

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

September 9, 2026

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/2026/>. 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 August 26, 2026.

Fall Spillway Weir Operations Update

Tony Norris, BPA, presented a [new tiered operating strategy for fall spillway weir \(SW\) operations](#) under low-flow conditions. The Action Agency's (AA) plan is intended to give project operators and real-time schedulers a clear, repeatable, and reliable way to operate when flows are low, data may be incomplete, and continuity-of-operations issues arise. The 2026 FOP calls for 24/7 surface passage at all six projects, but current low-flow conditions make that difficult to implement as written. From the AA's perspective, the new guidance is meant to balance several system requirements: minimum generation, miscellaneous project flows, uncertainty in inflows and incremental streamflows, forebay management, reduced gate changes for long-term maintenance, and continuity if data or communications systems fail.

Tony described three operating tiers for the Lower Snake River projects and lower Columbia/McNary (MCN) tiered operations (for complete details see plan posted to the TMT website). He noted that timing could be adjusted earlier or later at the discretion of project operators/duty schedulers if spill occurs for four consecutive hours, with possible adjustments between 0400 and 1200 hours. John Day (JDA) is currently below the threshold needed to keep the SWs open under this new operation. Tony noted that operations at JDA are more complex because it requires a crew and gantry crane to open and close the temporary spillway weirs (TSW), those actions can only occur during daylight hours/weather permitting, and about 3 business days advance notice are needed. If inflow forecasts improve enough, one or both weirs may be reopened, but that would be evaluated later based on forecast conditions.

Multiple TMT members acknowledged and appreciated the additional information and details on how the AAs are operating, noting a need to digest and continue to track and dialogue on how to best meet the intent of the spill operations and system requirements. NPT, CTUIR, WA, ID, and OR TMT representatives raised several concerns and points for additional conversation:

- Need for shared data and transparency. The [crohms.org](https://public.crohms.org) public data system is currently down (the USACE is working on fixing the issues but is unsure when the data will be available). Additionally, there was concern that the AAs are making decisions that impact the system using data that are not available to all TMT representatives.
- Use of previous-day average versus top-of-hour data (for some operations) as operation triggers.
- A need for regional consideration and thinking on alternatives (deep spill, storage) and broader water management options that support continued SW spill operations.
 - Tom Lorz, CTUIR, asked about using deep spill, specifically at JDA; from CTUIR's perspective deep spill could be implemented to deal with low flow conditions.
- Need for additional information and monitoring.

Tony clarified that the system must be managed conservatively during these low flows because of uncertainties: the operators do not have perfect knowledge of inflows, especially at Lower Granite (LWG) and in the lower river. He reiterated that the tiers were selected to provide consistent, reliable operations that real-time staff can implement while managing uncertainty. Additionally, there was no separate “spill priority list” in the guidance because the issue is not prioritizing one project over another; rather, it is whether there is enough water available to meet all the requirements. Each project is managed based on inflows and local constraints.

Tony also clarified that BPA is using actual operational data, not relying solely on model forecasts. He acknowledged that while the public data system was temporarily down, limiting what TMT Members can see, BPA has access to different real-time feeds and finer-scale data internally. He noted that the data source is essentially the same, although internal and public views may differ in aggregation and timing. BPA is planning conservatively at MCN by assuming the maximum of the min gen range, because it provides the buffer needed to manage uncertainty, miscellaneous flows, and power reliability; MCN’s margin is narrow, and the plan is built around what can reliably be implemented under low-water conditions.

BPA is still evaluating the new operation during the first full week of very low flows. If the current plan is refined, AAs will bring updated guidance back to TMT and share any lessons learned from the first week of implementation.

Throughout the discussion, TMT Members made the following requests from the AAs:

- Provide clearer documentation of how the tiered operation rules were developed, including how min-gen, miscellaneous flows, and uncertainty are balanced.
- Explain why the plan uses previous day’s inflow average instead of top-of-hour / real-time data for setting operations.
- Revisit whether the operation is overly conservative (i.e. using maximums from a range); can SW spill be maintained longer if maximums are not the triggers?
- Check whether there is a spill priority framework or similar guidance for deciding where spill is maintained or curtailed.
- Review historical JDA operations, especially 2024, to verify whether one TSW has been operated at similar flows before and what limitations existed.
- Investigate whether JDA can use deep spill as an alternative when surface spill cannot be implemented.
- Consider whether small operational changes at the mainstem dams or in forebay management might stabilize flows enough to support continued SW passage.
- Share more information on the inflow data being used, including whether hourly inflows can be made available.
- Restore crohms/public data access ASAP so TMT can independently monitor operations.
- Make the operational data and assumptions transparent to the full TMT.
- Monitor and share carryover / reservoir storage information with TMT, especially for GCL and other relevant reservoirs.
- Explore broader basin water-management options to help maintain minimum flows needed for spill operations, if feasible.

Non-Court Ordered Operations Review

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

- **Hungry Horse (HGH):** Inflows yesterday were up to 2.33 kcfs (from recent precipitation in the Flathead), outflows have been holding at 3.0 kcfs for a couple weeks. Midnight elevation was 3,548.6 feet, and the project continues to target its end of September elevation of 2,544.1 feet.

- **GCL:** Yesterday's inflows were 63.3 kcfs, outflows were 55.2 kcfs, and midnight elevation was 1,278.49 feet. The project hit its end of August summer flow augmentation draft requirement of 1,277 feet on August 31; refill has started in preparation for the chum operation in November.

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

- **Libby (LIB):** Current elevation is 2,445.3 feet, yesterday's average inflow was 6.5 kcfs and current outflow is 6.5 kcfs. Outflows are set for the bull trout minimum and are likely to remain for the rest of the month; the extra 500 cfs is due to unit maintenance, which is running at speed-no-load. Current return to service is September 21.
- **Albeni Falls (ALF):** Elevation at the Hope gauge is 2,062.3 feet, yesterday's average inflow was 12 kcfs and current outflow is 13 kcfs. Lake Pend Oreille is within the summer band of 2,062.0-2,062.5 feet
- **Dworshak (DWR):** Current elevation is 1,528.4 feet, yesterday's average inflow was 1.6 kcfs and current outflow is 8.7 kcfs.

Following a request from Brian Marotz, MT, Tony will forward information from Greg Hoffmann on last month's LIB power emergency.

Fish – Dave Swank, USFWS, reported that adult fall Chinook counts at BON are strong, roughly 15,000–19,000/day over the past week. Adult coho counts increased, with recent passage index of around 2,900 and some days nearly 5,000. Steelhead are still moving upstream, but below the 10-year average.

The adult lamprey run is near the tail end and still well below average; about 44,059 adults total, with lamprey passage occurring mostly at night.

Regarding concerns on “empty data,” on the FPC website, Erin Cooper, FPC, confirmed the site relies on data from the crohms site and will be populated when the crohms system is back up.

Power System – Tony reported the power system is meeting load; warm weather is at an end and there is not a lot of water in the system.

Set Agenda for Next TMT Meeting

TMT Members may send agenda items to Doug Baus or Emily Stranz. A draft agenda will be posted to the TMT website by Monday COB. As a reminder, TMT meetings have switched to an every-other-week cadence.

Questions or Comments from Non-TMT Members

There were no questions or comments from non-TMT Members.

The next TMT meeting will be on September 23 at 9 AM PDT.
A DSC Process Meeting will be held following the TMT Business Meeting.

**Columbia River Regional Forum
Technical Management Team
OFFICIAL MINUTES
Wednesday, September 9, 2026**

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. Introduction of New Member

Charlene Hurst introduced herself as a new member of TMT. She joined the Technical Management Team from Washington Department of Fish and Wildlife. She has worked closely with Charles Morrill and Thomas Starkey. This is her first TMT meeting. She is Washington's Columbia River manager.

2. Review Meeting Summaries & Minutes – *Emily Stranz, DS Consulting*

- a) August 26 Minutes
 - Approved

3. Fall Spillway Weir Operations Update – *Tony Norris, BPA, and Doug Baus, Corps-NWD*

- a) [TMT Coordination](#)
 - Posted BPA's fall operations to the TMT webpage primarily focused on how BPA will operate during low flow conditions.
 - Current low flow conditions are affecting the ability to provide 2026 FOP Surface Passage at all hours.
 - The 2026 operation is a new operation requiring 24/7 surface weir passage at all projects.
 - Per Section 4.1 of the [FOP](#); we need to be able to continue to meet all of the requirements of the project minimum generation, miscellaneous flows, and managing around uncertainty of inflows and incremental stream flows and balancing the need to provide the surface passage flow. Including the data gap (as seen on the public sites) that can pose a continuity of operations issue.
 - Simple guidance that can be followed by BPA's Real-Time that are scheduling the system and the Project Operators. It is important that folks at the projects and our Duty Schedulers have some clearly defined operations for them to operate outside of any issues with data or communications.
 - BPA has implemented a tiered strategy so there is a clear, repeatable, and reliable guidance to operate the system and minimizes gate changes on the system (a concern for the long-term maintenance of the projects).
 - Lower Snake
 - > 25 kcfs: Spillway is open all hours
 - 18 – 24.9 kcfs: Run 12-hour blocks (0500 – 1700)
 - < 17.9 kcfs: Spillway will close – open for a 4-hour block (0500 – 0900)

- Lower Columbia – McNary (MCN)
- > 90 kcfs: Both TSWs open
- 80 – 89.9 kcfs: TSW 20 on all hours
- 75 – 79.9 kcfs: Close both TSWs no later than 0300. Reopen TSW 20 for 12-hour block (0500 – 1700)
- < 74.9 kcfs: Close both TSWs no later than 0300. Reopen TSW 20 for 4-hour block (0500 – 0900)
- There may be need to adjust these strategies at the discretion of the project managers or duty schedulers if spill occurs for four consecutive hours between 0400 and 1200.
- This is the first full week of very low conditions.
- John Day (JDA)
 - Currently below the threshold to be able to have the surface levels open.
 - JDA requires a crew and a gantry crane to open/close the TSWs during daylight hours (as weather allows). JDA requires ~3 business days of advance notice.
 - When inflows are high enough, one or both weirs may be reopened. JDA will evaluate if inflows look to increase sufficiently
- Next Steps:
 - BPA is evaluating the implementation of the new operation.
 - BPA will potentially resubmit a similar notification with any refinements based on lessons learned.
 - BPA will evaluate and consider any useful input from TMT participants to be included and would be presented at a subsequent TMT meeting.

Jay Hesse, Nez Perce, said that he appreciated the document and BPA establishing some detailed operational criteria and including an explanation of that. He said that it really helps in the transparency. He said that he understands that it is complex, especially under the low flow conditions. He said that he thought that these details are useful for all of us. He said that he was still taking some time to think through and digest what Norris had provided. He said that he had two questions. One was looking at the September 3 data, as it was what was more recently available on the CROHMS site to look at spill. Using Lower Granite (LWG) as an example for September 3, the average daily flows there were right at the threshold or maybe slightly below what would be required to meet minimum generation and the spillway weir flow volume over that 24-hour period. He said that was not what was implemented, there were constrained hours of spill where there was no spill provided but there were hours of increased generation. He asked how the rules were set that BPA had put together, taking into account maximizing the maintenance or implementation of the desired spill versus just transitioning that spill to generation. He asked Norris to shed light on how the rules that BPA put together balanced those things.

Norris said that BPA had to set rules that allowed them to manage the forebay and all of the other constraints, including providing the miscellaneous flows as well. LWG does not have perfect knowledge of inflows to Lower Granite, so BPA needs to be able to have room to be able to operate and manage around that uncertainty. He said that the tiers, the

number of hours for the blocks, and the number hours were set so that they were repeatable and reliable and consistent with a consistent methodology that makes it simple enough for BPA's Real-Time to be able to manage as they are scheduling the system and managing the whole system, as well as making sure that the Project Operators have a clear guidance if there are any continuity issues with communication or data.

Hesse said that he understood and that it will be helpful to see how this plays out. He said that he guessed that he would be engaged, and he thought that others would be to make sure that we are maximizing maintaining that spill in light of all of that uncertainty and that we do not default to just turning spill off because of that uncertainty. He said his second question was in implementation of curtailing spill at individual projects, and systemwide management was there something similar to the spill priority list within BPA's guiding documents that is trying to prioritize where spill is maintained or where it is foregone, either in hours or place.

Norris said no, because this is about low flow, so it is about having enough inflow to meet all of the requirements at the projects and being able to have consistent reliable operations around any uncertainty there is regarding inflow and being able to operate the projects on all hours within all those requirements. Each project is going to be based on, like MCN in particular is going to be different because it has more than one flow input and the uncertainty of the operation immediately upstream of MCN. The Snakes are a little more predictable because outside of LWG, where it all starts, downstream of LWG they will be operating the system to pass that inflow. These changes are all based on inflows, we cannot simply prioritize one over the other because it is just a matter of if there is enough flow and BPA needs some reliable and consistent criteria to implement.

Hesse said that made sense. He said as we refine and look at the concept of a kind of the inverse of a spill priority list, in terms of maintaining spill versus adding. It might be a useful concept, he would have to think about it more. He said that it seems to him that the inflows to the system are projected to decrease given the pending reductions of Dworshak (DWR) flow augmentation that are scheduled under the Dworshak Board's management of those releases over the next ten days or so. He said what he had read in the document that Norris provided was also the anticipation that the flows out of Grand Coulee (GCL) are about to be reduced more in order to do some reservoir filling there. He asked if he was reading correctly that the current flows are impacting the ability to implement but are likely to get more challenging in the near future. He asked if that was accurate.

Norris said in a way, right now, we are tracking the Bonneville (BON) minimum to refill GCL to prepare for the Chum operation that begins in November. BPA is planning the system to be tracking somewhere between 70 and 80 kcfs at BON. Norris said that he would expect that to persist until either precipitation or stream flows have changed, at least for the lower river projects. As it relates to the Snake flow, yes DWR releases are expected to taper off as planned but he believed that the Hells Canyon begins to come up for Fall Chinook spawning. He said that he was not sure about the timing on that, or when that begins. That may supplant the reduction at DWR, but Norris was not sure about the schedule for that. He said that this was a typical time of year, especially on the Snake, where we see low flows, this is not atypical for the Snake.

Jonathan Ebel, ID, said that he did not expect flows from the Hells Canyon Complex to increase from where it was now for Fall Chinook spawning at least in any meaningful

amount. He said right now it was at ~9500 cfs. He asked if he had heard correctly that both spillway weirs at JDA were closed. He said last year there was kind of the 4-hour spill operation of the spillway weirs, flows were a bit higher than this year. In 2024, it was a 24-hour spill weir operation with one spillway weir. Inflows were close to the low flows that you see now. He asked Norris to explain the difference between this year and 2024 and why one spillway weir would not be able to be open at JDA today.

Norris asked if Ebel was sure that BPA had spillway weir operations at JDA this time of year in the past.

Ebel said that it looked like hourly spill was between 9 and 12 kcfs in early September, up until September 15, maybe.

Norris said not for steelhead overshoot operations. He said that it may have taken them some time to get the spillway weirs closed but we would have to go back and take a look.

Ebel said that it was until September 13 and the hourly inflows were in the mid-60s and low-70s.

Norris said that he would have to go back and take a look.

Ebel said that he was just pointing it out and asked if Norris would take a look because it looks like we did not have 24-hour spill under whatever scenario. He was just pointing out that it looks like it is not without precedent to have one open at these flows at JDA unless something else is different. He said that was his point. He asked Norris to explore that to keep peace in the valley.

Norris said that he was not sure that had occurred in the past at JDA.

Ebel said that he was looking at the data, but okay.

Stranz asked if there was anybody else who had input on this topic or if it was something that would be helpful to take some time offline to look into the details.

Trevor Conder, NOAA, said that it would not be a BiOp operation. He said that he would check to see what the limitations were on the powerhouse at that time. They might have been doing some kind of double testing. He said that he would look into that and make sure the powerhouse flow was actually at min-gen at that period and those kind of details, but it was not a BiOp operation.

Ebel said he would look at that.

Stranz said that Ebel has some more things to dig into.

Ebel said that they had talked about this in the process meeting about not putting links or limiting those to minimize distractions.

Norris said that BPA did not have a fall spill operation at JDA last year.

Ebel said until September 13 in 2024. He said that he could not recall and would have to look it up, but when he looked at the data, he could see that there was a spillway weir open in early September 2024, it flows similar to today. He asked Norris to explore that and if there were an option.

Stranz said that TMT did not necessarily need to figure this out at this moment.

Ebel said that one thing that was not being shown, that he was appreciative of, because the Action Agencies manage the pool elevations and the flows are low enough that they do not change that rapidly, but they manage the pool elevations for market reasons, other reasons. He said what was lacking in looking at the data in the memo is the demonstration that the minor changes, even potentially imperceptible changes in forebay operations would stabilize flows at a high enough level to allow for surface passage.

Norris said that there is not enough water at JDA to do that. When they have enough water, they would open one TSW when they can if it appears that they would have stable enough flows to maintain that, and then when there is enough water to open a second one, they will open a second one.

Ben Hausmann, BPA, said that he wanted to mention that there was an MFR that went out end of August 2024 and it was a spillway crane failure, so they were unable to close the TSW. HE said that he wanted TMT to understand that was the rationale of why it went into September.

Ebel said that one thing that is shown, looking at the generation data now. It shows that it could be done in 2024 and that makes sense. He thanked Hausmann. He said that it looks like it could be done, he asked that BPA considered it.

Charles Morrill, WA, thanked Norris for the details that he provided and Hesse's viewpoints to support that. He asked Norris about one of the tools that TMT has to look at least at MCN is the RCC provides inflows, 50 kcfs is the minimum powerhouse that we are running. He said that when he looks at the current RCC projection, we are looking at enough water to operate both of the TSWs at MCN. He asked Norris to explain that one to him. He asked if Norris looked at different numbers for MCN.

Norris said absolutely, the model run provide by the Corps is just a forecast and we have to operate to what is actually on the ground and right now we are well below the threshold to provide TSW flow at JDA.

Morrill said that he was not talking about JDA, he was talking about MCN.

Norris said that BPA expected to be in the low flow range, the model run is just a forecast, it is one forecast, it is a single trace, it does not necessarily represent actual probabilistic outcome, it is just a guideline based on stream flows that are provided probably via RFC. Right now we are not seeing flows in that range, they are seeing flows a little lower.

Morrill said that he would express disappointment that the CROHMS system was down and that information was not available for TMT to monitor and look at. He said that he did not necessarily think that the RCC forecasts were that far off, but he would defer to look at what the information is that we have available.

Stranz said that TMT did receive a message from Doug Baus yesterday about the system being down. She asked if there were any updates from the Corps on when that data would be available or was it still a work in progress.

Baus said that as far as the current update goes, as a lot of folks out there are tracking a lot of data out there are lacking. We are investigating the issue; the specific date or time is not known when all that information will become available. He said that they are tracking it, some things are becoming available at this time, and the ultimate date/time of resolution is not known. He also said that he would like to highlight that he agreed with

Norris' assessment and to acknowledge the RCC part, the forecast that go out they are what they are. Generally speaking, in the near term the forecasts are better, however beyond the near term they shift to climatology, generally that is a median trace and may not have the level of precision needed. He said that he wanted to highlight the reality of that forecast tool.

Morrill asked Baus if he had the ability to call powerhouse and find out what the previous day's average powerhouse and spill were. He said that he presumed that they had that ability.

Norris said that they are using the previous day's inflow to set the following day's spill. At MCN the previous day's inflow was just under 77 kcfs. He said that he believed they started per the guidance there, they started a 12-hour block at almost 0500, as noted in Table 4 in the document that was provided.

Morrill said that his question was at 77, 50 plus 18 is 68. He said that gives you about 10 kcfs difference.

Norris said that they cannot plan on the very bottom of the Min-Gen operating range. He said that they need flexibility. Min-Gen is a range, and we need to plan on having that minimum generation range available. From a planning standpoint we need to plan the rivers so that we do not violate all of the other requirements and be able to manage the forebay so we need to be able to plan on having that Min-Gen range available.

Morrill asked how much variance around that minimum generation if we take 50 kcfs as minimum generation at MCN. He asked what the range was on that so TMT had a better understanding of why when they see figures of, yes, the RCC is a forecast, but the single trace for the next five days is typically close to 80 kcfs. He said that he would like to have a better understanding of just how you are looking at previous days' flows when the information that is available to the Fish Managers suggests that there was enough water to run both surface weirs.

Norris said not to forget to add miscellaneous flows, we have miscellaneous flows of the project and the fish ladders and nav locks and all of those appurtenances. So BPA has combed through this carefully to find an operation that was going to work, and BPA is going to evaluate this over the coming week and provide any updates if they could and if any of it made sense. But right now, they need to have a reliable, predictable operation that could be implemented by their real-time folks.

Morrill said that he understood and appreciated that, but he just would appreciate having more information to understand exactly what those concerns are and make sure that you are able to meet them and that we understand why we were limited to blocks of time for only one surface weir.

Norris said that was why BPA had provided this document to outline those concerns.

Stranz asked Morrill if the reason that he did not have the information that he needed right now was because the data systems were down or was it because they only have access to the RCC forecast.

Morrill said one of the reasons was that the CROHMS system was down, we have the RCC forecast information but then again BPA has information that it is proprietary for their operation that some could be shared and some could not be shared and he understood that. He said that he was just seeking clarification so that we fully understand

where we are going. He said that he appreciated the rules and the guidance that Norris/BPA had provided and it helps them understand. When we get the CROHM back up, that would be helpful and he was sure that Norris and Baus would share what they can at the next TMT meeting or perhaps between.

Erick Van Dyke, OR, said that he appreciated the conversation, it is a difficult moment. He said that it was good to see that there is effort here to try to come up with a plan that is functional. He said that there was still some uncertainty about how to interpret some of that at this point, so it is still a work in progress and that he hoped that folks understood that. He said that what he was hearing about data is that maybe the data that the Fish Managers have depended on in the past from CROHMS is not actually driving the operational decisions real-time and there is another dataset that was not available to this group regularly is what is actually being used so it is a little confusing at this point. He said that he assumed that it was BPA's dataset given all the other actions that are in play here. He asked Norris if that was accurate and if there was potential that information could start being shared more regularly with this work group.

Norris said that the data was the same it is just that BPA has different feeds and real-time feeds, so it is not different. There are some computations that might have some decimal dust differences but right now that was not really what was a stake. He said that each of the TSWs of MCN are worth about 10 kcfs a piece and with 60 kcfs of minimum turbine at the upper end plus ~5 kcfs of miscellaneous spill leaves us only ~5 kcfs of buffer at MCN, in particular, to manage around Mid-C uncertainties, and that is about 90 kcfs. He said that he knows that it is frustrating that the Fish Managers cannot see the data, but of course you know we need to keep the lights on, so we have another set of reliable data to make sure that our systems are secure to make sure that is reliable during continuity of operation conditions. In spite of the fact that the Fish Managers are not able to see it, BPA does have the ability to see it but that is not always the case, sometimes all of the communication goes down, and they have to pick up the phone, and sometimes the phone cannot be picked up. We can see unpredictable large swings in the outflow from the Mid-C and we have to be able to account for that using the forebay and a buffer. He said that it is not a spreadsheet operation that they can narrow the operation down to the last couple of kcfs. That is something that is not a prudent way to operate the system. So BPA had to come up with a plan that they could implement based on that uncertainty and to be able to provide all of the objectives: min-gen, miscellaneous flows, fish ladders, forebay constraints, and any other constraints that we have on the system during this time.

Van Dyke said that the question was if that information that Norris was speaking to was available to the workgroup and what he was getting from what Norris said, which was quite a bit, was no. He said that it was difficult to realize that within this memo that the range has kind of been obliterated to the maximum, so the Fish Managers are recognizing that. This hedging of operations has kind of been modified a little bit from what has been shared in the past in terms of range versus the maximum being included with additional flows being added on top of that. He asked Norris to recognize that he was hearing that and it is not the same. He said that was important to him to share out loud and to try to figure out how this workgroup is going to function through this time when we are being told how folks are going to try to approach this with a document like this one and we are going to have to watch and see how it works. He said that it is important for him to know the nuts and bolts to be on top of the responsibility that he has with this group.

Stranz said that she wanted to go back because he heard Norris say that the data that TMT typically has access to is the same data that BPA is using and Van Dyke heard something different, so she wanted to ask Norris to clarify that one more time.

Norris said that BPA sees it on a much finer time scale. It is aggregated to hourly averages for the public facing side. He pushed back on what Van Dyke was mentioning. The MCN min-gen has always been expressed as a range and it is expressed as such in Table 1 of the FOP, so he was not sure why there was confusion there.

Van Dyke said that this memo indicated that BPA was using the maximum of that range.

Norris said yes, because BPA needs to make sure that they can meet and respond to constraints. He said that it is different than when we have a lot of water around, but we do not have the water to overcome any conditions so we cannot bank on the lower range. We need to be able to make sure that we have got the flexibility to provide power system reliability within the range and is that is why BPA were assuming the maximum of that range, because we simply do not have the water in the river.

Van Dyke said that the water was in the river when it is provided. They get that. What he was identifying as a hedging approach where you are using the maximum when in fact in the past, we have used the range as the range with a minimum and a maximum. He said that he was not interested in really holding up today's conversation about that knowing that it is likely we are going to be watching an operation. He said what he was worried and asking for is that there was better communication within the workgroup on what was happening and the information that is being used to make the decision is available to the group, not just one or two people. That is helpful in assuring we can share with others what is happening and that we work together to have an operation that functions the way it was intended. It is not a direct statement toward any one individual it is about the process and how we can work together to make this work better. That is what he was after. Van Dyke had another question and made a request that if carryover could actually be monitored and shared with the work group through this process.

Norris said that he was not sure what Van Dyke was referring to with his question about carryover.

Van Dyke explained that he was referring to the water stored in the reservoir that is called carryover. That is essentially what has been stored from a period before.

Norris asked if Van Dyke was referring to the Upper Snake carryover, like the irrigation.

Van Dyke said that was one place that he had seen that, he thought that he had also saw it in a few other locations where you have a storage reservoir. He asked if it was possible to track it that way.

Norris said that he was not really sure what storage reservoirs that Van Dyke was referring to, if it was the Upper Snake, then there is a whole process for that. He said that Bureau of Reclamation would have to chime in in that regard.

Van Dyke asked if it was GCL and CHJ.

Ebel asked what carryover?

Chris Runyan, BOR, said if Van Dyke was actually asking for carryover in Reclamation storage reservoir at the end of irrigation season this year, he could provide that for sure. He said that they are winding down to most reservoirs will stop their draft by about the

middle to late-October to maybe late-October. He said that he could give that to Van Dyke. He said that he did not know which projects that Van Dyke wanted but they could work on that.

Van Dyke asked if he could call Runyan offline to figure out how to do that and how it would work. He said that it was obviously coming as just a question. He said helping to understand how we might monitor that would be useful. He said that he thought in this situation it would probably be GCL that he was trying to have a little more information about.

Stranz asked that Van Dyke and Runyan work on that offline.

Tom Lorz, Umatilla, said to Norris that it looked like going to this previous day average model, it is kind of adding some other complexities to it because before BPA used to just do the top of the hour, they would have their forecast top of the hour and would set operations based on that. That was what we have historically done in the past. He said that he was wondering why we were not using that model because BPA get top the hour and say that is a much finer scale, they have the data to support that, they have operators that operate that way. It just seems that would be a cleaner, more simplistic way of doing it, so at the top of the hour you look at it going like we will have flows to operate at a TSW at LWG and it is a push button operation and that is how we have done it, that is what we do in August normally. He said that he was wondering why we went to this previous day average which seemed to add complexity.

Norris said that using the previous day inflow is done to reduce the number of gate changes and also to have a stable operation that we can reliably implement. It is a different story when we have a lot of water in the river but when we have very little water in the river we are having to plan further ahead to make sure that we can manage the forebays as well as the other variable inputs into the system for uncertainty. There is less margin for error when there is less water.

Lorz said that it just seems like you could still have a normal operation. He said that he understood why they are trying to limit the gate operation for MCN, but you are only operating one gate now off and on. If you plan like two hours ahead, it seemed like that would be a much simpler thing than having to try to use the day previous averages and get yourself processed, because it just looks funny when you are bringing out more generation, but you had opportunity to bring a TSW online. He said that was where we are trying to figure out if there is a better way of doing that. He said his follow-up question was given that JDA has trouble with the TSW opening and closing, has BPA considered using deep spill there as an augment and you could basically feather that in at a lower level, it would not have to be the full 9 kcfs and still provide some level of spill that was ideally thought of needed.

Norris said that the 2026 FOP calls for surface spill and not deep spill so if BPA cannot provide surface spill, then the surface spill will close.

Lorz said that he guessed that Norris was drawing the line that surface spill has to be surface spill regardless, even though that was not what people were going for necessarily, they were just trying to provide a passage route for adults and downstream migrants.

Stranz said that Morrill was on the same page as Lorz.

Lorz said since they have not had CROHMS, when he was looking at CROHMS, it looked like BPA was doing a slight fill on JDA because they have been released from basically mins but now you can get a full MOP. He asked if they were doing a slight fill at JDA and if so could some of that be of help to smooth operations out to maybe provide at least one TSW.

Norris said no because the lead time to open and close does not lend itself to being able to operate in that manner.

Lorz shared hence the deep spill comment.

Stranz said that the comment was heard.

Morrill said that he agreed with Lorz' suggestion about the deep spill and was perplexed by the response from BPA, that if they cannot provide surface spill, they are not going to provide any other alternatives for fish. He said that he appreciated the discussion that TMT was having. He said that his question went back to MCN and the previous day operation. When we look at the CROHMS data we see the hourly variation in flows. He said that his question was that is more to what we see in the hourly variations that BPA is taking into consideration when they say they do not have enough water to open both TSWs. Norris mentioned the 5 kcfs incidental, in that case you would have about 5 kcfs leftover. He said that his understanding and takeaway at this point is that margin is too thin for BPA to consider managing on that basis. He said that he would like confirmation of that. He said that if he was getting it wrong please correct him.

Norris said at MCN in particular BPA would have to manage around the uncertainty of the Mid-C operation. BPA have to have some flexibility to be able to manage power system reliability and to manage around the uncertainty of inflows. What BPA has come up is basically what they think they can manage with all of that uncertainty while managing all these constraints.

Morrill said that he did understand that, but it still leaves him confused that BPA is using a previous day average which shows the hourly fluctuations at MCN and you are basing the next day's operation on what you have seen in the previous day, and you are saying that is not adequate.

Norris said that they are using the inflow not the outflow.

Morrill thanked Norris and said that maybe he needs to look at that a little differently. He said that he did not think that there was much difference between the inflows and the outflows, but he would have to look.

Stranz said that there have been a couple of different requests from TMT, some asks that we will make sure they will be recorded for everybody in the meeting summary.

Charlene Hurst, Washington, said that she wanted to ask a process type question. She said to her this plan looks like it was building on the Fish Passage Plan, but it is for the fall flows which began September. She said that she was curious if it was typical for this forum to get plans after the season had started because she appreciated this dialogue today in the discussion, but it strikes her that it is a little difficult to talk about these things while you know the operation has already commenced. She said that she was

wondering if there were options to sort of receive these things ahead of the dates that things would be implemented.

Norris said that this process is augmented due to the source of the criteria and so BPA was given an operation which is reflected in the 2026 FOP that was not implementable during low flows as written, so it is a little unusual, but this is sort of a product of our current environment.

Stranz said that typically we do receive things a little more in advance to do some planning, however it is also in-season management so there are times there is stuff that comes up in-season that was not planned for.

Jay Hesse, Nez Perce, said that Van Dyke and Runyan had the assignment to talk about water management in the context of carryover. He said that as he was listening to that conversation, he was thinking that there was more in the context of a bigger picture of what opportunities do we have to shape flows in the basin to maintain the minimum flows necessary for implementing the low-level spill consistently. He asked that Runyan and Van Dyke start that conversation a little broader brush on if there are opportunities to reach that minimum flow and maintain that and to think creatively in the basin on water management. That and what risks that we might have later in the season if we look at ways to release water now. He said that he was adding to the assignment and trying to clarify what that ask actually is in his mind.

Norris said notably the minimum flow at Bonneville Dam is an instantaneous 70 kcfs and that is our current minimum flow and that has been the case since Grand Coulee Dam was built. He said that there should be no surprise there, there has never previously been a call to augment for September and October flows for such an operation, that would be a significant impact on storage if you were to try to make up that gap in flow. He said that he was not sure if the Salmon Managers would have even considered such augmentation drafts at the storage projects. He said that would be a major paradigm shift and would have to be considered in some other forum.

Hesse said that he understood and that was what they were asking for. He said as Norris had highlighted, this was somewhat new and what Hesse was encouraging as a holistic thought process to make this work for fish and understanding that may require a change in how we have done things in the past. While he thought this planning process and document that Norris provided are a necessary tool it is not apparent to him yet that we collectively as a group have done sufficient outside of the box thinking to make this work under the current conditions and goals that we have to meet all of the requirements: power, reliability, *and* fish operations. And so his question and assignment clarification was meant to be constructive and hopefully to provide all of us the confidence that we have done our best thinking to make this work, not just set up criteria to demonstrate why things are constrained.

Ebel said that he guessed the paradigm that Norris noted was pointed at him. He said that he would disagree with using storage to make up what he felt like at a not that great of a deficit. He said from Idaho's perspective there is no carryover in the Upper Snake, and it definitely could not be used for that purpose. He said that he thought to him in this memo there is operational room at the mainstem dams that could be explored to make up the 5 – 10 kcfs that is being portrayed as the deficit between what the flows are and what is necessary to have some surface spill down river. He said that he thought going to the

storage was shortsighted. Effort needs to be focused on operation of the mainstem projects.

Stranz said that she was going to shift TMT toward Operations Review. She said that she thought if there was more that Salmon Managers want to suggest on this, that would be helpful to have FPAC review the memo, review the conditions and they can bring things back to the Action Agencies at that point. She said that she did not want to go too far into this conversation right now given that TMT was not well prepared for it at this point.

Morrill said looking at project data that was available to us, the inflows are shown on the seven-day status, but they are only shown once a day. He asked if that information was available anywhere else on the Corps' website.

Baus said that the data that he uses on the Corps' website is not available at this time, but he does use the same project data that TMT uses, and he would go to the project data and use the same information that Morrill was looking at. He said he was not aware of an hourly inflow on an hourly time step that was available.

4. Non-Court Ordered Operations Review

a) Storage Reservoirs

Reclamation – Chris Runyan

- Hungry Horse Dam
 - Conditions:
 - Precipitation came in at the Flathead Basin this weekend.
 - Anywhere between 1 – 3 inches.
 - Inflows (09/08): 2.33 kcfs
 - Outflows (09/08): 3.0 kcfs
 - Midnight Elevation: 3548.6 feet
 - Operations:
 - HGH has been at outflows of 3.0 kcfs for the past couple of weeks.
 - Continue to target the HGH end of September elevation.
 - The 3 kcfs out should get HGH to the elevation. Prior to the rain they were looking at a slight decrease, but they should be able to hold steady.
 - End of September Draft: 3544.1 feet
 - From Full: 15.9 feet

- Grand Coulee Dam
 - Inflows (09/08): 63.3 kcfs
 - Outflows (09/08): 55.2 kcfs
 - Midnight Elevation: 1278.49 feet
 - Operations:
 - Hit end of August draft requirement on August 31.
 - End of August Draft: 1277 feet
 - Refill GCL in preparation of Chum in November.

Corps – Catherine Dudgeon

- Libby Dam (Lake Koocanusa)
 - Current Elevation: 2445.3 feet
 - Avg. 1-Day Inflows: 6.5 kcfs
 - Current Outflow: 6.5 kcfs
 - Operations:
 - Outflows for Bull Trout Minimum and will stay there until the end of the month.
 - Bull Trout Minimum: 6.5 kcfs
 - Additional 0.5 kcfs is due to the unit maintenance running speed no load.
 - Current RTS: September 21
 - End of September Draft: 2449 feet
- Albeni Falls
 - Current Elevation: 2062.3 feet (Hope Gauge)
 - Avg. 1-Day Inflows: 12 kcfs
 - Current Outflow: 13 kcfs
 - Operations:
 - Lake Pend Orielle is within the summer band of 2062 – 2062.5 feet.
- Dworshak
 - Current Elevation: 1528.4 feet
 - Avg. 1-Day Inflows: 1.6 kcfs
 - Current Outflow: 8.7 kcfs

Brain Marotz said that he was going to flash back to last month when there was a power interruption and flows dropped. He said that he was looking at the data available to him and he was finding it difficult due to averaging to figure out how to reconstruct what happened then when we went to about 1.5 kcfs for a couple hours and then ramped up. He said there was some spill to keep the channel wet, which is a good idea. Gas went to 111% TDG, which is slightly over the 110% TDG Water Quality Standard. He said that

he was wondering where an event like that would be archived because he remembered using a lot of historic data when they were developing the Montana operation and it would have been almost opaque that event even happened in the data he was looking at so he was wondering if the Corps had some help for him there so that people in the future could look back and reconstruct that. He said before they answer the question, what he was trying to do was line up the interruption with current atmospheric conditions at the time to get an idea of how fast desiccation would be occurring in that zone that was dewatered so that he could see. He said that he had said that it is probably not very much of an impact, but the notes did not really get into it very deeply, so he wanted to add a few things there. He said that if it is really hot and dry, things can happen very rapidly in a matter of hours, if it is more moderate, it might take four or five days for that zone to dry out and that really is significant for about a month and a half or that zone to come back up to peak biological productivity. He said that he was trying to reconstruct that going back to looking at the data and even the hourly data that he looked at did not really provide the information that he needed.

Norris said that he would forward the information that Greg Hoffman sent, he gives the specific times for the changes and that should help with Marotz' analysis.

b) Fish

Fish – Dave Swank, USFWS

- Juveniles (Index count)
 - Subyearlings
 - Mostly subadult Chinook passing
- Adult Fish Counts
 - Fall Chinook
 - Major fish passing at BON, there have been pretty good counts over the last week.
 - Bonneville: 15000 – 19000 fish
 - Coho
 - Increase in adult Coho.
 - Bonneville: 2900 – 5000 fish
 - Steelhead
 - A fair number of Steelhead are still coming in even though the run is definitely below 10-year average at this time.

Lamprey – Dave Swank, USFWS

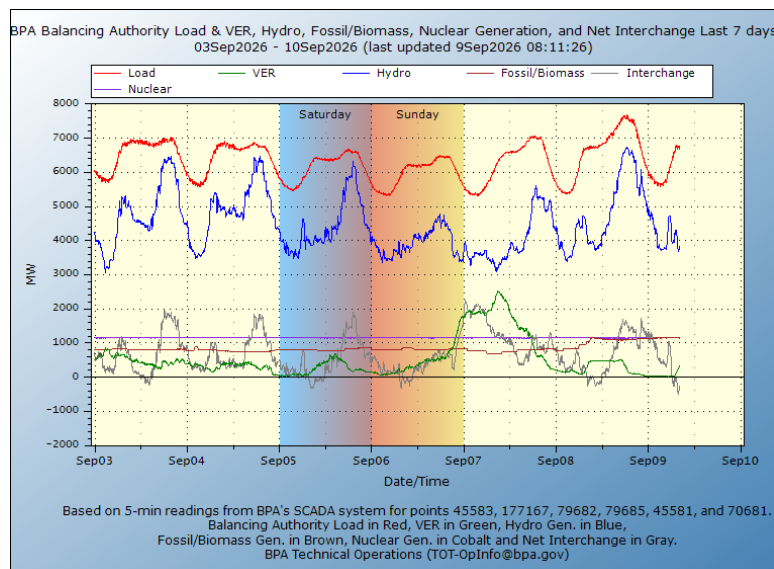
- Adult Lamprey
 - At the tail end of the adult run at Bonneville.
 - Still well below the 10-year average.
 - Counts
 - Daytime Window: 36% of total run

- LPS: 27% of total run
- Nighttime Window: 42% of total run
- Passage at Night (LPS): 64% of total run
- Total run: 44059 adults

- The run is well below average at Bonneville and nothing is expected to change.

Erin Cooper, FPC, added more information about the data. She said that when the S&P sites submit their data to FPC it includes flow and spill. Because that has not been available FPC has not been getting their report. She said that they are sort of piling up and waiting for that data to come back online. Cooper said that it looks like there is a lot of empty data here, but the reality is that they are just waiting for those reports, and so this was not super up to date.

Power System – Tony Norris, BPA



- Last warm day for a little while but there is not a lot of water out there.
- BPA is meeting load and keeping lights on.

5. Agenda Items

Next Meeting Scheduled: **Wednesday, September 23, 2026**

Next Week's Agenda Topics

Future Agenda Topics

- 2026 SR Sockeye Review (?)
- Adult Passage Assessment of LMN and JDA
- DART Presentation

Today's Attendees:

Agency	TMT Representative(s)
NOAA Fisheries (NMFS)	Trevor Conder
Oregon	Erick Van Dyke
Washington	Charles Morrill, Charlene Hurst
Kootenai Tribe	
Confederated Tribes of Colville Reservation	Dennis Moore
Umatilla Tribe (CTUIR) & CRITFC	Tom Lorz, Pete McHugh
Yakama Nation	Keely Murdoch
Bureau of Reclamation (BOR)	Chris Runyan
Army Corps of Engineers (COE)	Doug Baus (Chair)
US Fish & Wildlife Service (USFWS)	Dave Swank
Idaho	Jonathan Ebel
Montana	Brian Marotz
Spokane Tribe (STOI)	
Nez Perce Tribe (NPT)	Jay Hesse
Warm Springs Tribe	
Confederated Salish and Kootenai Tribes (CSKT)	
Bonneville Power Administration (BPA)	Tony Norris, Ben Hausmann

Other Attendees (non-TMT members):

COE – Megan Biljan, Oscar Espinoza, Tiffany Dixon, Catherine Dudgeon, Dan Turner, Michelle Yuen, Tom Conning, Denise Griffith, Michelle Yuen, Gregory Hoffman, Chris Peery, Kristian Mickelson

Grant PUD – Shaun Harrington,

PGE – Phil DeVol

Unaffiliated – Chris Stelzer

BPA – Tammy Mackey, Leah Sullivan, James Vanden Bos,

Washington Ecology – Thomas Starkey

Oregon DEQ – David Gruen

DS Consulting – Emily Stranz (Facilitator), Colby Mills

CorSource – Andrea Ausmus (BPA note taker, Contractor)

Clearing Up – K.C. Mehaffey

FPC – Noah Campbell, Erin Cooper

Energy EPS – Joshua Rasmussen

Columbia Basin Bulletin – Mike O'Bryant

AVA – Mike Dillon, Patrick Maher, Steve Lentini