COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM
June 25, 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 June 18 meeting.

Lower Monumental Dam (LMN) Operations for Transport Update – Erick Van Dyke, FPAC Chair/ODFW, provided an update on spill and transport operations at LMN, reviewing within-day flow fluctuations as a result of fish transport operations (project graphs/links on the TMT agenda), noting the data presented was from June 21 onward (no changes to observe in spill associated with summer operations). He mentioned that the transport operation ended with spring spill. Within-day flow fluctuations continued throughout the entire transport operation, and from the fish manager's perspective, impacted conditions for fish passage. Erick appreciated the opportunity to present on and observe the actions occurring and demonstrate the rationale behind some of the concerns for fish passage during TMT. He noted many reports on impacts to adult passage on the Snake River include impacts associated with collection and transport and how it can affect later performance for fish like sockeye and steelhead. Erick reviewed the 5-minute data, noting no further drops to zero spill, which correlates with the end of the transport barge operation.

Sockeye Conversion Update – Jonathan Ebel, IDFG, reported 13 tagged sockeye (one may be erroneous) from Bonneville (BON) to The Dalles (TDA). He noted that fish seem to be moving quickly to TDA (at 77% conversion) although timing slows moving upstream; 1 fish has already passed Lower Granite (LWG). A more comprehensive update will be provided at the next TMT meeting as more data become available.

SOR #2025-2 and Dworshak Dam (DWR) Update – On behalf of NOAA, Emi Melton, NOAA, presented SOR #2025-2, a water management operation for the lower Snake River during adult Snake River sockeye migration. Emi noted that the operation intends to provide better conditions for the at-risk sockeye via a ramp up and release of approximately 10 kcfs from DWR beginning June 29 and continuing through July 20. The SOR also requests the in-season consideration of relaxing the temperature criteria in the LWG tailrace from a maximum of 68 degrees F between July 23 and August 15 as necessary to achieve the DWR reservoir elevation threshold of 1,535 feet on August 31, with a return to 68 degrees F on or around August 15 for adult passage and fall Chinook broodstock collection. Emi noted that from NOAA's perspective, the request is necessary to improve adult Snake River sockeye conversion and survival to natal spawning areas by reducing temperature related impacts with early releases from DWR.

Willow Walker, Corps, provided modeling results on operational alternatives for higher flow at DWR in late June/early July, demonstrating strategies for optimizing water releases from the project to mitigate hotter temperatures in the system during that period. Modeling shows a comparison of a constant release during early summer versus releasing just enough to maintain 68 degrees F, to determine if a rise in the tailwater temperature would be delayed at LWG. Included in the presentation are links providing data requested at the June 24 FPAC meeting. Doug Baus, Corps, added that the Corps is available to answer questions that may arise.

TMT Discussion on the SOR

Fish Managers expressed strong discontent that TMT Members were not provided adequate opportunity to review and fully consider the impacts of the SOR as proposed, as well as the short notice for operational implementation. In response to queries, Willow clarified that the intent of the SOR restricts DWR to 10 kcfs, while recognizing in-season management (up to 13 kcfs) may be temporarily necessary to keep the LWG tailwater at 68 degrees F in the case of an extreme heat wave. She also clarified that Corps' alternative modeling accounts for 2 heat waves (1 each in late July and August) and uses heatwave averages, however, the length or intensity of potential upcoming heat waves are unknown. Operations after August 15 are planned as written in the 2025 Water Management Plan and FOP.

Other concerns and perspectives expressed by Fish Managers included:

- This SOR was provided the morning of the TMT meeting and is being prioritized for immediate action, while other operational changes this year have been deferred for post-season analysis and discussion. This significant change from this year's, and previous years, operations warrants more conversation and consideration at TMT.
- There are a lack of data and modeling to justify the SOR. The potential benefits for sockeye survival, and recognition of the tradeoff and impacts on other runs, is not presented/quantified sufficiently.
- The relationship between tailwater temperatures at LWG and Ice Harbor (IHR) is weak and is not modeled. Current modeling scenarios focus on LWG tailwater conditions and are what the region has relied on for coordinating DWR operations with any level of certainty. IHR tailwater is typically warmer than LWG and there could still be a thermal barrier despite these efforts.
- This operation is expected to limit the region's ability to manage water temperatures later in the season, when heatwaves often require DWR increases up to 13 kfcs for temperature management. This early operation will restrict releases to 10 kcfs at DWR when the lower river is expected to be the warmest.
- This operation puts greater risk of thermal accumulation and stress on fish migrating later in the season.
- There is a need for a more comprehensive analysis on tradeoffs, given the uncertainty of summer conditions, potential impacts to other runs and specific portions of those runs, brood stock, Tribal harvest, and planned operational changes that could affect passage later (for example the 10-day powerhouse outage at LMN in late August).

NOAA and the Corps added that the SOR has been built upon ongoing studies and is included in NOAA's BiOp terms and conditions. It is not a new idea, but an expedited implementation due to concerns around sockeye survival. NOAA feels strongly that the full Snake River sockeye run will benefit from this operation and that benefits to sockeye will be better than the impacts to the portions of other runs that could be impacted.

Following a brief caucus prior to polling, the Corps clarified that their understanding of the SOR includes increasing to 13 kcfs as needed in order not to exceed 68 degrees F in the LWG tailwater. Otherwise, water would be released on the timeline demonstrated in the modeling alternative results for DWR as presented at the meeting. The Corps acknowledged that forecasting is a challenge, and any updates would be provided in-season as necessary.

TMT Members were polled on the SOR as written, and had an opportunity to provide any rationale for their polling response:

TMT Member	Polling Response	Rationale (Optional)
NOAA	Support	NOAA submitted the SOR because, from their perspective, there is an urgent need to improve Snake River sockeye survival, and while they understood increasing temperatures is unfavorable and causes concern for other species, conditions are bad enough for sockeye to support this action.

Oregon	Object	OR objected to the SOR because from their perspective, it had not been coordinated well enough to warrant the change in operation. For OR, the presented SOR was uncertain and lacked consideration of system and ecological impacts across all species; they didn't feel the SOR provided enough information on anticipated benefits to warrant the requested change.
Washington	Object	WA echoed the sentiments of other Fish Managers from earlier in the discussion, and specifically OR's rationale; there is a need to look at the situation holistically, including the risks and benefits to all populations, and impacts from thermal accumulation needs more consideration.
Confederated Tribes of the Umatilla Indian Reservation	Object	CTUIR recognized that sockeye could benefit from more efforts, however the concern remains that in low flow years with heat, a change in operations early on could exacerbate conditions later in the season. More time is needed to consider the options and magnitude of potential impacts. CTUIR expressed hope to continue working on this issue to find an option that may work for everyone.
Yakama Nation	Object	YN echoed CTUIR's statement and emphasized their concern with the lack of communications, analysis, and greater context of the operation. They encouraged creative solutions and adaptive management without putting too much risk into August operations. They remain very concerned about sockeye and encourage regional coordination on the best efforts to support them.
Reclamation	Support	BOR supported NOAA's position.
USACE	Support	USACE recognized the challenge of the issue and risks associated. They noted that risk is something that can't be avoided and viewed the operation as an opportunity to alleviate some risk on sockeye by moving water to improve conversion.
Idaho	Object	Sockeye are very important to ID, although they didn't think this proposal alleviates the risk to sockeye as from their perspective, the SOR presented no evidence to suggest it would, while creating serious risk to fall Chinook juveniles and adults, and A-run steelhead. ID also felt the operation may have negative effects to sport and Tribal fishery in the state. From ID's perspective, the level of detail in the SOR's justification did not meet the best available science. They strongly encouraged the Corps to continue operations as in the past and for NOAA to work with Fish Managers and explore solutions to the problem. ID emphasized that emergency adult sockeye trapping that may occur at LWG is not in conjunction with this request, it is a separate operation.
Montana	Support	MT still had lingering questions. They noted that temperature management with limited cool water is important to all species and life stages. They suggested a maximum temperature threshold to cause flow augmentation to resume at some level during the low flow period in late July and early August.
Nez Perce Tribe	Object	NPT is committed to creative solutions and recognized the issue and operational impacts are a balancing act; all species deserve attention, including sockeye. From their perspective, the SOR did not provide certainty of benefit to sockeye and did not address other potential actions. They were supportive of holistic solutions given the risks, and alternatives that may be beneficial, such as water management out of Hells Canyon.

BPA	Support	BPA supported NOAAs expected benefits of the operation.
The Kootenai Tribe of Idaho, Confederated Tribes of the Colville Reservation, USFWS, Spokane Tribe of Indians, Confederated Tribes of Warm Springs, and the Confederated Salish and Kootenai Tribes were not present to register a polling response.		

Action Agency Implementation
Doug reported the Corps plans to implement the SOR as written, with the clarification regarding temporary flow increases as needed to not exceed 68 degrees F in the LWG tailwater. The operation will start on June 29 (flow change from DWR beginning on June 26 to reach 10 kcfs on June 29) and will continue unless advised otherwise. Due to significant concerns from Fish Managers, the Corps plans to consult their policy and legal staff on the operation. Additionally, the Corps noted that communication with the public and other interested parties regarding the change in operations at DWR will occur via the normal channels. Clarifications to the SOR regarding utilizing over 10 kcfs from DWR during the requested period to manage temperatures will be recorded in the SOR disposition, the official meeting minutes, and facilitator's summary.

ID and the Nez Perce Tribe signaled that they plan to elevate the issue to their RIOG representatives and expressed frustration that the operation was planned to begin soon, prior to RIOG convening for discussion. TMT members asked that the SOR process be discussed at a future TMT Process Meeting.

Operations Review
Reservoirs – Eric Rothwell, Reclamation, reported on Bureau of Reclamation projects:

- **Hungry Horse (HGH)**: outflows will probably increase in early July.
- **Grand Coulee (GCL)**: the project is on track to refill after the July 4 weekend, falling short of refill right before the weekend. The project will fill 0.5 feet/day, reaching its highest point mid-month, short of total refill to reflect the Lake Roosevelt incremental storage release.

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

- **Libby (LIB)**: current elevation is 2,440.05 feet, with inflows yesterday of 15.6 kcfs, and current outflows of 8 kcfs; the project is ramping down to bull trout minimum flow, about 7 kcfs. After July 27, outflows will remain at 7 kcfs (or about 6.8 kcfs if needed to keep turbines out of the rough zone).
- **Albeni Falls (ALF)**: current elevation is 2,061.7 feet, with inflows yesterday of 20.3 kcfs, and current outflows of 20.2 kcfs; the project continues to operate in the summer elevation band of 2,062-2,062.5 feet.
- **DWR**: current elevation is 1,599.91 feet, with average inflows yesterday of 3.5 kcfs, and current outflows of 3.2 kcfs.
- **LWG**: yesterday's inflows were 41 kcfs; the project is still operating in a MOP of 733-734.5 feet.
- **McNary (MCN)**: yesterday's inflows were 154.5 kcfs; with a soft constraint between 337.5 to 339 feet elevation until July 19.
- **BON**: inflows yesterday were 155.05 kcfs; treaty fishing took place today, with more expected for July 7.

Finally, the Corps reported that transformer testing and maintenance outages at LMN are scheduled for mid-late August, with operational considerations for adult fish passage during those periods. The outage is described in the Fish Passage Plan Appendix A.

Water Quality – Alexis Mills, Corps, reported that summer spill is ongoing at all fish passage projects. TDG levels are at or below water quality standards (115% forebay / 120% tailrace). In response to a query, Alexis added that there have been few, if any, TDG exceedances this year, likely due to lower flows. Data recovery efforts are underway due to a server outage on June 18.

Fish – Emi reported a small amount of yearling Chinook out-migrating, with the predominant outmigration being juvenile sub-yearling Chinook; the index at BON over the last 2 weeks ranged from 8,500 to 34,000. Steelhead outmigration is low, with an index of a few hundred per day. Sockeye outmigration is nearly over, with only a few hundred in the last 2 weeks at BON.

Chinook adults have shifted to their summer run at all projects. IHR counts for Chinook ranged from about 270 to 500 adults, YTD about 103% of the 10-year average. Priest Rapids counts ranged from about 500 to 1,400 adults, YTD about 108% of the 10-year average. Steelhead counts were around 200 at BON, YTD about 62% of average (still early in the season). Sockeye adults are starting to return to upper river projects, including mid-Columbia and Snake areas. Wells (WEL) had a count of 194 sockeye, about 47% of the 10-year average. LWG had single-digit daily sockeye returns, at 0% of the 10-year average (could indicate an earlier run this year, still early). Shad were in the hundreds of thousands at BON, and between 35,000-55,000 at MCN in the last 2 weeks, about 102% of the 10-year average.

Power System – Tony Norris, BPA, reported incoming cool weather followed by some temperature rises in the 10-day forecast; no issues are expected.

Questions or Comments from Non-TMT Members – There were no questions or comments from members of the public.

The next scheduled TMT meeting will be on July 2, 2025, at 9:00 AM.

Columbia River Regional Forum
Technical Management Team
OFFICIAL MINUTES
Wednesday, June 25, 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 18 Facilitator Summary and Minutes

   - Approved

2. **LMN Operations for Transport Update** – *Erick Van Dyke, OR/FPAC Chair*

   a. FPC Spill to FOP Graphs

   - Lower Monumental (LMN)

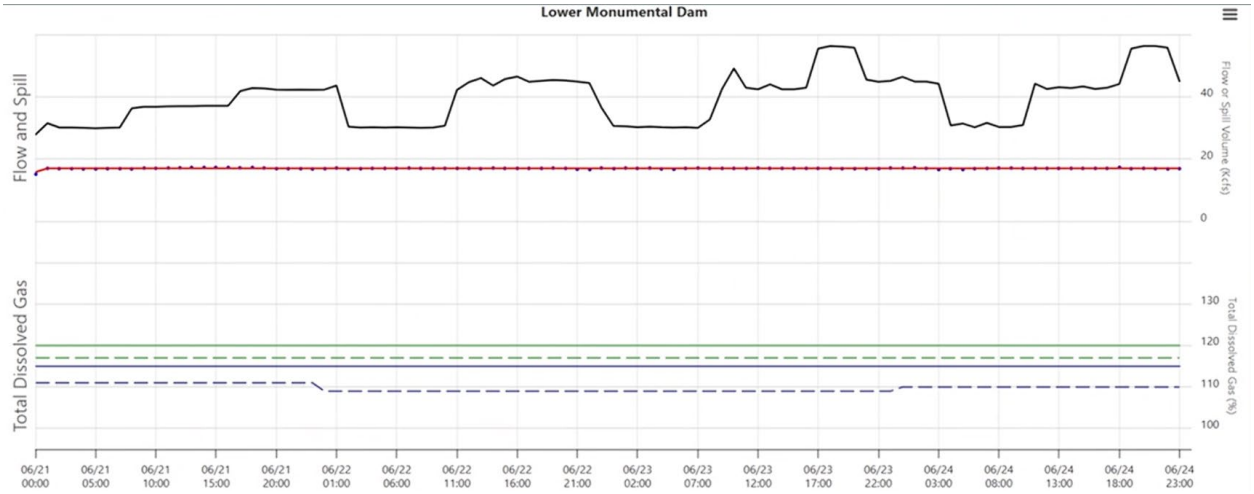

Figure 1: LMN FPC Spill Graph

- The graph now shows June 21 and forward so we will not be able to see any specific changes in spill associated with the summer spill operation.
  - Blue dot impact is no longer something on this graph to anticipate as being different.
- We still see changes in within day fluctuations even at LMN.
  - Transport program should have ended with spring spill but is not demonstrated on this graph so the information that could have been shown here is not actually in view.

- Within day flow operation continued through the entire transport operation, and it altered situations so that we could collect and transport fish at LMN.

- Van Dyke said that he appreciated having the opportunity for TMT to observe and see what kind of actions are occurring, and the rationales behind why the LMN Transport Program is a program that affects fish passage.
- Something that may come in later, and has not been talked about yet, is many of the reports that have talked about impacts to adult passage in the Snake River include the impacts that are associated with collection and transport. There is plenty of documentation for sockeye and steelhead about how these impacts ultimately affect later performance.

b. LMN, IHR Flow & Elevation Timeseries

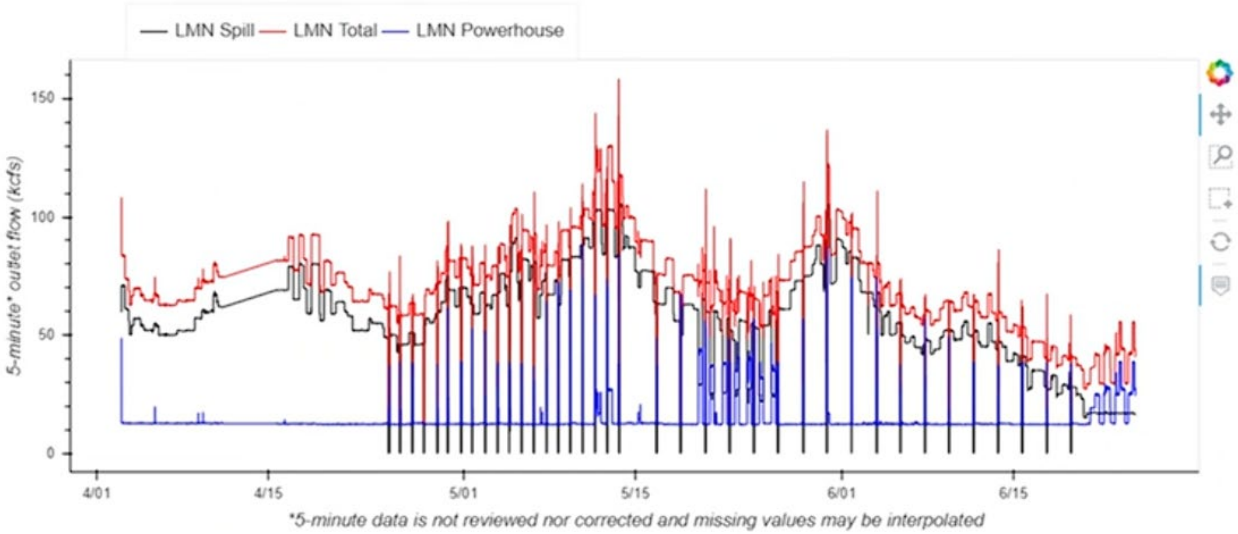

Figure 2: LMN, IHR Flow and Elevation Time Series

- No longer dropping to zero from impact of transportation but shows the undulating lines still continue to occur.

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

- Ebel shared that this was a preliminary presentation and putting numbers out this early could be misinterpreted.
- 13 tags but one may be erroneous
- BON > TDA
  - Fish are moving quickly
  - BON > TDA conversion: 77%
- Conversion rate drops as you move upstream with one fish across LWG.

- This fish is a runner and Ebel hopes that this fish will make it to the basin. It is early and fast and is a characteristic that is needed in the fish.

- Ebel will prepare something more complete for next week when it would be informative.

4. **SOR 2025-2 and Dworshak Dam (DWR)** – *Emi Melton, NOAA; Doug Baus, Corps; & Willow Walker*, *Corps*

c. SOR 2025-2 – *Emi Melton, NOAA*

- NOAA requested to provide ~10 kcfs from DWR beginning on June 29 to July 20 to provide a better condition for the Snake River Sockeye.
  - Snake River Sockeye are one of the species most at risk.
- NOAA would also consider relaxing temperature criteria at Lower Granite (LWG) to 68°F maximum after the requested period, but this is not set in stone.
- NOAA is hoping to achieve the DWR reservoir elevation threshold to be 1535 on August 31.
- Later in season, on or around August 15, NOAA is hoping to return the tailwater conditions for LWG to be ~68°F which will help facilitate the adult passage for fall Chinook.
- The reason why NOAA was asking for this is because the survival rate and conversion rate of the adult Sockeye has been low in the last four years and NOAA is thinking that reducing the temperature may help with this conversion rate.
- NOAA has seen that some of the Sockeye have been migrating in the Upper Columbia and there is a likelihood that whatever Sockeye that make it into the Snake River are not surviving.
  - Based on study by Crozier, et al., cited in the justification section of the SOR.
  - NOAA thinks this is because the survival rate drops significantly between 20° – 22°C.
  - Within the last four years the temperatures at IHR tailwater has been exceeding this threshold of 22°C in July while the Snake River Sockeye are returning.
- NOAA had seen some modeling efforts that show early releases of the DWR water likely would provide a cooling benefit to the Snake River, possibly all the way down to IHR.
  - Result is supported by the Karr and Fryer study (cited in the SOR).
- in terms of the temperature relaxation after the Snake River Sockeye pass, we want to be cognizant of the fall Chinook passage and broodstock collection.
  - The previous SOR 2023-5 noted that such efforts begin around August 17 and it requires a temperature at LWG to be below 70°F and ideally below 68°F.

- NOAA's thought is allowing the temperature of LWG tailrace to be higher than 68°F after the Sockeye passage but before the broodstock collection effort beginning.
  - NOAA is looking at July 23 – August 15 timeframe may help extend the summer flow augmentation from DWR without using water managed by the Nez Perce Agreement.
  - It is NOAA's understanding that salmon and steelhead migrations generally slow or pause during this period.
  - While NOAA acknowledges that the temporary increase in temperature can create a more stressful environment for fish migrating during this specified period NOAA thinks that the proportion of each species migrating within this time period is relatively low compared to the benefit the Snake River Sockeye would get.
- The reason that NOAA chose this time frame is that Snake River Sockeye arriving at LWG after July 23 typically do not survive.
  - Based on Johnson's studies: 2019 and 2020 (IDFG Report Number 20-07 and Report Number 21-10) cited in the justification section.
  - Likely due to stress accumulated between Bonneville Dam (BON) and LWG as well as the high temperatures in the Snake River.
- NOAA is hoping that by increasing the temperature target for the LWG tailrace at the end of July and beginning of August it is unlikely to impact the salmon population as a whole.
- Melton also shared that this is consistent with NOAA's Terms and Conditions in their 2020 CRS BiOp;
  - 1F. Improve passage conditions for adult sockeye salmon to the extent practicable.
  - Using DWR reservoir management and improved temperature modeling.

d. Summer 2025 Operational Alternative – Updated 6/24 @ 4:00pm – *Willow Walker, Corps*

- Walker shared a graphic showing the model that NOAA requested. The model shows the results of what implementing this operation would look like.

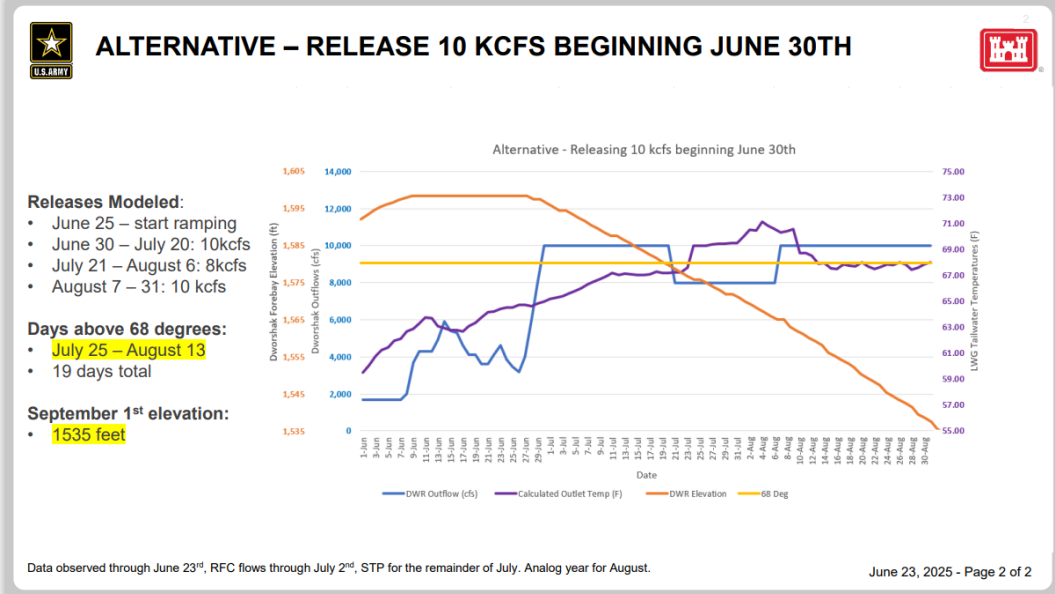

Figure 3: Modeled Proposed Operation - graph presented on slide 2

- DWR only has a certain amount of water available each summer, that amount of water is not changing but just where the Corps would be putting more of the benefits and reducing the temperature risk during the prime Sockeye season versus later in the year.
- Explanation of graph:
  - Orange is DWR elevation
    - As in any summer DWR is starting out full and then decreasing as the Corps releases throughout the summer.
  - Yellow flat line marks the 68°F target.
    - For LWG tailwater temperature.
  - Purple line shows a combination of observed and modeled future LWG tailwater temperatures.
  - Blue line is DWR releases.
- Steps: The graph starts with June 25, and on June 26 (tomorrow evening) the Corps would start ramping up releases to 10 kcfs by June 30. They would hold the 10 kcfs through the third week of July and then drop down to 8 kcfs for a couple of weeks and then bring it back up to 10 kcfs toward the end of August.
- A possible result of the 8 kcfs, unless it is very cold, is likely not going to be enough to keep LWG tailwater below the 68°F mark. This is shown in the purple line rising above the yellow line.
- The End of August (September 1) Elevation Target would be the same as always (1535 feet).
  - They are trying to use the same amount of water and are not trying to use any more or less water for this operation.

- Based on the FPAC meeting on June 24, there was a request for some observed data for specific years; these links are available on the last slide of Walker's presentation.

e. SOR 2025-2 – Questions/Comments

Ebel said that there would be a series of questions from a lot of the Fish Managers (FM) after what was discussed in FPAC, and some of them individually over the last few days. He said that the FM did not know that this was going to be an SOR until about 30 minutes ago.

Van Dyke broke in and said that his comment was essentially that, FPAC had not really had time to review this, it was distributed less than 20 minutes before the meeting started. He said that he thought it was 8:41 AM. Van Dyke said that is not really adequate time for FM to be having their heads wrapped around it.

Ebel said that he thought it would just result in more questions, but he has his head wrapped around it and he knew where he stood on it.

Stranz asked to take a step back and clarify that the SOR TMT was seeing this morning but the alternative that Walker presented was discussed at FPAC. She asked if she was correct.

Ebel said that she was correct.

Van Dyke also confirmed.

Stranz said that TMT would have some questions and conversation and recognized that this is a fast-moving proposal on the table that not everyone had sufficient time to digest.

Ebel said that he had a few questions/comments. He said that he would only do one right now but he may have more later depending on what people say. He said that the SOR only requests ramping up to 10 kcfs, and it is common for the Corps to release up to 13 kcfs just to keep the LWG tailrace temperature at 68°F, let alone affect IHR tailrace temperature enough to reduce Sockeye mortality. He said that in FPAC they had discussed a lot about IHR, that is missing from the SOR, but that could be talked about later. He asked if the SOR, or its potential implementation restrict DWR to full powerhouse (PH).

Walker gave a note on wording, she said that 10 kcfs, right now, is slightly more than full PH, it is about 500 cfs of spill on top of full PH.

Ebel said that was a pretty technical point. He asked if it restricts DWR from spilling up to the water quality limit for TDG.

Jay Hesse, Nez Perce, amended Ebel's question and asked if it limits DWR to 10 kcfs and just that volume, for specificity.

Walker said that she thought that Hesse's amendment cleared that up.

Stranz asked if anyone had an answer for whether or not the SOR had proposed limits it to 10 kcfs. She said that she thought that it would probably be directed to NOAA.

Melton said that she thought that as it was currently written it is for 10 kcfs but NOAA had not had the opportunity to look into the TDG limit, so that may be something that they need to look at.

Ebel said that it was pretty well established. He said that he would like to the Corps' interpretation if implemented if they would read this as restricting them to 10 kcfs.

Stranz asked Walker for her perspective on Ebel's question.

Walker said from her personal reading she was reading it as restricted to 10 kcfs. She said that Ebel was correct, if there was a heat wave during this timeframe that the Corps would typically go up to ~13 kcfs in order to keep the LWG tailwater temperature at 68°F if heatwave were to occur. She said that one thing that was slightly different here is by starting the ramping of DWR cooling water early the intention is to keep the cooler stratification at the Lower Snake dams longer. If we are starting early, we get a little bit of help carrying over that cold water from spring runoff. There is not as much thermal energy to overcome this time of year so it is possible that it would be below 68°F and the heatwave would not push us up over 68°F as it usually does because we would be starting from a lower point. She said that it would depend on how hot and for how long it would really impact what that looks like.

Hesse said that he had multiple questions and ultimately a comment. He said that Ebel had limited it to one and he would follow suit, but he has more. He said that he would build off of the questions for Walker. He said that he assumed that Walker's modeling was based off of average temperatures, yet our management actions usually are responsive to heatwaves as the FM just referenced. He asked how hot the water would get in the latter half of July and August during the typical heatwave. He said that Walker's model suggested that it would be in the 71°F range. He asked if she modeled in heatwaves as typical or if it was all off of average temperatures.

Walker said that the model graph takes into account model averages but because we usually do see at least one heatwave the Corps does include, and this model includes two heatwaves. One towards the end of August and then one in late July period. You can see the one in July at where you can see it is a little bit of a flat line and then it increases to just above 71°F. She said that was the result of having a heatwave in there. She said that it does have some heatwaves but we are 60 days out so we do not know how many heatwaves there will be or the intensity. There are two in the model right now.

Hesse said thank you, he said that he has more but would wait for others.

Stranz said that she would circle back to him.

Tom Iverson, Yakama Nation, said that getting the SOR at the start of the meeting was insufficient. He said that his question was what the spill operation would be from

August 1 to August 15. He asked if we were going forward with RCBA operations or if we were reverting back to some other operations, either injunctive relief or 2020 operations. He said that it would be very important to understand how this was modeled. He said that his second question had to do with 10 kcfs taking advantage of thermal inertia to keep the thermocline, to keep the water separated through July. He said that it did not make sense to him then that 10 kcfs is enough to overcome the thermal inertia that we see in the first two weeks of August. He said that he was struggling with understanding how we would bring those temperatures down. He said that his biggest concern with the SOR is that it is like we are conflating LWG tailrace temperatures with Ice Harbor (IHR) tailrace temperatures. He said that IHR is usually 1 – 2°F warmer than what we see at LWG. So, it we had IHR temperatures on this graph, Iverson thought what you would see is more like a 74 – 75°F temperature in the first two weeks of August at IHR which would be a thermal barrier to any fish moving up the Snake River. So, bringing the temperature down a day or two before they trap fish at LWG is not going to help. He said that there are not going to be any fish to trap at LWG on August 17 if the temperature is 75°F at IHR. He said that was his point and those were his two questions for now.

Stranz said that she would take the first question to the Corps. She asked what they assumed the operations would be after August 15.

Walker said what is modeled in the graph is as it is written in the Water Management Plan (WMP) currently and it did not make any guesses one way or the other that it would be change.

Aaron Marshall, Corps, said that the planned operation right now is what is coordinated in the 2025 Fish Operations Plan (FOP).

Stranz asked if Walker could address Iverson's second question about overcoming the thermal inertia in August with 10 kcfs and his concerns about IHR temperatures.

Walker said on the IHR note, the Corps does not have a model that has enough fidelity in real-time to model IHR tailwater temperatures. She said that the Corps' model was designed and calibrated for LWG tailwater temperatures which is why you do not see an IHR line on the graph. She said that the most that we can expect is that we usually see IHR follows the trend of LWG. She said putting in any type of exact number for IHR is not something that she was able to model, so that is why it is not on there.

Iverson asked if there was not a fairly well documented relationship. He said that he meant that it did not seem hard to sort of model that the tailrace temperatures between the two dams just to come up with a conversion factor.

Stranz asked if there were any Corps representatives that would be able to answer that question.

Ebel said that he was not a Corps person, but he thought that at the release rates that DWR has done, within the TDG limits, in the North Fork of the Clearwater, there is not enough response of IHR to be able to model it. He said that there is no capability

because the relationship is so weak. He asked the Corps to correct him if he was wrong but in looking at the data over time it seems that was the case.

Iverson said that made sense to him but it seems like there should be a relationship between the temperature at LWG and the temperature at IHR. He said that we know that we gain so much thermal input over that geographic space during the summer months. He said that was what he was looking for, just a simple relationship there. He asked if we had ever looked at that.

[Hesse's audio was faint and difficult to hear at times]

Hesse said that he would direct the question to NOAA in terms of their assumed temperatures and response. He said that there had to be some justification in the assumptions made for the benefits of this from their perspective. He asked what NOAA's expectations for the thermal response or outcomes were both to be attained as a cooling effect and the temperatures that would be realized when flows are reduced later. He said that he thought that those were both consistent with Iverson's questions of what NOAA's expectations was with or without modeling.

Melton said that she had a little hard time hearing Hesse, so she repeated what she thought Hesse had said. She said that his two questions were NOAA's expectation of the 10 kcfs being enough to go down to 68°F in August and then the temperature getting high at IHR relative to the highest point that is seen for LWG. She asked if that sounded right.

Hesse said yes. He then asked what NOAA's assumed outcomes, with or without modeling at IHR for temperatures low and high.

Melton said that she would go in a chronological order. She said in terms of the high temperature at IHR she thought that NOAA was in agreement that if LWG is at a certain temperature then IHR is likely to be slightly higher. To what extent we cannot determine what that is. She said as NOAA said in the SOR, their justification is that the benefit to the Sockeye is for the entirety of its run, whereas for the risks that we have for the other species is part of the run or part of the population. It is a risk that Melton thought NOAA would like to minimize but it is a risk that they acknowledge. In terms of coming down to 68° at 10 kcfs, Melton said that she did not think that we currently have it specified in the SOR that it is 10 kcfs at the end of August, that is what the modeling results show but the SOR is focused on 68°F at LWG at this point.

Walker said that she could clarify the end of August 10 kcfs. She said that amount is in there because that is the amount of water that we would have leftover at that point to get down to the 1535-foot elevation. In this particular result it looks like that is enough to keep the 68°F at LWG tailwater, again heavily dependent on real-time conditions, how many heat waves, and the exact timing of what that looks like.

Iverson said that the Corps could need variances on the 68° for the entire rest of the month if there is not enough water left in DWR.

Walker said if the end of August is very hot, it would be possible.

Van Dyke asked Melton a question building off of what Hesse just brought up from Iverson's earlier inquiry. He said that in the SOR she used the Karr, et al. as a source of information about what to expect. He asked for Melton to tell TMT how that evaluation informed us of what we should expect at IHR.

Melton said this is the only study that she could find that is currently usable that we were able to rely on. She said that maybe the Corps may have additional insight around this. She said that the study had a different relief study around LWG to control temperatures at the Snake River Projects and so they had a various release strategy from 1991 to 1996. Within that study there were a few instances where the releases from DWR, ranging from ~14 – 20 kcfs has been able to control the IHR. She said in 1994 (she believed) they did a big release from DWR, which we saw a decline in temperature all the way down to IHR. She said that there was another year where the DWR release was ~14 kcfs and in that year we also saw decline in IHR and in that particular year, they were also able to keep the temperature under 71°F, which is a threshold that was mentioned with the Crozier study for Sockeye.

Van Dyke said that he did not think that Melton had answered his question. He said that may be because the answer is not available. He said that it just emphasizes how the support for this operation is using evaluations that no longer apply in many respects to the operations that are currently occurring and that there has not been any real effort to understand this since the early 1990s, about the time Sockeye were actually listed. He said that it is a hurdle for gathering support for an operation. He said that he recognized that, and he appreciated Melton for being upfront and being as clear as she could be about what information she had to use to make some pretty difficult decisions.

Lorz said that he wanted to jump in a little bit since this was a CRITFC fish study. Malcom Karr was a CRITFC employee and Dave Benner was PHD at Idaho and Jeff Fryer was a CRITFC employee. Lorz said that the study used different discharges from DWR and saw how temperature control effects occurred, and those effects were measured through every forebay down to IHR. He said that the two that Melton related to were a 20 kcfs release over a two-week period of time and the other one was dealing an early discharge of 10 kcfs over discharge. The only major change that we have now is that we have a total dissolved gas standard, so we probably cannot get the 20 kcfs anymore, and also there is a new threshold of 1535 as our end elevation for August 31. He said saying this is not useful, he is scratching his head on that one. He said that we could do the latter operation and all that is doing is gives you some idea of what the impacts are at IHR. Lorz said that the other side of this though is what happens if we keep at 1535, we did not have those controls or did not have those questions about how bad the temperature is going to get in the middle/end of July once we stop this operation and say go back to 8 kcfs and you have hot spells. That is going to be the problem child that the FM have that it is going to take a lot of water, more to get us back to a cooling temperature where we can see the benefits for a broodstock collection. He said that it again comes down to are the negatives going to be so bad that it is not going to be

worth it for Sockeye. He said that he agrees with his colleagues, talking about this yesterday at FPAC is great but TMT probably should have had this discussion earlier because this is not a small change and this affects a lot of different operations. He said that it is going to be challenging for the FMs to get on board in less than 36 hours.

Van Dyke said unfortunately that was a response to him. He said that his question was about what we know about how impacts IHR. He said that if that was known he asked what it was to help bridge the gap. He said that was what the FM were asking about. He said that Lorz had implied what the FMs should get from that. He asked what that was. He asked if it was a Celsius difference.

Lorz said yes, if Van Dyke would like they could send him the reports. He said that there were three. There was a deep, mid, and high-level thermograph in the forebays, and you could track to see what temperature differential. He said that he presented this to the implementation team because he is that old, back in the early 2000s, but that is twenty years ago and shockingly enough he did not remember what the exact change was, but that information is in the reports. He said that they can send out the reports and people can look at them. Lorz said that they have been sent out numerous times over the year, but he guessed that it had been about ten years since they had sent them out, so we are on the 10-year time cycle. He said that Melton had them and if she would like to send them out or he could, either one will be fine, or people can take a look at that. But he said that there was a noticeable and a measurable difference at IHR. It was not as pronounced to LWG, but there was something at IHR.

Stranz said that if it were possible, if there are links to those reports, that could be put in chat, that might be helpful for folks.

Lorz said that his were email links from internal, so he did not have a link to put in there. He asked if Melton did. He said that he had not looked on the greater Google website to see if this report is easily accessible at all.

Melton said that she did not have it either, she only had a pdf copy.

Ebel said that you can take the title, plug it into Google, put a PDF after it and it will bring you to the CRITFC website. That was how he got it.

Stranz thanked Ebel.

Ebel said he was struggling with this one. He said not in terms of Idaho's position on this but really the rationale and what we have been doing the last couple of years and the advancements in temperature modeling. He said that this feels like it is throwing the advancements and the operational coordination that goes into DWR operations during the Summer that have evolved since 2015, and it is just saying to hell with them, throw them out the window. He said that he was struggling with that to really understand how this is more beneficial or protective of Sockeye than what we have already been doing for the last few years. He said that he did not know. He said that maybe that is the question, he asked if NOAA could present some data, something concrete, that demonstrates that this is better than what we have been doing. He said that he asked

that because the thermal stress is cumulative, and this cannot undo the damage that is done in the Lower Columbia even with operations that bring DWR to unacceptable levels and exceed legally agreed to draft limits. He asked if he could get a more concrete explanation of why this is a good idea.

Melton said that part of the reason why we are looking into this is because keeping LWG at 68°F in the last 10 years has not been keeping IHR cool enough for Sockeye. She said that was based off the DART temperature data for both tailwaters. She said that the understanding of what happens to LWG goes both ways and that if we keep LWG cooler, IHR stays cooler, just as if LWG does get warmer than we expect that IHR would also get warmer.

Baus said to Ebel's point he wanted him to know that he heard him. He said that the all the people on this phone have been working diligently over an effort on being conservative with DWR outflow. He said that at some point it highlights that in the BA we can draft not to exceed 1535 at the end of August and over the past six years we have not been doing that. Over the past six years on average, we have been drafting to about 1537', coming in about 2 feet high for the end of August, for the last ten years, coming in at 1536', on average a foot high. He said that the Corps recognizes that there is risk and uncertainty with forecasting flows and they recognize that there is risk and uncertainty on what they can produce in the relationship between LWG and IHR but it is just taking an opportunity to look at where we have been with water management at the end of that time period and recognizing that we have not drafted down to that elevation of 1535'. We did last year; we drafted down to 1535' in 2024 but over the previous years it is trying to better understand if there is something that we can do out there better for Sockeye, that we have not been doing perhaps now is the opportunity to do it.

Stranz said that Dennis Moore had to leave, she asked if he had anything to add before he left.

Dennis Moore, Colville, was not available to answer at the time.

Ebel said that the way that Baus phrased it sounds good, but the data does not back this up. Ebel said that he would use a couple analogies here but first if you look at the last few years, we have come in a couple feet high because of actions taken like relaxing the temperature criteria, granted for a much shorter period than this to conserve water outside of the Sockeye window, so that argument kind of goes out the window. He said that the reason to do that, to use the analogy, who wants to run their paycheck down to 0 the day before their next paycheck. He said that we are not going below 1535' before the end of August, that is the amount, that is the allocated water for this. He said that what he is struggling with it that this proposal and essentially the confirmation that DWR is restricted to 10 kcfs and the modeling that is supporting it does not include the intensity and number of heatwaves that we have seen in the last few years, like is really suggesting this might be worse. That we may not be able to respond and even keep LWG at 68°F. He said that the issues go on from there, he said that he could bring it up. He said that he still had not heard a concrete reason why this would be better for

Sockeye than what we have been doing the last few years and he would like to go back to that concept because he thought we are in this boat this year or this could turn on us very quickly because flows in the Lower Columbia are very low, the Lower Columbia is going to be very responsive to heat waves in terms of water temperature, the cumulative thermal stress can get very high very fast for these fish and there is very little that Ebel thought that we can do in the Snake to offset that harm. So, again if the proposed solution or thing to try from his perspective does not match the problem, the scale, or the type of problem that we are likely to have this year. On top of that we have not even gone into the risks to Fall Chinook population, to the broodstock programs, all the things that have been discussed in the past about that temperature criterion later, on top of being this long period of higher temperatures is going to be immediately followed by a full PH outage at LMN that can potentially block passage and will only be passing surface water at high temperatures. There is other context here that is shifting very little risk off of Sockeye to enormous risk onto A-run steelhead and Fall Chinook.

Stranz asked if there were any other clarifying questions. She said that TMT will all have a chance to provide rationale after you poll so you can get additional comments in, but she said that she wanted to check to make sure that there are not any additional questions or perspectives to share.

Hesse said he still had multiple questions, but he was going to start with a comment. He said the water temperature in the Lower Snake and Lower Columbia is borderline given the modified habitats that are there now and how we manage. He said that they are on the edge and RNC and FCRPS collectively are to keep the wheels from coming off the cart generally and rarely are we in an area where we have water that makes things better for fish, we are just trying to keep it functional as a collective. In that reality, this SOR request to improve things for Sockeye, not make them really good, but just a little bit more functional is knowingly at the detriment and pushing things over the edge for juvenile Fall Chinook that are still rearing and migrating, adult Fall Chinook that are coming upstream, adult A-run Steelhead that are coming upstream and several management actions. He said what he had not seen is the SOR is the acknowledgment of those negative impacts nor an assessment of the magnitude of these. He said that he thought the comment stands alone, if he added onto it about having two extra feet at the end of August, that is because we have been managing risks. Ebel brought up that the “excess” water was because we were conserving things and already in a detrimental state, elevated water temperatures, to get us through August. He said that he also wanted to make sure that people understand that if we come in above 1535’ that is not a waste, that water is applied in September and helps us ramp down flows and get to the natural thermal cooling periods that are getting later and later in the September period. He said that in no way should that be viewed as wasted water or inconsistent with the plan. He said that was the end of his comment. He said that his question goes back to the assessments and that we had not talked about any assessments to juvenile Fall Chinook that are rearing in the Lower Columbia, rearing in the series of reservoirs, including LWG, and migrating downstream. He asked if NOAA and others could talk to the assumed impacts on juvenile Fall Chinook from this operation.

Melton said that what she did was she looked at it more holistically, as a whole population, or whole species for Snake River Fall Chinook ESU. She said that the date of July 23 had most of the juvenile Snake River Fall Chinook out-migrated by the time any of the temperatures would go up beyond 68°F. She said that she recognized that does not necessarily capture what would happen to the Clearwater juveniles but at the same time what we are talking about is the Snake River Sockeye as a whole and she thought that it would make more sense to look at the Snake River Fall Chinook as a population as a whole too, or the species as a whole. She said that was the reason why she had been looking into the migration timing for the ESU.

Hesse asked if Melton was aware that those juvenile Fall Chinook that are migrating during that time frame, while lower in abundance to the major migration, are a representing and come from the Clearwater spawning aggregate and so it is a unique part and a productive part of the population and so that needs to be taken into context that you cannot write off Clearwater production because it is unique. He said that it seems to him that she is saying that she was okay impacting a sub part of Snake River Fall Chinook without any quantitative analysis is not acceptable in his mind, nor consistent with the expectations for TMT. Just as a high-level management note, Fall Chinook are really the only remaining stock that supports sizable Tribal harvest now and while Sockeye are important, accepting impacts to that would ultimately have some level of impact on the one remaining Tribal harvest opportunity that is of any size this needs to be part of that holistic process and needs to be based off of analysis and some risk management rather than just a broad statement. He said unless he missed in in the SOR, and he may have because of its late distribution and he was reading it on his phone, he did not even see that impact acknowledged in writing.

Trevor Conder, NOAA, said that the SOR in that last couple of paragraphs cites a previous SOR where there was a temperature exceedance above 68°F that he believed that the Nez Perce supported to allow exceeding 68°F where it acknowledges that it was not an improvement, it was a reduction of conditions for those stocks understanding that this, given their run timing, these effects were minimal relative to what we believed to be large improvements to Snake River Sockeye. He said that NOAA acknowledges that there is a reduction there, but they feel strongly that the improvement to Sockeye is substantial relative to that reduction. He said for NOAA it is like you guys were willing to accept that level of analysis for that SOR, Conder said that it was not clear to them why that is a separate bar for this one that NOAA is putting forward for Sockeye.

Hesse said two responses: One is that Hesse would highlight that the substantial impact of Sockeye does not seem to have a quantifiable expectation for water temperature so that is frustrating. He said that he wants to help the Sockeye. Referencing that SOR and support of Nez Perce for higher water temperatures, Hesse said that he believed that the SOR referenced that going to 69.5°F and was done with much trepidation because we were pushing those fish further on the edge. He said that he believed that the SOR that NOAA put on the table does not have a cap and pushes us way above 69.5°F so in no way should that previous SOR be used as justification for Nez Perce acceptance of elevating water temperature to a higher water temperature than the 69.5°F.

Ebel, as primary author and proponent of those SORs, said to Conder, if he recalled at those times, the first time it was proposed, NOAA signed on to it eventually and they were aimed at conserving water in DWR again because of the very highly modeled, with a lot of analysis on behalf on part of the Corps and Ebel said that he really appreciated it at the time and he still appreciated it now, showing the outcome of if we did not do that and we purposely limited that upper temperature threshold to pretty much to what the Corps could do. He said that the Corps did a great job implementing that at the time to keep it well below 69.5°F. He said that he thought that we have had a couple deviations for like a day or two that was a much shorter time period than what is being proposed here. That was based off of a significantly higher resolution data than is being presented to TMT now and was being done in real time conditions without that many assumptions about heat waves. He said that it was kind of like how many more are we going to have. Ebel said so these are not comparable and again he kept on hearing the concept from NOAA that this alternative that is sitting in front of TMT is going to have a great benefit to Sockeye, but it had not been shown what the benefit to Sockeye would be. He said that there is a serious disconnect between those two things. He said that he could do it but he had probably put together most of the SORs that have been submitted in the last few years, and he said that he is always asked to bring all sorts of information to the table, and he said that he does his best to do so. He said that none of that level of detail, support for the outcome that is being sought, that is being supported by the operation that is being requested is there. He asked if NOAA could provide him with something concrete, because he cares about Sockeye, the Idaho Department of Fish and Game, it is very important to them, and they take a lot of actions to benefit those fish. He asked where the connection was.

Conder said that some of the uncertainty that Ebel sees here is why he does not see precise modeling efforts. He said as the Corps had probably indicated while he was on another call, it is difficult to precisely model temperature down to IHR because of the variability in solar inputs and so they cannot say with strong confidence how much of a temperature change we would be able to see and therefore if we do not have that it is very difficult to precisely indicate how much of a benefit the Sockeye will receive. He said that piece is why you do not see this is what LWG temperatures will be within half a degree. He said that Ebel would not see that, but we are seeing that Sockeye in these warmer years, the years that rank the hottest at IHR, if you sum up the temperatures when they are migrating, are the years when they have the poorest survival and conversion from BON to LWG. They also have the poorest conversion from McNary (MCN) to IHR, and they have the poorest conversion from IHR to LWG in these hot years. Conder said that NOAA feels strongly that by providing cooler water during the peak of the Sockeye migration, that conversion will improve. And while Ebel is correct, the thermal accumulation, we would not provide a band aid to that or an improvement to that, that is incurred in the Lower Columbia, they will not accrue additional thermal accumulation from IHR to LWG which will improve their survival. So instead of seeing conversion rates in the 30% range from LWG NOAA is hoping to get more anywhere in the 50% to 70% from BON to LWG by having this operation. Sockeye really need it right now; they are having a tough time so to Conder the impact to Sockeye is more

substantial than affecting the tails of the run on Fall Chinook what we can incur from this. He said that he hopes that he is right.

Ebel does not think that Conder is. He said that he does not see it, he said that there is a lot here. He said that there is an elephant in the room standing in front of them, the 10 kcfs limit seems odd and out of place. He said that it also disconnected with Conder's goal given that the 13 kcfs, going above and spilling a higher proportion of that, this total volume of water is a known tool that allows TMT to respond to heatwaves and that is being taken off the table. He said that he found that pretty interesting. He said that there is very little empirical support for what the desired outcome. And sockeye are also very important to Idaho, but this is not going to do what Conder is suggesting it is going to do, and he thought that it was pretty well established.

Van Dyke said that he was glad that Conder added some content. He said that the question that he was having now was why this particular operation change is being emphasized as an immediate action when earlier requests have been limited to after-season evaluation, especially given all the details so far that had been shared, it seems unbaked. He thought it was a sad testimony given that the details that were being provided in the SOR are drawing from studies that have provided us with pretty clear-cut water temperature thresholds that frankly have been identified as not only impacting Sockeye but the other species that use the river. He said that FM are interested in system-wide life-cycle approach to these problems and what FM got in the conversation is generally a statement about earlier support or lack of interest in providing for a specific species or things like that. He said that he thought that was unhelpful and inaccurate. Ha asked why it is that this particular operation change is being emphasized as an immediate, while all the others have been pushed off to evaluations after season. He said that he could take the answer from either Conder or Baus or both.

Stranz asked if Conder or Baus could shed some light on that question.

Baus said that he was listening but was not understanding. He asked Conder to go on because he did not understand what the specific question was. He asked either for Conder to go or for Van Dyke to repeat.

Conder said that he was having a hard time understanding the question.

Van Dyke said that he thought it was pretty specific. He asked why this operation request is immediate without evaluation after season. He asked if that was hard to understand. Frankly both Conder and Baus have heard this, to say that they do not understand is just a pause that is not necessary here. He said how about actually thinking about what it is that is different about this operation request than the other ones that were meant to improve fish passage.

Conder said that he was not sure anybody said that they would not evaluate this. He asked why they would not evaluate it.

Van Dyke said that they are doing an immediate change in an operation for this that was not provided or allowed for other operations requests earlier. He said that they were in fact pushed off with the intent that you needed to look at them closer. He said that it does not appear to him that you have looked at this one very closely, even though, quite frankly the reports and documents you are using to support it come from more than a life cycle for many of the species. He said that he was asking why is it that this particular operation request is getting immediate action, while the others were pushed off until you were allowed to spend more time looking at it. He asked why that is.

Conder asked Van Dyke to recall that last year, during a TMT process meeting, Conder had provided some information from modelling the Corps had done to the group and so in that request to have the Corps do that, modeling occurred a year prior to that. Since 2015 we have had recommendations to the Corps to look at this. He said that he would not say just because this process is rushed given everything that is going on right now, it is a little bit rushed unfortunately, but it is not like NOAA has not been looking at this for some time. Conder said that they had been looking at this issue, this did not just get dreamed up in the last couple of days. He said that they have been looking at this for years hoping to find a way, since they recognized Sockeye have been struggling with temperature, they have been trying to find a way to use this water to benefit them understanding that there are significant trade-offs there. He said that we have been looking at it.

Stranz tried to call for another TMT member.

Van Dyke said that did not answer his question. He wanted that put in there and be upfront. He said that the question was clear for folks to say is just inaccurate.

Stranz said that this is clearly a hard one. She called on Iverson and then Hesse. She also pointed to questions and comments in chat.

Iverson said that the stated goal it is to have IHR tailwater temperatures below 22°C, and even below 20°C if we can. He said that all of the analysis that had been presented is about DWR and LWG tailwater temperatures. He said that the analysis does not support the goal. It may, he was hearing things like this **may** benefit, we **hope** this benefits, but we are not seeing the analysis. He said that to get to Van Dyke's comment, when you think of the level of justification that was required by the fish and wildlife managers to support stopping barging at LMN. He said that Ebel did a huge analysis on population level effects. He said that NOAA promoted barging for a very, very small portion of the population. He said that the FM provided lots of data to argue their point and a decision was made. This is a huge operational change, and the amount of data and justification is not being provided that support that a comprehensive analysis has been done. He said that Ben Hausmann's, BPA, question was that Sockeye conversion is a known concern, we are all very concerned about Sockeye, they are the most threatened stock in the basin. Iverson said that he thought the FM all care about that. He said that what TMT was hearing was that FM think that TMT's current adaptive management operations at DWR would work but what is being proposed is a big shift with known consequences: if we go to 10 kcfs through July 23 we are going to have water issues in

later August when we have Fall Chinook juveniles and adults in the river. Iverson said that is a very important population for the Tribes and so they are very concerned about that. He said that we have A-run Steelhead in the river, yes, it is a small portion of the population, but it seems like that was a big concern for NOAA when we were talking about barging, but now a small portion of the population does not merit the analysis just to justify this operation. Iverson said that he thought that TMT needs a more thorough analysis of this. He said that he supports creative thinking and thought that this is an example of that and his first response to this proposal was really positive because we really should be a lot more sophisticated in our fish operations than we are but as you start to unpeel this onion there are just a lot of unintended consequences or known consequences that we just need to analyze before we implement something like this. Again, while Conder had been thinking about this for a long time, TMT have not had big discussions about this, especially in an operation this specific and so Iverson thought that was a big concern that he had.

Hesse said that he really appreciated Iverson's comments, they were right on. He said that he wanted to go back to an operation that he guessed was recently described and referenced by Ebel in terms of LMN PH outage that is expected in the latter part of August and the consequences that has or will have on adult Fall Chinook movement through the Lower Snake to get to LWG. He said as the SOR is currently proposed it is to get tailrace temperatures below LWG down to a trappable or in the trap at a temperature that allows adult Fall Chinook broodstock collections as has been extensively discussed in this forum and in other forums and committed to in the Fall Chinook Hatchery Genetic Management Plan and associated NOAA permits, that Fall Chinook trapping that occurs August 18 is super important. It represents a collection of older age structured fish and natural origin fish, that is the opportunity for that program, and it is a BiOp or permitted obligation. He said that what he sees in this operation is a whole bunch of uncertainty about actually cooling tailrace temperatures down, reestablishing the thermocline. But it seems like not even only an uncertainty, but it is a certainty that the reestablishment would not make it down below IHR when those Fall Chinook that are typically showing up coming through the lower part of the Lower Snake and as was referenced it is almost certain with this operation that adult Fall Chinook would be held up and the most important part of that population, jeopardizing their conversion, for both natural escapement, harvest opportunity, and broodstock collection. He said that it is uncertain whether this operation, how this operation supports that effective migration for the early portion. Hesse said that he needed to hear how LMN with the PH outage would further exacerbate lower river temperatures during that period. There are a lot of details there that he did not need to express, he thought that some of TMT understood those complexities. He asked for someone to speak to the certainty that adult Fall Chinook would be able to move through the Lower Snake at their normal times and not be delayed, not jeopardize their conversion rates at a time frame that allows trapping to occur as scheduled and under past effectiveness at LWG.

Stranz asked if he was asking that of a certain agency.

Hesse said that he thought that one was a modeling question given the early responses that the models do not go below LWG. He said that his assumption was that the model did not apply to adult migration temperatures in early August either. He said that he guessed that the question rolls to NOAA about their assumptions of suitable temperatures for Fall Chinook leading up to August 18 and the lead time that it takes those fish to get through the system and the effects. He said that he heard their commitment to having trappable temperatures on August 18 but what he saw written does not support fish getting there at that time. He asked what the thinking was on connecting those to dots. He said that he guessed that was a NOAA question.

Conder said that as Hesse knows, Doble testing is required and has to occur when there is no moisture and so we typically try to select a period when that can occur that is going to have the least impacts on fish. Generally, that is done in this period that we are looking at, when there is a dip in passage. Everybody kind of has to accept that is when that would occur. Conder said that he did not think that this was any different. There are fewer fish migrating, the fish really slow down in that early August period because temperatures get hot and that is just how they have evolved to move through the system. So we are taking advantage of that period of time with this operation because we know fish are naturally slowing down during that period and then once temperatures begin to cool later in August the fish begin to move. That is kind of what we are working with here. He said that it is just how it is.

Hesse said that what he heard in Conder's response was the elevated temperatures in early August, he said that what he had asked about was mid-August when those Fall Chinook start to enter into the Lower Snake River and the ability for the remaining full DWR augmentation water to effectively cool, not only the LWG tailwater but then the subsequent pools and tailraces downstream. He said that it seems like under Conder's explanation that we would be making it challenging – non-viable in early August for fish to move through the system and likely challenging – non-viable in late August for those fish to convert through. He asked if we were setting up a condition where Fall Chinook would not be able to get through the Lower Snake until early September. He said that was his assumption under this given the challenges.

Ebel said that he wanted to clarify something. He said that there is Doble testing at certain projects, but this is a ten-day, 24 hour per day full six turbine outage at LMN starting on August 18. He said that was what he was referring to and that was what Hesse was referring to, it is not the Doble testing, it is another maintenance project that could have serious consequences for Fall Chinook adult passage immediately after this operation that is being proposed by NOAA. He said that he just wanted to clarify that.

Stranz said that she wanted to give space to the Corps to either confirm what Ebel had just said or if there was anything different from their perspective for that outage.

Chris Peery, Corps, confirmed that there is an outage for the PH at LMN. It is August 18 – 28. He said that it is for isophase work and transformers. He said that this work had been scheduled for about a year now. He said that it was in Appendix A in the Fish Passage Plan. He said that there will be ~8 kcfs of flow going through Unit 5 for station

service, which means that they will be probably spilling ~70% of the river during those 10 days which is about what they have been doing last week at the end of the spill season. He said that there are options to not use the RSW if we do not want to pass the warmer surface water through the spillway. He said that the modelers do not like to do that because it does mean that the warmer water accumulates longer in the forebay and that would impact temperatures later in the season. He said that there is also the option to pool water during parts of the day so that they could spill less during early hours for adult passage if it looks like there is a passage delay that is occurring. He said that those were some of the things that they had considered for that operation.

Conder said that he wanted to note that at LMN at that time of year if you look at the forebay temperature strings there is not a lot of temperature variation at LMN. He said it is not like at LWG in July where you have a lot of difference in temperature if you are spilling or going through the PH. At LMN you are going to have very little temperature difference based on if you are spilling or going through the PH. He said that he did not expect it to have as drastic impact on temperature.

Ebel said if you are lucky and there is not a heatwave.

Van Dyke said that we are getting a lot, which is part of the pause we have again. And the information and impression of what folk expect are built on actions that are different, that were taken prior to this one. He said what seems certain is that the operational constraints are understood. He said what is still missing is how this impacts ecological function, that part is something that Van Dyke thought a lot of folks have provided their thoughts, but the details are still not very empirically based, and he was not certain that the details that were provided in the reports that TMT members had in front of them are being fully considered. The ramifications of being above 65°F in the Crozier report, for instance, or 64°F (15°C), clearly impacts all the species that are migrating through the system. He said that these targets do not seem to really emphasize the realities that the species were trying to pay attention to have thresholds, and these are thresholds that are just assuming we can teach them to overcome so the rationale that had been provided so far just seemed to fall short again. And the notion that the operation constraints are being balanced, it is unclear how that is a reality. So, TMT could keep talking about this and that might take people to new places in the conversation by it seemed to Van Dyke important to make that point.

Stranz said that at this point it might be helpful to take a quick break and come back and TMT could do a round of polling and then get everybody's additional rationale and comments. She said that a lot had been shared today so she wanted to give a few minutes for everyone to digest that. She asked if it would be helpful for folks to be able to have some time to do some caucusing right now. She said she was mostly asking for the Action Agencies (AA) who had been able to hear more perspectives today.

Charles Morrill, WA, said that he could not raise his hand (he had joined via phone call) but would like to offer a comment. He said that he strongly agreed with the comments from Hesse, Ebel, and Van Dyke's follow up from Iverson. He said that he thought one of the things that he was most concerned about is that we are proposing a fixed operation

without the flexibility to adapt based on assumptions that may or may not hold water. He said that he would not add to that, but he wanted to emphasize that he had listened to all the discussion and that he wanted to share his thought and feelings about what he had heard.

Stranz thanked Morrill and then checked with the group if there were anything that folks who had not said anything yet wanted to add.

Peery said he wanted to provide perspective from the operations perspective. He said he was not a TMT voting member but for operations. He said that Operations does support this SOR and it really comes down to the conversion rate for Sockeye and improving that rate. He said that we have a target of 50% that we want to hit and there are definitely years where we are not hitting that and other years where we are barely above 50% conversion. He said that Operations thinks this would be a benefit for the entire Snake River Sockeye run. Over the population as a whole, the Fall Chinook run conversion averages ~70%. He said that the whole population and the components of that run could be impacted by the SOR operation but there is only so much water in DWR and this is looking at a tradeoff operation. He said that he thought the model operation shown on the screen (Figure 3 above) is a good balance for that tradeoff. It brings down flows at the end of the portion of the Sockeye run that we really want to be impacted, it starts to bring it back up again around August 8, that gives it about 10 days of trying to moderate the temperatures prior to the fish trapping operations at LWG. He said again in terms of benefits to Sockeye, yes, we do not have the certainty of what that benefit would be, temperatures at IHR, but we do know that there is an issue with sockeye passage and conversion and so this is a tradeoff.

Stranz thanked Peery. She asked AAs if it was helpful for them to have time to caucus or if that was not necessary and we can keep going.

Baus said that AA would find it beneficial to have a caucus. He said that he did not know if 15 minutes worked for folks or if there was a longer/shorter time.

Stranz said that TMT would give them 15 minutes and check in and see if we can reconvene at 11 am and if they needed more time at that point, we would add it.

Erin Cooper, FPC, asked if the States and Tribes also want a caucus.

Iverson said that FM were probably good, it sounded like FM had all been saying the same thing.

Van Dyke said that he agreed with Iverson's comment. He said at this point there is not enough known to really caucus about anything that FM have not already described or talked about.

[caucus break]

Stranz asked Baus if there were any questions or clarifications before TMT moved into polling.

Baus said that he wanted to clarify that during the AAs caucus they did talk about in the event that we were to warm up during the 10 kcfs period, the Corps would increase project outflows, from 10 kcfs to 13 kcfs for example, in order to keep the LWG tailwater not to exceed 68°F. He said that he wanted to clarify as that came up in the call, if we needed to increase flows from 10 – 13 kcfs during that 10 kcfs period early on in the implementation, the Corps would do that consistent with their routine operation. He said if there were any questions he was happy to respond. He asked Walker to correct him if he misquoted that.

Walker said that he had stated that as agreed.

Ebel said that he had a question. He asked where that water would come from. He said right now TMT was looking at an operation with a fixed volume that is modeled at 10 kcfs, if you need an 3 kcfs for five days where is it going to come from.

Baus said that it would come out of that same volume of water.

Ebel asked where in time.

Baus said at this time what you see modeled and observed is the Corps' best look ahead at what forecasted conditions could look like and they would do their best to make any adjustments consistent with what was coordinated today. But Ebel was correct as far as looking ahead in forecasting it is challenging. He said that the Corps would provide any updates in the season if we found ourselves in that type of situation.

Ebel said what it does is it would make the situation that FM were talking about worse.

Baus said perhaps or perhaps better, we do not know.

f. SOR 2025-2 – TMT Polling

Agency	Poll
NOAA	Support
OR	Object
WA	Object
Umatilla	Object
Yakama Nation	Object
BOR	Support
Corps	Support
ID	Object
MT	Support
Nez Perce	Object
BPA	Support

g. SOR 2025-2 – TMT Response

Agency	Poll
NOAA	Conder said that NOAA put it forward. He said that they support this because they feel strongly about improving Snake River Sockeye survival on this one. He said that they understand that increasing temperatures to do this is not very favorable. It has implication for their species and that is of concern to NOAA. It really is, but NOAA feels the situation with Sockeye is bad enough to need this type of measure so that is why they are supporting.
OR	Van Dyke said that Oregon objected to this because they do not think that this is actually being coordinated well enough to recognize what should be expected from it and that it changes an operation that has been a strong conversion piece for quite some time. He said that it is the uncertainty of what we get with this and it is the consideration of the system impacts as well as the ecological impacts across all the species that have been listed give Oregon pause on whether they should expect any information should be gleaned from this change.
WA	Morrill said that he would defer to those who have spoken in the comments during the previous discussion. He said that he certainly echo what Van Dyke just said. He said that he thinks there is a lot of uncertainty in this. He said that the one thing that came up a little bit during the discussion is that we need to look at it holistically. He said that it is uncertain what benefits will be attained. It is clear that there are some risks to other populations. He said that the other thing that we really have not talked about is thermal accumulation or the effects of it. Ebel mentioned it early on but prior to the fish even reaching IHR what are the fish subjected to there, it may not even, if we operate at, as we have done in the past, we may still see similar effect and difficult passage conditions for Sockeye in the Snake. Morrill thanked TMT for the opportunity to speak.
Umatilla	Lorz said this is a hard one. He said that we understand that Sockeye are not doing great, and we understand that NOAA's need and desire to try more for them and we encourage them to keep working with us on this. He said that Umatilla's concern is that in these low flow years like this, and hot years, that kind of stuff like that, we could do something in early-June like this but then it could just exacerbate things so bad in August, and we have not fully talked through what alternatives, options, we have to deal with that. So, Umatilla thinks that we need more time to come up with this and we are just getting this discussion yesterday and SOR this morning and trying to implement something on this by June 29. Something that has this magnitude of impacts across there is just not enough time. Umatilla cannot

	in good conscience, until we better understand the full options or ramifications, Umatilla cannot make a change right now. Umatilla hopes that we will continue to keep working with this and try to come up with something that can work for everyone.
Yakama Nation	Iverson said that he would echo Lorz' sentiments. He said that he thought the lack of coordination prior to this SOR coming forward and then also the lack of analysis and justifying analysis that looks at the whole context of this operation. Yakama Nation very much encourages creative solutions. We are very concerned about Sockeye. He said that he would encourage creative solutions. We are very concerned about sockeye. He would encourage the AA to do what they can within the adaptive management capabilities they have for managing DWR to maybe get some colder water for these fish, but a fixed operation for this duration puts too much risk into August. So that is why Yakama is objecting.
BOR	Eric Rothwell said that he did not have a lot to add to this conversation, just supporting NOAA's position and BOR's sister agency at the Corps.
Corps	Baus said that the Corps recognizes the challenges if this conversation. He said that we recognizes the risk and issues associated with this but at the same time some risk is something we cannot avoid, we are always managing risk and so we see this as an opportunity looking over the past several years by not releasing that water down to 1535', hopefully this is an opportunity to alleviate some of that risk on Sockeye and hopefully by moving that water during the time of the Sockeye migration has an improvement on Sockeye conversion.
ID	Ebel said that the coordination of DWR operations with the State of Idaho, the Idaho Dish and Game and the Nez Perce Tribe is important to us. He said that it has improved with time to a point where we think that the Corps has used the volume of water in DWR for summer augmentation as effectively and as efficiently as possible to benefit summer migrating anadromous fish. This SOR throws that out the window. He said that he wanted to be clear that Sockeye are very, very important to the State of Idaho. Ebel said that he does not think this proposal, or this request alleviates risk on Sockeye. And Ebel said that he was not presented by NOAA or the Corps any evidence to suggest that it would. Instead, what it does is create very serious risk to Fall Chinook, both juveniles and adults, and A-run Steelhead to the negative effects of sport and Tribal fisheries in Idaho. The level of detail provided with this request does not meet the bar of best available science by any means. Ebel said that he strongly encourages the Corps to continue with the types of operations and coordinations that we have done in the past few years and for NOAA to work with Idaho to explore actual solutions to this

	problem which for this coming year appears to be very probable to arise below MCN.
MT	[Brian Marotz' chat response] Montana supports (I have many questions, but temperature management with limited cool water is important to all species and life stages. There should be a maximum temperature threshold that would cause flow augmentation to resume at some level during the low flow period in late July and early August).
Nez Perce	Hesse said that the Nez Perce Tribe is wholly committed to creative solutions that improve all of the fish species coming back into the Snake Basin to healthy and abundant levels, Sockeye included. When those types of actions are not attainable, we are wholly committed to actions that keep all of those species from going extinct and it is a balancing act across all of those. So our attention to all species, including Sockeye, is there. This proposal does not provide certainty for benefit to Sockeye, does not quantify that. It most certainly has risks that the other species however not quantified. It also does not address other actions that may be beneficial to the water temperature management, such as operations out of Hells Canyon. [connection issues] This addressed issues of alternative solutions or things that can help, such as water management out of Hells Canyon dam. [connection issues] So the Nez Perce are committed to those holistic solutions but given the risks that are likely to occur and unknown, unquantified in this analysis so far, we cannot support this going forward.
BPA	Norris said BPA is supporting NOAA's assessment of the expected benefits from this operation.

h. SOR 2025-2 – Action Item Decision – *Baus*

- The Action Agencies plan on implementing the SOR as coordinated today.

Ebel said since this would start tomorrow, he asked what the Corps' plan of alerting the public on the Clearwater River was.

Baus said he would give a moment but as far as the Corps does send out notifications, so he was assuming change in DWR operations would be sent out by normal communication pathways. He asked Walker to chime in if he had mischaracterized that.

Walker said that she could not speak to their Public Affairs or Operations but she and Oscar Espinoza, in a few hours, would send out one of their normal regulation emails saying that this operation is starting. She said that was what she had on her end.

Hesse said that he had two questions. He asked if that notification would include the flow rate/ ramp rate conditions that are contained in the current Water Management Plan (WMP). He also asked if the modification to the SOR about exceeding 10 k is going to be put into writing as well.

Walker said that they would be following the ramping as laid out in the WMP, so the ramping would start tomorrow night, and it will take a few days to get fully up to that 10 kcfs.

Stranz said and then the modification to the SOR about the 68°F about 10 kcfs. She asked who had that one.

Baus said that he could take a crack at it. He asked if NOAA Fisheries as author of the SOR if he got it wrong let him know. He said that he would offer up Option 1: Would be captured in today's meeting any clarified SOR is routine, we do clarify SORs so Opportunity 1 would be just captured in the Meeting Facilitator Summary or Minutes. Option 2: Conder could send it back out. He said that his preference would be that we do just as we had done with previous SORS just acknowledge that details of that were discussed and coordinated and they are captured in the summary and minutes. He said that he would pause there and turn it over to NOAA for their thoughts on that.

- Include change to include "not exceeding 68°F".

Conder said that he thought the summary and minutes would suffice from his opinion.

Stranz said that she would suggest that just because you can look at the SOR and then look to the minutes and the summary, but she felt like it might be worth adding that in there since folks will go back to this SOR because it feels like a significant one for people. She asked if it was difficult just to add that into the SOR and repost a new one.

Conder said if there was a process for that.

Norris asked if it could be covered in the disposition.

Stranz said sure, she was just thinking that it probably should be close to the SOR and not require folks to go looking through the minutes. The disposition might be a perfect way to do that.

i. SOR 2025-2 – Post Discussion

Van Dyke said that when we started this meeting today there was a clear indication that the SOR was not shared until, well, not very long before the meeting started. Although there has been conversation the process for this meeting in particular has bounced around pretty quickly. He said that he guessed his question was how should be interpret the rules of moving forward for SORs when in the past FM had been given clear time sensitive points for any SOR they may have to run through the TMT group. He asked if FM should now just expect to provide an SOR when we are ready for that and have that

discussion at the formal TMT or if there was some other process that we need to go through to reevaluate how the rules are being applied.

Stranz said that she heard that, and she said that she was going to suggest that, given the time of day right now, we shift that to a process meeting conversation because there is some process outlined in TMT guidelines, but they can take that up as a process conversation at the July meeting. She said that she wanted to finish the SOR polling process if possible.

Ebel said that he wanted to underscore that point here, TMT absolutely needs to discuss this. This was a pretty serious policy violation . It was very telling. He said that he wanted to make sure that note is here.

Stranz said that TMT would have time to process that at the process meeting.

j. SOR 2025-2 – RIOG

Stranz asked if there were any member of TMT who would like to signal elevation to RIOG.

Hesse said that Nez Perce at this time would elevate.

Ebel said that Idaho also elevates.

Van Dyke asked Stranz if it were necessary for all of us to share support for this notion that this particular issue has many components that require some additional thoughts and coordination including what Stranz just asked for. He asked how Stranz was expecting that TMT should represent themselves when they are thrown these curveballs if in fact, we do not follow rules in the same way when they are written. He said that he guessed his question was if she needed them to add on support for this notion, since it had already been identified a topic that needs elevation.

Stranz said that she did not think that you have to signal that you are elevating right now. She just wanted to provide the opportunity to follow the SOR process. She said that it sounded like Idaho and Nez Perce are going to elevate, others even if you do not state it right now you can still elevate. She said that she just wanted to provide that opportunity.

Lorz asked because it is going to start so soon if the AA's plan is to go forward and the wait to hear from RIOG to see if they can continue or are they going to wait to get RIOG approval and go forward. He said that this is kind of a funny one.

Baus said that the AAs plan on implementing the SOR as coordinated unless we hear otherwise from Legal and Policy staff.

Lorz said he hated to say it but that is poppycock because RIOG cannot meet quickly. He said basically the AAs are going to do this operation over everyone's objection because RIOG cannot meet. He said that he hated to say it but it seems like the game is going to be now, wait to the last possible second, do your SOR knowing we all cannot object and

elevate in time, and hope you get to do it. He said that he did not know how well that was going to sit with folks. He said that he would caution Baus to at least consider talking to your Policy folks before you implement it.

Baus said on the behalf of the Corps of Engineers, we will consult with their Policy staff on this SOR but at this time their plan is to implement the SOR.

Lorz said excellent. He said he guessed that goes along with how everything has been going this year so we will keep the track record alive.

Stranz said more to come on this one. She said that it sounded like the Corps was going to consult with their Legal and Policy folks on the plan to implement the SOR as written with the addition of the 68°F target and ability to exceed 10 kcfs if needed to meet that target. She said that it sounded like Nez Perce and Idaho, and possibly more, will work on elevating this to RIOG so we will stay tuned.

Hesse asked given the acknowledged tight timeframe if as chair of RIOG if Conder could take the lead at initiating RIOG scheduling or would he wait for Nez Perce and Idaho to elevate it with a memo.

Conder said that he was going to update NOAA's primary RIOG representative, which he believed is Nancy Munn at this point, who is NOAA's assistant regional administrator about this see if that is what she plans to do. He said that he could advise her of that but it would ultimately be up to her.

Iverson asked for clarification. He said that the SOR says this would start on the night of June 29, he said that he thought he just heard somebody say this would start tomorrow. He asked for clarification on when the action is going to occur.

Walker said that she believed that the SOR says to be at 10 kcfs by June 29. She said that they need to start ramping to get there. To follow the ramping rates, they would need to start tomorrow evening.

Morrill said that he understood the Corps is going to ask their Policy folks about going ahead to implement this at this point in time. He said that the key question is: are they going to wait to find out what their Policy folks say before they implement it or are they going to implement it and ask later. He said to him that is a little key point of concern with this.

Baus said again, as noted, the Corps' plan is to implement this as described today and if consultation with Policy leads them to a different conclusion, the Corps will notify TMT. He asked if that was a fair characterization.

Morrill said that it was kind of an interesting characterization, so you are going to go ahead and do it and should your Policy folks say no, which Morrill said he did not think they would. He said that it seems to him to be a little - not straightforward to say we are going to implement it without approval from our Policy folks.

Stranz said that she thought what the Corps was saying was that they are planning to move forward to implement and if after talking with Policy that position changes then they will circle back to the region. She said that there will be coordination with Policy and Legal.

Morrill said that he heard that but given the discussion that TMT had today that was a little incongruous to him [the connection becomes garbled at this point] given the objections from the agencies.

Ebel said that he did not bring this up but in the SOR it says emergency adult Sockeye trapping may occur LWG in conjunction with this request. It is separate from this request, if it is decided that it is necessary. He said that he wanted to make sure that was clear to people.

Stranz said that she knew this was a hard one and she appreciated everyone's attention to it and questions and comments. She said that TMT was going to move on now to a quick operations review.

5. Operations Review

a. Reservoirs

Reclamation – Eric Rothwell

- Hungry Horse Dam
  - Outflows: 0.8 kcfs
  - Elevation: 3556.51 feet
  - Future Operations: Outflows will probably increase in early July from their current outflows.
- Grand Coulee Dam
  - Outflows: 95.3 kcfs
  - Elevation: 1286.3 feet
  - Future Operations: On track to refill after Fourth of July weekend. So they will fall short of that refill right before the weekend and will fill a half a foot a day and reach the highest point mid-month, which is short of total refill to reflect the Lake Roosevelt incremental storage release operation.

Corps – Catherine Dudgeon, Corps

- Libby Dam (Lake Koocanusa)
  - Elevation: 2440.5 feet
  - Inflows: 15.6 kcfs
  - Outflows: 8.0 kcfs

- Operations:
  - LIB will continue to ramp down to Bull Trout minimum flow at ~7 kcfs.
  - After Friday July 27, outflows will remain at 7 kcfs until further notice as flows maybe slightly lower than 7 kcfs, about 6.8 kcfs, as units will be operating near the rough zone where cavitation is a concern

- Albeni Falls (Lake Pend Oreille)
  - Elevation: 2061.7 feet
  - Inflows: 20.3 kcfs
  - Outflows: 20.2 kcfs
  - Operations:
    - ALF will continue to operate in the summer operation band of 2061 – 2062.5 feet.
- Dworshak Dam
  - Elevation: 1599.91 feet
  - Inflows: 3.5 kcfs
  - Outflows: 3.2 kcfs
- Lower Granite Dam
  - Inflows (6/24): 41 kcfs
  - Operations:
    - LWG is operating within the MOP range of 733 – 734.5 feet.
- McNary Dam
  - Inflows: 154.5 kcfs
  - Operations:
    - Grebe nesting season has begun.
    - Soft constraint of 337.5 – 339 feet until July 19.
- Bonneville Dam
  - Inflows: 155.05 kcfs
  - Operations:
    - Finishing up this week's Tribal Treaty fishing today.
    - They are planning on skipping next week expect to more fishing to start Monday, July 7.

b. Water Quality – *Alexis Mills, Corps*

- TDG

- As of Saturday, we are at Summer Spill at all Fish Passage Projects.
- We are at or below the Water Quality Standard of 115% forebay and 120% tailrace.

- Server Outage
  - June 18
  - Working to repopulate that data

Iverson said that he had noticed that we have not had many exceedances this year if any. He asked if that was due to the Corps' excellent management of spill this year or is it because just conditions.

Mills said that she would love to credit that to her skills, but unfortunately that is because we have had pretty low flows this year. The freshet was pretty lackluster so we were only minimally at the spill cap during the 125% gas cap operations.

c. Fish

**TMT would like to caveat that the 10-year averages are NOT their management goal, and the 10-year averages are well below the goals that TMT has for total returns/abundance coming back.*

Salmon – Kelsey Swieca, NOAA

- Juveniles
  - Yearling Chinook
    - Small number still out-migrating
  - Subyearling Chinook
    - Smolt Passage Index (two-week average)
      - Bonneville 8400 - 34000
  - Steelhead
    - Low out-migration
    - Smolt Passage Index (two-week period)
      - Bonneville: few hundred/day
  - Sockeye
    - Out-migration is pretty much done.
    - Smolt Passage Index (two-week period)
      - Bonneville: few hundred
- Adult Salmon Counts
  - Summer Chinook

        - Shifted to a Summer run at all Projects
        - Passage Index per day
            - Ice Harbor: 270 – 500
            - Priest Rapids: 500 – 1500
        - Ten-year YTD Average:
            - Ice Harbor: 103%
            - Priest Rapids 108%
    - Steelhead
        - Still early in the season
        - Passage Index per day
            - Bonneville: ~200
        - Ten-year YTD Average:
            - Bonneville: 62%
    - Sockeye
        - Starting to make it back to the upper river Projects, both in the mid-Columbia and the Snake area.
        - Passage Index per day
            - Lower Granite: single digits per day
            - The Wells 194
        - Ten-year YTD Average:
            - The Wells 47%
            - Lower Granite 0%
            - May be an indication that the run may be earlier than expected
    - Chad
        - Passage Index per day
            - Bonneville: hundreds of thousands
            - McNary: 3500 - 55000
        - Ten-year YTD Average:
            - McNary: 102%

d. Power System – *Tony Norris, BPA*

- Cool weather in the near term.
- There are a few temperature rises coming in the forecast, but no issues expected.

6. **Set agenda for next meeting – July 2, 2025**

   Meeting Location: Microsoft Teams

   a. **Sockeye Conversion Update**
   b. **Dworshak Water Management Update**

Chat Log

| *Ben Hausmann (Unverified)10:08 AM*

| *As a relatively new TMT member without the Dworshak op history, I have a question. I get that there are concerns about uncertainties with the model, unknown heat wave occurrence, process, etc. But beyond the uncertainties and with a known sockeye conversion issue that may benefit from this op, what are the specific potential negative fish impacts that are being weighed against that benefit? I've heard LWG trapping impact and perhaps harvest opportunity--are those the main concerns?*

| *Erin Cooper (Unverified)10:11 AM*

| *With this operation, temperatures could go well above 69.5. This situation is very different from the earlier SOR when the tradeoff was accepted for a maximum temperature of 69.5.*

| *Ben Hausmann (Unverified)10:39 AM*

| *LMN isophase work needs similar weather conditions to Doble testing. Like Chris said, it's in App A.*

| *Brian Marotz - Montana (Unverified)11:14 AM*

| *Montana supports (I have many questions, but temperature management with limited cool water is important to all species and life stages. There should be a maximum temperature threshold that would cause flow augmentation to resume at some level during the low flow period in late July and early August).*

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	Tom Iverson
Bureau of Reclamation	Eric Rothwell
Army Corps of Engineers	Doug Baus (Chair), Lisa Wright, Aaron Marshall
US Fish & Wildlife Service	
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 – Tiffany Stoeckig-Dixon, Oscar Espinoza, Catherine Dudgeon, Richard Hilt, Christopher Peery, Leon Basdekas, Alexis Mills, Willow Walker, Michelle Yuen, Patricia Madson

BPA – Tammy Mackey

NOAA – Emi Melton

Oregon DEQ – David Gruen

Washington Ecology – Thomas Starkey

Flathead County Commissioner – Randy Brodehl

DS Consulting – Emily Stranz (Facilitator), Colby Mills

CorSource – Andrea Ausmus (BPA note taker, Contractor)

EKI – Travis Togo

NPCC – Kate Self

PGE – Phil DeVol

Snohomish PUD – Scott Richards

Chelan PUD – Lance Beyer, Jay Fintz, Carl Bertilson

FPC – Erin Cooper, Noah Campbell

Energy EPS – Joshua Rasmussen

Avista – Patrick Maher

Unaffiliated – Shea Frantz