

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

April 9, 2025

Facilitator's Summary

Facilitation Team: Emily Stranz & Colby Mills, DS Consulting

The following Facilitator's Summary is intended to capture basic discussion, decisions, and actions, as well as point out future actions or issues that may need further discussion at upcoming meetings; it is not intended to be the "record" of the meeting. Official minutes can be found on the TMT website: <https://public.crohms.org/tmt/agendas/2025/>. Suggested edits for the summary are welcome and can be sent to Colby at colby@dsconsult.co.

Review Meeting Summaries & Minutes – TMT Members approved the official meeting minutes facilitator's summary from the April 2 meeting.

Official April Water Supply Forecasts – Chris Runyan, Reclamation, reported the official April water supply forecast (WSF) for Hungry Horse Dam (HGH). The Flathead Basin has received a range of 110%-180% above average precipitation since the start of March, although the WY to-date is 89% of average. The April through July was 1,680 kaf, or 85% of average; April to August was 1,738 kaf, or 85% of average; May to July was 1,324 kaf, or 80% of average; and May to September was 1,424 kaf, or 80% of average.

Chris noted that the RFC streamflow forecasts indicate there could potentially be more runoff occurring in April than typical, Reclamation will continue to monitor. Minimum flows downstream of HGH are 3,410 cfs at Columbia Falls and 750 cfs on the South Fork below the dam. The forecasted end of April forebay elevation is 3,528 feet.

Doug Baus, Corps, reported the April water supply forecasts for Corps of Engineers projects:

- **The Dalles (TDA):** NWRFC April to August volume forecast is 81 maf, or 91% of average.
- **Lower Granite (LWG):** NWRFC April to July volume forecast is 20 maf, or 98% of average.
- **Libby (LIB):** Corps runoff forecast April to August is 5,023 kaf, or 83% of average.
- **Dworshak (DWR):** NWRFC April to July volume forecast is 2,281 kaf, or 92% of average.

April Flood Risk Management Shift – Kasi Underhill, Corps, reminded the group that TDA WSF significantly informs flood risk management (FRM) decisions. Towards the end of March, after the official March FRM submittal, TDA WSF spiked considerably for a few days, which prompted the Corps to send an end of month FRM to allow projects time to start drafting. When the WSF dropped back down, the Corps resubmitted the FRM on March 31; the official April FRM is not far off from the March 31. Kasi noted that a mid-month FRM is not normal; the Corps was taking precautions for drafting.

When TMT last met, the Corps was planning for a 100% shift at DWR, however, there will now be a 72% shift for DWR, due to Grand Coulee Dam's (GCL) limitations on draft rates. With the refill period of FRM about to commence, some FRM submittals could come more than once a month as runoff conditions can change quickly during the refill season.

Interested TMT Members have been added to the FRM submittal distribution list, with the next scheduled for the beginning of May. This will be the final planned presentation on FRM shifts until next season. Per request from Erick Van Dyke, FPAC Chair/OR, Kasi confirmed the Corps will share any significant changes or issues that arise in-season that warrant an informational update to the TMT.

Water Management Plan – Doug reported that in response to requests during the 2025 Water Management Plan (WMP) review, Action Agencies (AAs) have shifted the WMP review schedule from the calendar year to the water year. The draft 2026 WMP is expected to be released for initial review in August. Multiple Fish Managers expressed appreciation for the AAs efforts on this requested change.

Doug noted that for anyone experiencing further issues accessing the Corps' TMT website/pages, to make sure the URL includes "https://public:" <https://public.crohms.org/tmt/agendas/2025/>.

McNary Dam Spill Pattern – Erick reported on concerns expressed by some Fish Managers regarding the planned spill pattern at McNary Dam (MCN). Specifically, there was a request for TMT to discuss and better understand the implications of the planned operation to open spill bays 1 and 2 starting on April 10 and consider an alternative of opening spill bay 18 with bay 1 or 2. Typically this issue would be discussed at FPOM, but given the time sensitive nature, Fish Managers brought it to TMT.

Jonathan Ebel, IDFG, expanded further, noting that from Idaho's perspective, issues with and limitations to MCN spill bays creates suboptimal patterns for fish. In an effort to consider best options for juvenile passage, IDFG requested further discussion about a delay in opening gates 1 and 2 to allow time for consideration of potentially opening bay 18 with bay 1 or 2, as an alternative. Jonathan noted that the current WSF might allow for such a shift.

The Corps confirmed that they are open to delaying start dates and changing the planned operation if there is consensus from TMT. Chris Peery, Corps, noted that as the requested potential alternative of using bay 18 has not specifically been modeled as part of spill patterns for the coming year, there are uncertainties around what the spill pattern with bay 18 will look like. Some Fish Managers noted that although a specific pattern was not modeled with gate 18, they did run gate 18 spill at ERDC this year; some thought it created a pattern that looked better for fish, as it closed the gap in the tailrace.

The Corps clarified that due to maintenance limitations and FRM, there are constraints with how many times a double-leaf gate can be opened during the spill season. The Corps went through a lengthy process for evaluation and approval to consider FRM risks of losing full capacity of two of the double-leaf downstream gates, however, did not consider the possibility of opening a third gate in the operation (i.e., bays 1, 2, and 18). Due to the amount of evaluation and time for review, the Corps did not think it was feasible to assess use of a third gate for the current season.

A caucus was held for Fish Managers to discuss whether to delay opening gates 1 and 2 to allow time for more discussion on potentially switching gate 1 or 2 for gate 18, or to continue the operation as planned. Fish Managers did not reach consensus to delay the operation at this time.

Erick reported on behalf of Fish Managers, a request for additional modeling from the Corps for more information on when 3 bays may be open (particularly in 2025) in the event of a low flood risk year. Additionally, they requested continued discussions on the prioritization of spillway repairs for future planning, particularly for bays 1, 2, and 18.

The Corps confirmed they will continue the operation as described in the FPP to open bays 1 and 2 this year. They acknowledged the Fish Managers' request to explore the operation of bay 18, indicating the issue would be a longer-term discussion. Regular updates on progress (or lack of progress) on the internal conversations would be appreciated from Fish Managers.

Questions or Comments from Non-TMT Members – There were no questions or comments.

The next scheduled TMT meeting will be on April 16, 2025, at 9:00 AM.

A DS Consulting Process Meeting will follow the TMT business meeting.

**Columbia River Regional Forum
Technical Management Team
OFFICIAL MINUTES
Wednesday, April 9, 2025
Minutes: Andrea Ausmus, BPA (contractor, CorSource Technology Group)**

Today's TMT meeting was held via conference call and webinar, chaired by Doug Baus, Corps, and facilitated by Emily Stranz, DS Consulting. A list of today's attendees is available at the end of these minutes.

1. Review Summary and Minutes

a. April 2 Summary and Minutes

- Approved

2. Official Water Supply Forecasts – Chris Runyan, BOR, and Doug Baus, Corps

Reclamation

- Since the beginning of March:
 - Flathead Basin has received above average precipitation.
 - March Water: 110% – 180% of median
 - Water Year to Date: 89% of median
- Hungry Horse – March Final Forecast
 - April – July
 - 1680 kaf
 - 85% of average
 - April – August
 - 1738 kaf
 - 85% of average
 - May – July
 - 1324 kaf
 - 80% of average
 - May – September
 - 1424 kaf
 - 80% of average
- The later periods are slightly less than the April periods.
 - Seeing potentially more runoff in May or in April than is typical.
 - The shape is a little earlier, but it will depend on how it plays out.
- Minimum Flows Downstream of Hungry Horse
(based on the March Final April – August)

- Columbia Falls: 3410 cfs
- Below HGH (S. Fork): 750 cfs
- Forecasted End of April Forebay elevation
 - Elevation: ~3528 ft

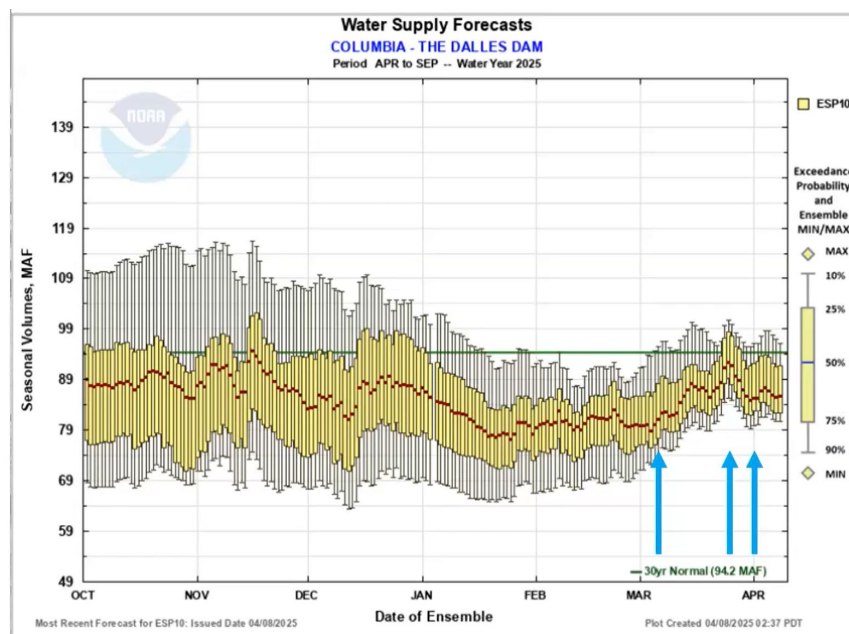
Corps

- The Dalles (Columbia River)
 - April to August Runoff Volume
 - 81 maf
 - 91% of average
- Lower Granite (Snake River)
 - April to July Volume
 - 20 maf
 - 98% of average
- Libby (Kootenai River)
 - April to August Runoff Volume
 - 5023 kaf
 - 83% of average
- Dworshak (North Fork Clearwater River)
 - April to July Runoff Volume
 - 2281 kaf
 - 92% of average

3. April Flood Risk Shift Estimates – Kasi Underhill, Corps-NWD

Underhill noted that TMT had requested to receive updates on any Flood Risk Management (FRM) shifts for April. She said that she would put TMT on the email. Baus provided the emails for the submittal. She was not able to get it out for the last April submittal, but the emails should be up to date for the next submittal. She asked for the group to let her know if they did not receive a May FRM.

a. The Dalles (TDA) Water Supply Forecast (WSF)

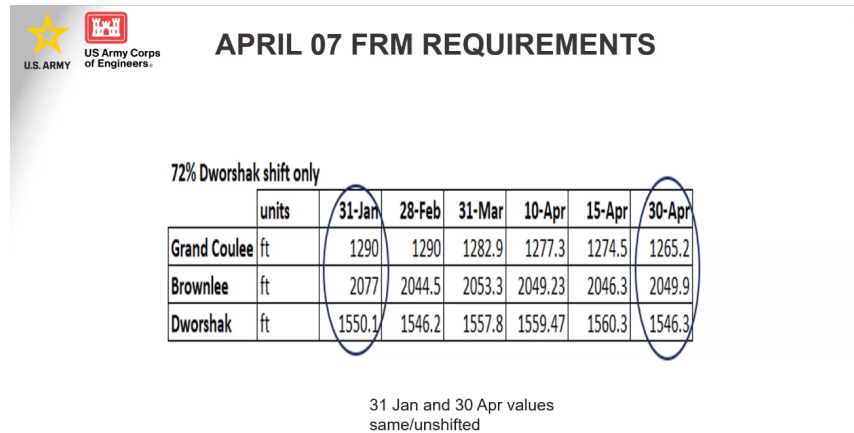


- TDA WSF is what the Corps bases a lot of their system FRM drafts on.
- Official Submittal (typical): Beginning of March (first blue arrow)
- Toward the end of the month the Corps began to see the WSF spike up and it stayed there for a few days and then kept going up (second blue arrow). The Corps felt the need to send out an FRM at the end of the month to make sure the Projects had enough time to start drafting and to have increased knowledge that the FRM was a greater need.
- Then it dropped precipitately (third arrow). The Corps resubmitted on March 31.
 - Underhill said with perfect knowledge she would have held March 1 and then resubmitted at the end of April.
- Official April FRM is not too different from March 31.
- Not a typical year and it caused some worry and increased concern about Projects having enough time to react.

b. April FRM Shifts

- Early next month the Corps will be going into the refill period of FRM.
- Refill
 - Some of the FRM submittals may possibly come more than once a month.
 - There is a small chance that the submittals may come every week.
 - Conditions can change quickly during refill in the System.

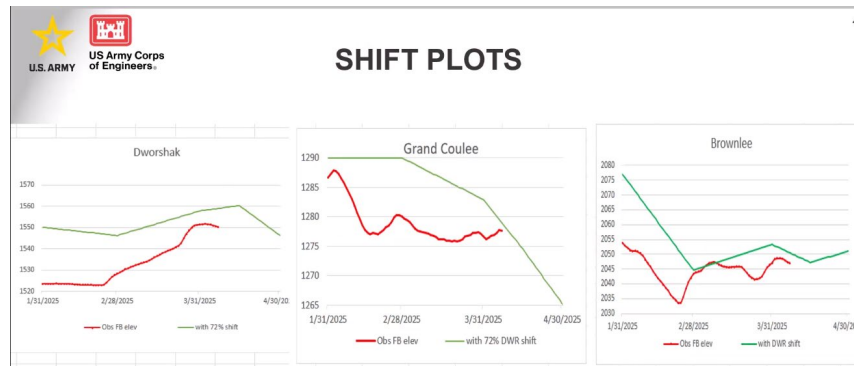
c. Shift – Final FRM Requirements



- April 7 FRM

- No Brownlee Shift
- Only Dworshak (DWR)
 - Previously the Corps had talked with TMT about doing a 100% shift, but Grand Coulee (GCL) was not going to be able to accept a 100% shift due to draft rate limits.
 - Dialed back to what GCL could accept which is 72%.
- 15-Apr and 30-Apr are the FRM points.
 - 30-Apr is an unshifted elevation.

d. Shift Plots



- Shift plots show 72% shift

- Underhill said that it did not look to her that there was much difference between 72% shift and 100% shift.

Stranz asked Underhill when the next time the Corps would be giving an FRM update.

Underhill said that she did not have any more to talk about shifts but if anything, interesting happened with refill she could provide an update or if anyone requested a topic. She said that TMT had already talked about the start of refill. She said that she could always talk about how the Corps does FRM during refill at some point. She said

she would wait until someone reached out for an explanation, but she did not have any planned presentations for TMT.

Stranz said that unless Underhill heard otherwise from TMT, we would assume that TMT would see Underhill next year's season for the same shift presentations.

Erick Van Dyke, OR, said in the event that there is some major change in the FRM details that are coming out he requested that Underhill make sure that TMT is aware of that and potentially share some of the information of the why. He felt that would be helpful.

Stranz said that she felt that Underhill was on the same page, unless there was something interesting or if there was something that was different that happened.

Underhill said yes, but she hoped to not have an interesting year.

Stranz thanked Underhill for her presentations.

4. Water Management Plan – Doug Baus, NWD; Tony Norris, BPA; and Chris Runyan, BOR

a. WY25 WMP Process

- During the WY2025 process the Action Agencies (AA) received many requests from fish managers to shift the schedule of the draft review from a calendar year to the water year so that it is finalized by the start of the water year on October 1.
- Since then, the AA had additional dialogue, and they decided to make the change.

b. 2026 Updated Review Schedule

Draft Water Management Plan (WMP) posted by the AAs for the TMT to review.	August 1, 2025
TMT Comments due to AAs	August 22, 2025
Final Water Management Plan	September 30, 2025

- For WY26 the AA will be shifting the review schedule to the WY and plan to get a draft out for TMT review in August.
- Water Management Plan 2026 - <https://public.crohms.org/tmt/documents/wmp/2026/>

Van Dyke told Baus thank you very much for thinking it through and working it out to help achieve what the Fish Managers (FM) have been asking for. He said that it was greatly appreciated.

Jay Hesse, Nez Perce, also shared his appreciation.

Baus said he also wanted to acknowledge and address what was said at the beginning of the call. The Corps did update the URL for the TMT website. He said that if some were still having problems to let him know. He said that the solution should be typing <https://public.crohms.org/tmt/>. He said that that should resolve some of the issues, if not, please let him know.

5. McNary Dam Spill Pattern – *Doug Baus, Corps-NWD; Erick Van Dyke, OR; Jonathan Ebel, ID; and Chris Peery-NWW*

a. FM Request – *Van Dyke*

- Van Dyke shared that the McNary (MCN) dam spill pattern was a developing item that had some information that came to the FM prior to setting the agenda item for this meeting. He said that it is an important topic that the FM had been working together on to understand the information and the options.
- The primary request for TMT is to understand if we can or what the FM would need to do to delay the actions that are planned until the FM have an opportunity to discuss the spill pattern better.
- Details had been delivered by Ebel so Van Dyke felt that he would be a better mouthpiece for the topic.

Stranz said that the request that she thought she heard from Van Dyke was that the request was to delay implementation until there is more conversation. She said that she wanted to put out there that this is typically an FPOM conversation and there was, as she understood, an FPOM meeting scheduled for tomorrow. She said that she wanted to have that process check in first.

b. FM Request Explanation – *Ebel*

- MCN has problems with the spillway in general that is driving what would be considered suboptimal patterns and there are maintenance limitations on using certain bays. It is a large interaction of the need to pass a flood with degraded spillways and hoists.
- Yesterday the FM received notice that the WSF would allow use of the two hoist lifts to open two bays to create a different pattern than would otherwise be true at a higher WSF this early in the season.
- The Corps notified the FM that they would open Bays 1 & 2.
- Ebel's request was based off his perspective gained at ERDC and considering juvenile passage and the disproportionate number of smolts that are passing near the spillway weirs.
- Request:
 - Further discussion is warranted about opening Bay 18 & Bay 1 OR 2 versus opening Bays 1 & 2.
 - Talk about the Pros and Cons of the two alternatives:
 - Opening Bays 1 & 2 (default FPP action)
 - Opening Bay 18 & Bay 1 or 2 (alternative action)

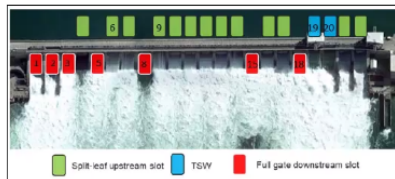
Ebel said that given the number of things that any representative needs to look at at any given time, he felt this was something that had fallen off his radar until it was forced back onto it. He said that this was a last-minute request to take a look at this. He said that this alternative of opening Bay 18 has not been fully vetted. He said that he thought that it deserves more consideration and that is why he was asking that the Corps delay opening Bays 1 and 2 until the region, with the FM, can fully talk about the Pros and Cons of two

alternatives. Ebel said that this is not a typical TMT issue so those that listen to TMT and are not part of TMT are probably confused.

Stranz said that was helpful and clear.

c. Corps response – *Baus*

- Baus said that for the TMT side he recognized what Van Dyke and Ebel had mentioned.
- The Corps had the planned FPP operation (shown below) planned to go into effect on April 10 at 0001 hours.
- Without some degree of consensus from TMT members the Corps cannot change the planned FPP operation that was already thoroughly coordinated and approved by the region. As it relates to today's dialogue at TMT, as well as dialogue at the FPOM meeting tomorrow, Baus wanted to emphasize that what is shown below in FPP section 2.2.4 is the Corps' plan. Baus shared that there was an opportunity to talk more about this topic at FPOM.



If lower flows are forecasted and meet *all* hydrologic criteria below, crews will open double-leaf gates 1 and 2 in the downstream slot to 4 stops (~7 kcfs spill) each on April 10 as early as possible during daylight hours and spill will be distributed according to patterns in **Table MCN-8-ALT**. From 0001 hours until gates 1 and 2 are opened, spill will be at the FOP target using patterns in **Table MCN-8**:

- a) Official April water supply forecast for The Dalles April-August runoff below 90 MAF,
- b) STP forecast for McNary inflow below 350 kcfs through the spring, and
- c) Internal weekly Corps system flood risk management (FRM) analyses indicates high probability of McNary inflows below 350 kcfs through the spring.

If the April WSF for The Dalles is greater than 90 MAF, or either the STP or internal Corps FRM analyses indicate flows peaking above 350 kcfs, gates 1 and 2 will remain closed in the downstream slot. Once the risk of inflows exceeding 350 kcfs has passed, and if spill gates 1 and 2 have not yet been opened, the gates will be opened to 4 stops each. Additional downstream gates can be used with a set (e.g., 4 stop) opening after the peak flow period has passed, as coordinated with FPOM. If gates 1 and 2 are needed to pass higher flows, they will be opened to a level that is expected to be sustainable through spring and early summer spill based on STP and ESP forecasts. Additional double-leaf gates in the downstream slots will be used as needed to pass high flow.

If gates 1 and 2 are opened, they will be closed using the second of two allowed overloaded movements at the end of early summer spill on July 31 or once spill is forecast to be below 70 kcfs for the remainder of the spill season.

Peery said that Baus summarized well. He said that he had had conversations with Van Dyke and Ebel previously and Ebel had related his concerns. Peery had related that it was an FPOM issue but if the region could come to a consensus in the next 24 hours the Corps could potentially make a change. He said that was why Ebel made the suggestion of bringing it up at TMT to discuss. Peery said that, as Van Dyke mentioned, the region did model the patterns that the Corps is using for MCN at ERDC. He said that those plans were vetted through the Fish Passage Plan (FPP) change forms and the subsequent meetings, and they were approved. He said that this is a very last-minute requested change and to add to that the Corps has not modelled using Bay 18 as part of their spill patterns for the coming year so they do not know what it would look like and if it would potentially produce a benefit. There are concerns there about that. Peery also brought up that the Corps did have a release of the draft report of the telemetry study from last year

that showed the juvenile survival through the tailrace was comparable to what was in previous evaluations before the Corps was using split leaf. He said that this also indicated that the pattern MCN was using last year using Gates 1 & 2 was not producing anything worse in terms of juvenile passage at least that they could detect using the telemetry work. He shared that those are some considerations for this discussion. He said that if there is a consensus with TMT and FPOM to make a change, or at least hold off to discuss a little longer, it would be something that the Corps would consider.

Stranz said that she was assuming that there were a lot of representatives from FPOM that were attending this call but maybe not all. She asked Peery if there were some from FPOM that were not on the call.

Peery said that most of the FPOM representatives are also the same as the TMT representatives. He said that the only person that he had not heard from today was Tom Lorz.

Stranz said that Lorz was present. Lorz also confirmed that he was present. Stranz said that she wanted to make sure that by having the conversation today TMT was not missing any voices that would be present tomorrow. She said that it sounded like that TMT had two things on the table. One was whether or not to delay implementation of the planned FPP operation that is supposed to start tomorrow morning. The other piece is whether or not the region agrees to opening Bay 18, as well as Bays 1 & 2. She opened TMT up for conversation. She said that she was not sure how much TMT wanted to do right now, versus talking about delaying or talking about the content.

Ebel said that he wanted to correct quickly. He said that it was not an “open 18 and 1 and 2”. He said that they can only open two bays. That was problem, maintenance issues have limited the number of options. He wanted to make sure that it was correct for the notes.

Stranz thanked Ebel for clarifying.

Tom Lorz, Umatilla/CRITFC, said that unless the Corps had relaxed their concerns about using 1, 2, and 18, the FM problem is that they can only pick two.

Hesse added clarity about what Peery had shared that Bay 18 was not modeled. Hesse said that he thought that was incorrect and he believed that they did model that in their last trip. He said that he wanted to make sure that TMT is on the same page that we do have some modeling runs including 18. He asked for Peery to speak to that and make sure that TMT was on the same page.

Peery said that they had run a pattern that had all eight gates available before they ran the patterns where the seven gates were closed. He said that technically they did run patterns with Gate 18, but they did not specifically run a pattern that looked at five bays closed with two bays open at four stops each with one of those being Bay 18.

Hesse said that he thought that made sense. He said that they did run some patterns where Gate 18 was open beyond the status quo original ones. He said that he was not sure which ones they actually ran with 18 beyond status quo. He said that they did do that and Ebel probably know the details better than he does. He just did not want the region to have the impression that they did not look at this at all because they did. It was one of the last special cases that was run as they were wrapping up.

Trevor Conder, NOAA, said that he was wondering about that as well. He looked in the report and could not find a case where they ran a split leaf operation with Bay 18. He said that he was having a hard time remembering it. He said that he knew they ran the old traditional FPP standard spill operation with Bay 18, but he could not find anything in his notes that show that they had modeled Bay 18. He said that was one where Ebel was there with a few others and operated it.

Ebel said he did not want to get too wrapped around that aspect. He said hydraulically speaking having 18 open provides better egress conditions around the spill waivers. He said getting rid of the hole in the spill pattern in that specific spot is going to improve things in that area. He said when you think about how the flows work going way into the details because essentially the jet from 17 crosses over and blocks the spill, the flow from the spillway weirs because it is a higher flow and creates a vortex/eddy thing. He said after hours of staring and video staring at 18 he only sees improvements for the 40% of steelhead that are passing through 19 and 20.

Conder said that he thought Peery's point was that they had not do extensive runs on 18 to see what the compromise is. He said if you do that and take one of the North Bays, 1 or 2, out there is a compromise there. He said that they did not adequately look at that. The Corps did modify the spill pattern in the FPP compared to what occurred last year to address that hole, or issue, seen at the lower flows adjacent to the TSW to reduce some of that north flow and put that in the center to help direct the flow. Conder said that his take on it was that was going to be an improvement hence why the region approved the FPP and were optimistic about seeing that operation run this year starting tomorrow while evaluating the JSAT study to see if it appeared to be similar or possibly an improvement over what we had seen last year. He said that NOAA agrees with Peery that there was a relatively high survival through the TSW for steelhead, there was 99% and there was very fast egress time. So, it was not an indication that there was a lot of fish getting slowed down in that eddy based on that study or based on the information that we have. He said that is why NOAA is pretty supportive of moving forward with the current plan that was approved.

Van Dyke said this is the kind of thing that he thought the FM were asking for from TMT to make a decision of if we could have time to talk about it. He said that the details that we were starting to hear would take us off onto some other places. He said that he could think of several things that he would want to say right now to respond to Conder that may not be helpful in the group arriving at what TMT is going to decide today. He said that the type of things that are being discussed right now are the FPOM detail that the region needed time for and what the FM were asking for right now. Rather than go into the technical nuances that each individual shares based on what they have observed and seen and thought.

Stranz thanked Van Dyke for the process check and pause. She said that she thought it would be helpful to see if TMT agrees to press pause on the operations until they can have the conversation tomorrow at FPOM. She said that she did not have a good sense, based on what Conder had said, on whether or not there was consensus amongst TMT members to take that pause. She asked if it would be helpful to have conversations about the pros and cons of pausing operations for a day until the FPOM conversation or if it would be helpful for TMT to caucus amongst the AA and FM.

Baus added a note regarding the pause. He said before TMT goes there; he asked Peery to help him understand better. He said that a pause in this context sometimes does not mean a pause for a day or two. He said that it means pausing to the extent where any project staffing limitations or physical limitations or project constraints could actually resume. He said that the assumption that TMT is making is that it is a short duration, i.e., a day or two) the Corps could pivot quickly. He asked Peery to comment on if the Corps is not doing what was agreed upon to do in the FPP if he felt like the Corps could pivot quickly and do something (e.g., if the plan is to have Bays 1 & 2 open tomorrow if TMT decides to close them would there be any delays in the ability to pivot to do something different at either the project level or some reason that TMT had not talked about) because he thought that would be important. He asked if TMT decided not to do something what the time step for when the Corps would be able to resume doing something.

Peery said what they would have to do is delay opening Gates 1 & 2 because they only have two lifts allowed for double-leaf gates. So, they would have to divert to the spill patterns where Gates 1 & 2 are not being used and the region saw what that looks like at ERDC (it is not a great condition for the tailrace) then in the interim, while the region had the discussion. Making the change, he had not talked to the Project, if making the change later whether there would be an issue making the lifts on the gates later, a day or two, or a week later. He said that he would think that it would not be a big issue for them as long as TMT can get to them. He said basically what the project would do is not make the lifts tomorrow, so it would be less work for them. He said then the crews would need to be made available when the region was ready for them to make the lifts. If the region goes to the option of using Bay 18 there is more involved. They would have to create that spill pattern and program that into GDACS (what the operators use to set the pattern at the dam). Peery said that he did not know what the timeframe for that would be.

Stranz said that it sounded like there were some uncertainty there but the changes could likely be made either to delay and to open Bay 18 but there would be some process involved, and the Corps was not sure about the timing.

Ebel said that he had brought this up, and he fully understood that this was a last-minute request. It was something that was on his mind that he had brought up occasionally. He said that folks know his position on this. He said if the region delays it, he was trying to judge the willingness to make the change and open 18. He said that if the willingness is not there then we might as not delay it. He said that he did not want to be the entity that delays it just to end up with the status quo. He said that his position is opening 18 would be a benefit. He said that he understands that survival according to the acoustic tag study seems similar to past years. He is not looking for similar, he would like better survival. He said that he would like a better situation, an actual improvement. He said that he was proposing that opening 18 would be an improvement but others are going to disagree. He said that if TMT is in a situation where all of a sudden, he had made a request that delays it and then there is a very low probability that the Corps is going to move from the status quo then he said that he would like to remove his request and then move toward prioritizing Gate 18 for being the first or second gate that is fixed, or brought back to fully functioning. He said that he wanted to clarify his position.

Stranz said that she wanted to check in because what she had thought she had heard was that if there is consensus from TMT to *delay* the operations tomorrow then the Corps was

will and able to delay. She said that if there is a consensus from TMT to make a *change* in the operations there is some process that needs to happen to implement those changes, but it sounded like you were open to the idea. She asked the Corps representatives if she had gotten anything wrong.

Baus said that if we are trying to manage expectations and be clear, said that what he was hearing. He said that in his mind this is a simple conversation. The conversation is the Corps has the FPP current plan, they are planning on doing that. Baus said that what Ebel is proposing is to do a modification from the FPP, what he was hearing for now, temporary, all the Corps is being asked to do is to is a different spill pattern effective tomorrow, April 10 at 0001 hours. He said that the Corps is planning on implementing Table MCN-8-ALT with gates 1 and 2 open, but they are being asked to implement Table MCN-8 with gates 1 and 2 closed until a decision can be made.

2025 Fish Passage Plan McNary Dam VERSION: 5-MAR-2025 (updated spill patterns)

Table MCN-8-ALT. ALTERNATIVE INTERIM McNary Dam Spill Patterns with TSWs in Bays 19-20, 13 Split-Leaf Gates in upstream slot, and Double-Leaf Bays 1&2 Open in downstream slot. ^{a, b}

Table MCN-8-ALT. Alternative Interim Patterns w/ 13 Split-Leaf Gates in Upstream Slot + Bays 1&2 (8 Gate Stops per Spillbay)																		Total Stops	Total Spill
1 ^a	2 ^a	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	(#)	(kcf)
																		0	19.5
																4	TSW	4	24.5
																5	TSW	5	25.5
																5	TSW	9	30.5
																5	TSW	10	31.5
																5	TSW	14	36.5
																5	TSW	15	37.5
																4	TSW	19	42.5
																5	TSW	20	43.5
																6	TSW	21	44.5
																5	TSW	22	45.5
																4	TSW	26	50.5
																5	TSW	27	51.5
																5	TSW	28	52.5
																5	TSW	29	53.5
																5	TSW	33	58.5
																5	TSW	34	59.5
																5	TSW	35	60.5
																5	TSW	36	61.5
																4	TSW	40	66.5
																4	TSW	41	67.5
																4	TSW	42	68.5
																4	TSW	42	73.5
																5	TSW	43	74.5
																5	TSW	44	75.5
																5	TSW	48	80.5

^a Alternative patterns in Table MCN-8-ALT will be used only if low flows are forecasted and meet all hydrologic criteria defined in section 2.2.4. Double-leaf gates 1&2 will be opened to 4 stops (~7 kcf/bay) on April 10 and stay open through early summer spill on July 31 or when flows drop below 70 kcf. Opening and closing gates 1&2 will use both overloaded movements allowed each year (no more than 2 lifts every 12 months).

^b A total of 13 spill gates will be operated in the upstream slot in split-leaf, 11 of which are on a hoist and may be adjusted hourly as needed to adjust spill. Gates 6&9 are on a crane and will be adjusted at least once per week. The remaining 5 spillbays (3, 5, 8, 15, and 18) are double-leaf gates in the downstream slot and will remain closed unless needed to pass high flows using the first of two overloaded movements allowed each year (12 months). After the high flow event, open double-leaf gates will be closed using the second of two allowed overloaded movements.

MCN-44

2025 Fish Passage Plan McNary Dam VERSION: 5-MAR-2025 (updated spill patterns)

Table MCN-8. INTERIM McNary Dam Spill Patterns with TSWs in Bays 19-20 and 13 Split-Leaf Gates in Upstream Slot (green cells). ^{a, b}

Table MCN-8. Interim Patterns w/ 13 Split-Leaf Gates in Upstream Slot - 8 Gate Stops per Spillbay																		Total Stops	Total Spill
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	(#)	(kcf)
																		0	19.5
																		4	24.5
																		5	25.5
																		5	30.5
																		5	31.5
																		5	36.5
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																		5	81.5
																		5	82.5
																		5	83.5
																		5	84.5
																		5	85.5
																		5	86.5
																		5	87.5

^a A total of 13 spill gates will be operated in the upstream slot in split-leaf configuration, 11 of which are on hoists and may be adjusted hourly as needed to adjust spill. Gates 6 and 9 are on a crane and will be adjusted at least once per week. The remaining 7 spillbays (1, 2, 3, 5, 8, 15, and 18) are double-leaf gates in the downstream slot and will remain closed unless needed to pass high flows using the first of two overloaded movements allowed each year (12 months). After the high flow event, open double-leaf gates will be closed using the second of two allowed overloaded movements.

^b TSW spill is approx 19.2 kcf (9.6 kcf/bay) at forebay 339'. Upper TSW gates will be raised 3-5 ft above the water surface to ensure free flow over the TSW crests.

MCN-38

Wright said that is correct - the current plan is to open Gates 1 & 2 and that it is FPP Table MCN-8 ALT; if there is an agreement today to pause opening Gates 1 & 2 the Corps would instead implement the Table MCN-8 with all the double leaf gates closed including 1 & 2.

Baus said that it was his understanding that the Corps already had that pattern already developed. He asked if that was correct.

Peery said that the Corps did, if they do not use Bays 1 & 2 they have a separate table (MCN-8) to go to that covers that pattern.

Baus said that it would basically be implementing table MCN-8 with Bays 1 & 2 closed. He said that the idea would be that TMT today would be coordinating implementing a modification from the FPP they would operating effective April 10, 0001 hours. They would start with Table MCN-8. That would have Bays 1 & 2 closed. He said that tomorrow at FPOM the AA and FM would do a deeper dive into talking about what to do next. He said that the challenge in there and what the Corps is really trying to drill down on today is that there is a risk. He said as TMT just talked about today, there is a risk with doing something different because the Corps has not adequately run this to ground with the Project yet. He said that he wanted TMT to be tracking that the risk associated with not doing a planned operation is the risk of going into unknown chartered waters and not knowing how quickly the Corps could make a change to do something different and that is what we are looking at today. He said that if the Corps got a TMT consensus recommendation to implement a short duration pattern modification, specifically, Table MCN-8 with gates 1 and 2 closed, they would provide the Project guidance today. The Project would start tomorrow with a different pattern than the planned pattern they would have used based on current conditions per the FPP. Then the Corps would see how FPOM went the following day. He asked Peery or Wright if he had mischaracterized the Corps expectations for today or tomorrow.

Peery said if the FM had a consensus agreement with TMT today to not use Bays 1 & 2 so that the region had time to discuss the alternate operations the Corps would agree to doing that and having that further discussion at FPOM. If the region does not have consensus, then the Corps would default to the original FPP plan to open gates 1 and 2 tomorrow.

Stranz said she wanted to make sure it was clear. She asked why we would go to the MCN-8 operation as an alternative.

Peery said that it was because MCN has restrictions on Gates 1 & 2. MCN is allowed to move the gates twice in a year. So, they can open them for the season at a set opening, which would be four stops, four feet opening each. Then at the end of the season they can close them. They do not have the option of opening them tomorrow and then changing to something else later if we decide. He said that they would either open them now and close them at the end of the season or wait on changing the gates until after the region has further discussion. The same would go with Bay 18, if the region decided to go with Bay 18 and later decided that it does not look great, we would be stuck with it because we would have used the one lift to open it and there would be one more lift to close it.

Van Dyke said it had been helpful to have this dialogue and look at the tables that were provided and agreed to in the FPP to center what is going on here and it does help his question because the understanding is that we can have two of the bays open. He said what was not clear was if it was a possibility to open Bays 1 & 2 and later decide to close one of them in favor of opening another one, Bay 18. He said that he did not think that the FM understood the flexibility there. He said that the restrictions on the red boxes are all the bays that are restricted to the constraint of only allowing two lifts, which means to open and then to close it. He asked if it was possible to open Bays 1 & 2 as planned and then we talk about the details and there is consensus to change to open Bay 18. He asked if the Corps was going to say that there are two open and they were not going to mess with them and they were not going to change things around that had been decided.

Peery said that technically they could close Bay 2, for example, using the second lift, and then they still have an engineered lift on Bay 18 that they could use to open and close that at a later date. The Corps had not discussed that kind of operation with engineering, but it would not violate the limitations of two lifts per gate.

Baus asked if he had heard correctly, if the request was to have three gates: 1, 2, and 18, in operation. He said that it was his understanding that was not on the table at this time due to FRM/hydraulic capacity issues. He said that he wanted to clarify his understanding that any conversation moving forward until the Corps had time to do additional coordination would be if the desire is to use gates 1 & 2 & 18, there is an opportunity of two of those on the table at this time.

Peery said that was correct, the Corps is only allowed to open two gates for a total of 4-foot opening each. He said that it is either 1 OR 2, or 1 & 18, but they cannot have three gated open at the same time.

Van Dyke said that he felt that his scenario did not violate. He said that it was a question about closing one of those two gates that had been open, it was never to have three gates open.

Alexis Mills, Corps, said that each gate can be lifted only once per season. She said that even if gates 1 and 2 were opened, and then gate 2 was closed and gate 18 was opened in its place, there would be three gates that had exercised the single lift for the year and therefore have limited capacity.

Peery agreed with Mills. The whole point of keeping those gates closed is that they are available to pass high spill flows. If we use Gate 2 and decide to close it and open Gate 18, now Gate 2 cannot be used again if needed for high spill flows.

Stranz said to circle back to Van Dyke's original question – it would not be possible to open both Gates 1 & 2 and then later on decide to open Gate 18 because you would not be able to close 1 OR 2 again.

Van Dyke said that was how he was interpreting what was said at that point.

Peery said yes.

Stranz said that TMT was back to the conversations from a few minutes ago. One option would be to delay the opening 1 & 2 to tomorrow so that the region would have more time for conversation on whether or not they prefer to open 1 OR 2 (& 18).

Charles Morrill, WA, said that he appreciated the discussion and diving into the details. He said that he got that there were only two lifts, and that it would be only 1 & 2, 1 & 18, or 2 & 18. He said that because he had not been able to get to the ERDC trip and watch the visuals. He asked Peery if the model at ERDC was still watered up and if it were how quickly could they get a run of 1 & 18 or 2 & 18.

Peery said that the model is not still watered up, they had dewatered before the group had even left on the last day they were there, and they were going to do some more work on it. Peery said in order to schedule we would have to contact ERDC and find out what their availability was.

Morrill said that he understood that. He said that he was just bringing the question up for others, for the Corps, and the discussion with the ERDC staff. He asked if that was even a desirable option to help us come to a prudent decision because you could certainly open 1 OR 2, whichever one is better and delay the second opening until we have additional information to help us decide whether we want 18 open or whether we want 1 & 2 open.

Peery said that would complicate things because the Corps does not have a spill pattern set up with just Gate 1 open or a Gate 2 open and the Corps would just have to wing it. He said that he did not have a comfort for that in terms of he knows that there is relatively few fish moving through the system right now, but they are at MCN, there are Chinook at MCN, and that is playing too much with it.

Morrill said he understood.

Dave Swank, USFWS, said that his first point was to remind people that we are having a lot of hatchery fish from the national fish hatcheries released tomorrow morning and potentially into Friday. He said that it was a little over 13M smolts being released and coming downstream over the next two to four days. He said that making the late request was making him a little nervous on whether there would be an effect on those fish. He said that he did not know that for sure. He said thinking about Ebel's request he was there with Ebel at ERDC looking at the spill and how 18 did affect it. He said that he agrees with Ebel that it did seem to help some of the flow out of the TSWs. Whether that ends up making a better overall survival he said that it was hard to say. He said that he was a little concerned that this is a last second change and not having fully evaluated the spill pattern, at least while he was there (it may have been run while the group was off looking at something else). He said that he wanted to express some concern that it is a last-second change and sounds like the Corps would still have to come up with a spill pattern for this potentially. He said that he was leaning against it at the moment just because we had not had the time to really fully evaluate it. Even though Ebel may be correct, and it might help.

Stranz said that one of the things that Van Dyke mentioned earlier was getting into the technical details might be better for an FPOM conversation. She said that she was wondering if it would be helpful to give FPAC an opportunity to connect with each other to see whether or not there is a stomach for delating until future conversations at FPOM.

She said that what she thought she heard Ebel say was that he would pull his suggestion off the table if there was not a stomach for actually implementing 18 and opening 18. She asked TMT if it would be helpful for a brief caucus to assess whether or not there is a stomach for delaying operation.

Van Dyke said that he had a question to help any caucusing that TMT does before they go there. He said that he also did not achieve connection with a PC to see if they had their usual availability of a place to caucus. He asked if Brandon or Erin was on the line.

Erin Cooper, FPC, said that they could set up a caucus for now or later.

Van Dyke said he had a question that it goes back to Mills piece of information and the detail that came to that. He said that flows up to 360 or 380 that were identified as the reason why the calculus for how many were allowed. He asked Mills what the current risk of floods is above 360 kcfs at MCN.

Marshall said that it would be something that the Corps would have to take a look at. He said that they had done an evaluation and determined that flood risk is low enough based on the criteria laid out here in the FPP to be able to open Gates 1 & 2, but there is the context with which they have evaluated flood risk for the MCN spillway operations.

Van Dyke said that what he heard that if they did it for the two bays and did not explore further that would not have been informed. He asked what the room for actually looking to see if this suggested operation could also fit within the boundary degrees of that the Corps had decided for just two bays. He asked if there was a chance for that.

Marshall said that would be something that they would need a little time to take a look at and make sure that they are considering all the possibly outcomes there.

Stranz said that what Van Dyke was asking was if there was a possibility, if FM decide to delay, to consider 18, or would the Corps have capacity to look into that analysis.

Marshall said yes, they would.

Stranz asked for Cooper from FPC to help the FM get onto a caucus call and Baus to provide a location for AA to convene.

Morrill asked Marshall how it would take the Corps to look at the option and the concerns of a flood risk. He asked how long it would be before the Corps could come back and say yes, they could have three gates open or not.

Stranz reminded Morrill that three gates was not an option.

Morrill said that he was asking how much time it would take if the process to go through the flood risk and he was just asking how quickly the Corps would be able to come back and say they could open three gates based on flood risk.

Van Dyke said that Morrill meant “utilize them” instead of “open”. He said that the FM were getting what the Corps was saying, it was just that the language was starting to get mixed up.

Marshall said he did not clearly understand what the Corps was being asked to evaluate.

Morrill said that he would try to rephrase. The Corps had decided that we could open Bays 1 & 2 without risk to flood. He asked what the process and how long would it take for the Corps to look at the question of if they had three gates open, what is the risk.

Van Dyke said that Mills had brought the limitation of the spillway operation in as a component for constraining what we can and cannot do. What Van Dyke said that Mills said is that once we open one of the two bays that use would be checked off the box and it is no longer available. What the FM needed to understand is what it means if there are three of the red boxes that have been used to do what they were asking and how that would impact whether there was some unexpected flow event that required opening everything.

Mills said that the ability to open the two gates was vetted through engineering and the whole Columbia Water Management team. She said that process occurred last winter prior to spring spill season.

Stranz asked for clarification that when Mills said that two gates, she meant Gates 1 & 2 specifically.

Mills clarified that she was referring to the diminished capacity of two of the downstream double leaf gates, but the Corps did not care which two out of the seven. She said that the concept of significantly restricting capacity of two of the downstream double-leaf gates had been vetted all the way up the Corps' chain of command and that was a process that took some time last year. She said that she thought that now taking a third of the seven double-leaf gates out of commission would be a lengthy process and Mills was not sure that could occur in a timely manner this Spring. She said that she did not want to say absolutely not but she thought that the discussion of the ability to add a third gate in, which is what TMT had been talking about, it is a discussion that would not be done in season this year.

Stranz said that was helpful. She had thought that she had heard Marshall say that the Corps had assessed that the flood risk was low enough to be able to open Gates 1 & 2, but that the Corps would need to do some thinking on whether or not opening Gate 18. She said maybe she had misunderstood that. She asked if there was an additional assessment that would be needed by the Corps to determine whether or not opening 18 is an option as one of the two gates that the Corps can open.

Ebel said that the TMT representatives' discussion had deviated from his request. He said that although it would be great, that discussion to have three gates open go beyond what he was asking for.

Stranz said that she did not think anyone had been asking for three gates to open.

Ebel said he wanted to clarify, when Mills was saying, and to his understanding, the Corps had analyzed having two gates open for this. It could be any one of the red gates and that would be the decision. He said that was it. He said that he felt like TMT was going pretty far afield but that is why he also thought that the region needs to caucus.

| *from Charles Morrill to everyone: 10:18 AM*

| *the vetting of opening two gates ...*

| *from Charles Morrill to everyone: 10:18 AM*

| *What Alexis just said ... two gates can be open*

| *from Charles Morrill to everyone: 10:18 AM*

| *my question was how long would it take to consider opening 3 gates*

Stranz said what she had though Marshall had said and what she wanted to clarify, because she thought it was related to the timing of actually implementing a changed operation. She thought she heard Marshall say that they would need to do more assessment to see whether or not it was an option to have 18 be one of the two gates open. She asked Marshall if she had heard that wrong.

Marshall said that he might have misspoken. He said that the last question was a little confusing. He said that would be something they could not consider for this season. He said that they would be able to consider MCN-8 or MCN-8 ALT for this year. He said reevaluating whether or not 3 of the double-leaf gates can be used is something that can be considered after the season.

Peery said that he would clarify that for flood risk management (FRM) they do not care which two double-leaf gates are used. He said that it would really be a fish passage question, an FPOM question.

Stranz said that the caucuses would start at 10:20a. She asked Cooper to send out the number to the FM and Baus to send out the number for the AA. The question on the table is whether or not to delay openings of Gates 1 & 2 in order to allow more time for conversation at FPOM around including Gate 18 as one of the two gates that are open this season.

Morrill said that his understanding and takeaway was that MCN only has two gate options that the process to even vet the possibility of having three gates out is not on the table at all. The Corps cannot do that. That was what he had been asking Marshall initially, he was asking how long that process would take and whether it was something that the region could do. He said that he appreciated the discussion, and he understood.

*** Caucus (Reconvened @ 11:00) ***

Van Dyke, FPAC Chair, summarized as clearly as he could. He said that he appreciated everybody to take the time to think about this and communicate. He said that the FPAC caucus did not have consensus amongst the FM on opening Bay 1 and 18. He said therefore the FM were not asking to delay the opening of Bay 1 & 2 at this time. Van Dyke said that the FM do request continued discussion for the Corps to model when three bays may be open, particularly in 2025 as was brought up earlier, in the event that it is a low flood year, and the risk is less than maybe usual. The FM would also like to continue the discussion on identifying prioritization of spill weir repair, specifically the bays that were talked about today (Bays 1, 2, & 18). The FM really felt that they should receive the highest priority in these discussions that will hopefully be planned for the future.

Stranz asked if Baus had a response about FPACs conversation or anything that he would like to report back on behalf of the Aas.

Baus thanked Van Dyke. He said that he thought they had heard the FM loud and clear. The Corps will continue on starting tomorrow, April 10, with the operation described in the FPP. He said that the AAs also heard the request to continue looking at the operation of a third bay (Bay 18). He said that he did not have a timeline for the FM on that topic, but the AAs heard the FM and will get back to them about that if they have more information.

Peery said that he appreciated the conversation/discussion. He said that he knew that the representatives all wanted to do what is best for the fish. He said that Ebel definitely has some good ideas to investigate, and fingers crossed next year at this time MCN will have one new hoist and a slab so there will be more options available.

Swank said that he wanted to correct his earlier statement about smolts being released. He said that there were a lot of hatcheries being timed with the start of Spring Spill but that 13M+ number that Swank had cited earlier he realized immediately after making the comment that those smolt are coming from hatcheries downstream of MCN. So, that number is not actually accurate for MCN passage.

Stranz thanked Swank for clarifying. She said that TMT for a really good conversation and for everyone's questions and efficient caucusing.

In reference to Van Dyke's agenda request/suggestion to see how movement is progressing for the prioritization piece.

Stranz thanked Van Dyke for bringing the topic back up because she was wondering if that would be via FPOM or TMT.

Van Dyke said that he thought that question would bleed in throughout this year and this discussion because it always seems to. He said that he thought that the representatives were all aware that occasionally an FPOM topic will come into a TMT agenda item. He said that he thought that process did require some thinking and he was hearing Stranz.

Baus said that he wanted to manage expectations for Wednesday, just looking around at his Corps' colleagues he thought it is reasonably certain that the RCC would not have any meaningful updates by next Wednesday regarding the utility of Bay 18. He said that he wanted to be clear on that. He said that he thought that it would be a longer-term issue that they need to look into and explore. He said that he would offer up that he would be happy to communicate that out as soon as he was aware of that. Baus said that they would look into it but with other issues going on he was not seeing that having anything meaningful by next Wednesday.

Van Dyke said that he guessed he would say that he would be happy with Baus saying that Wednesday and communicating the way Baus had just described when he is ready. He said that keeping that level just to keep the FM aware that it is ongoing would be a great gesture, if nothing else.

Stranz said it sounded like Van Dyke was just trying to make sure it stays on the radar.

Hesse said he thought that type of update was good. He said that he wanted to make sure that the Corps, and Baus, understood that having a timeline for getting that analysis and potential alternatives to using Bay 18 does have some urgency. He said that it is not

something that the FM just want to add to the to do list. He said when the Corps reports back to the FM next week, if they could some thinking about where that does fit in the list of things and understand that it does have the potential for near term application. He said that he just wanted to make sure that the urgency part is not lost in the report out.

Stranz said that she wanted to acknowledge that TMT was hearing from the FM that this is important and there is some urgency from their perspective. She said that the AA is saying yes, they hear the FM and there is a lot going on internally and fewer people to help with what is going on internally at the AA. She said that TMT will make sure, and DS Consulting would support TMT in making sure that it does not fall off the radar and that the TMT representatives will all continue to provide updates and get updates from each other even if the update is – we are not there yet. She said that TMT will need to manage expectations for what is actually going to be able to be accomplished within a week. She said that she wanted to create that space.

- | *from Charles Morrill to everyone: 11:09 AM*
- | *updates on expected peak flows at McN ... high priority*

6. Public Comments

- | Morrill had brought up a concern before TMT started about Thomas Starkey, Washington Ecology, not being able to get into the FPC link from his agency computer. Morrill also mentioned that he was not able to access FPC off his agency's computers from the link on the TMT webpage. He said that he had already sent a message to IT the day prior closer to the close of day. He said that he was able to access it from his Mac but could not get through the link on his agency computer. *from Jonathan Ebel to everyone: 9:06 AM*
- | *Charlie is correct, the FPC link under "Fish" on the TMT website is broken, but I can access it if I type it in. Not sure how long that has been true.*
- | *from Lisa Wright to everyone: 9:15 AM*
- | *Looks like FPC has a new URL for the homepage. I've updated the link on the TMT website. https://www.fpc.org/fpc_homepage.php*

7. Set agenda for next meeting – April 16, 2025

Meeting Location: Webex

- a. Check in on the MCN topic of prioritization. (Van Dyke request)

Today's Attendees:

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

Other Attendees (non-TMT members):

COE – Dan Turner, Alexis Mills, Kasi Underhill, Chris Peery, Elizabeth Holdren, Tiffany Stoeckig-Dixon, Tom Conning, Nick Bertrand

BPA – Tammy Mackey

Oregon DEQ – David Gruen

Washington Ecology – Thomas Starkey

DS Consulting – Emily Stranz (Facilitator), Colby Mills

CorSource – Andrea Ausmus (BPA note taker, Contractor)

Puget Sound Energy – Chris

EKI – Eve James

Clearing Up – K.C. Mehaffey

Chelan PUD – Lance Beyer

Portland General Electric – Phil DeVol

Energy EPS – Joshua Rasmussen