

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

April 15, 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 approved the official meeting minutes and facilitator's summary from the April 2 meeting. Minutes and summary from April 8 are pending and will be reviewed at the next TMT meeting.

Dworshak Update

Jessika Solleder, Corps, reported on current operations at Dworshak Dam (DWR) and results from the [April 7 snow flight](#). Current forebay elevation is 1,572.64 feet with an outflow of 9.9 kcfs. Snow telemetry indicates snow water equivalent (SWE) is below average, and the basin had been trending downward since mid-March after a brief buildup from storms. Forecasts show snow over the next two days then a brief dry period, followed by rain at all elevations at the end of the 10-day. In the Clearwater Basin, forecasts show up to 2.5 inches of precipitation at higher elevations; 1 inch at lower elevations.

The April 7 snow flight (in coordination with NRCS) included stops at Cool Creek, Crater Meadows, and Hemlock Butte, with a planned stop at Shanghai Summit cut short due to weather conditions; only an aerial survey was conducted. Key observations included:

- Snow line around 5,200 feet
- Snow telemetry sites appearing to report accurately
- Satellite imagery potentially over-reporting the snow line
- Soil conditions dry to slightly damp
- Snow density below 40%

Jessika noted the basin appears to be in a pre-runoff loading phase; the Corps expects early runoff. Results from the snow flight will help inform refill and regulation decisions moving forward.

SOR 2026-01: Releases of water from Grand Coulee Dam for flow augmentation in the Columbia River from Chief Joseph Dam to Bonneville Dam

On behalf of CRITFC, ODFW, WDFW, Yakama Nation, and IDFG, Jonathan Ebel, IDFG, presented [SOR 2026-01](#), describing it as a new flow augmentation strategy for Grand Coulee Dam (GCL) and Lake Roosevelt. The SOR requests Reclamation to implement a volume-based 4-week strategy in 2026 to augment river discharge in the Columbia River from Chief Joseph Dam (CHJ) to Bonneville Dam (BON). Specifically, releasing 200 kaf of stored water from GCL on April 17 to augment flow from CHJ to BON, ending on April 23 and smoothly transitioning to a forthcoming week 2 request that will be provided on April 21. He explained that the requested strategy consists of:

- Drafting water on a weekly basis
- Basing outflow on inflow plus draft volume
- Aligning operations with the timing of migrating fish
- Allowing for monitoring fish response with increased flows over time.

Jonathan noted the request is intended to target priority listed species that data show are moving earlier in the season, especially in the upper Columbia and Snake River systems, and to improve the ability to test

effects through adaptive management. He added that the SOR includes supplemental material showing modeled flow impacts, travel times, and water transit times, and that additional material has been sent to Action Agencies (AAs) in response to questions.

TMT Discussion on the SOR

TMT members asked for clarification on what the SOR is trying to do and how it differs from existing operations. Jonathan explained that past spring operations at GCL have been difficult to evaluate because they are not organized as a clearly defined volume release that may be tracked and tied to fish passage and survival outcomes. In response to queries, the following technical clarifications were provided:

- The SOR is not the same as current spring flow requests tied to seasonal flow objectives in the existing EIS / BiOp.
- The SOR is intended to be a different strategy, not just a different weekly flow target.
- Water transit time is used as a proxy for fish travel time because from a fish perspective, the two are strongly correlated.
- The requested operation could, in low inflow years, require a large draft, potentially up to 1 maf, depending on conditions and constraints.

Other concerns and perspectives expressed by TMT Members included:

- Is the suggested operation about flow or about reshaping reservoir volume and pass-through flow timing?
 - Jonathan emphasized that the strategy is intended to enhance the spring hydrograph below GCL by using storage more deliberately during a key migration window.
- Dennis Moore, Confederated Tribes of the Colville Reservation, noted that modeling results did not capture the full picture and pointed to creel data showing declines in the recreational fishery during deeper drawdowns. He also noted concerns about access for research vessels and impacts to resident fish populations that rely on stable reservoir conditions.
- Brent Nichols, Spokane Tribe of Indians, noted the operation may have negative impacts to Lake Roosevelt resident fish, access to boat launches, and operations such as northern pike suppression and burbot research. Pike minnow suppression in Lake Roosevelt began three weeks ago and will continue weekly until late October. He reported that 28 adult northern pike had already been harvested from the lower reservoir, and that more than three-quarters were females capable of carrying 200,000 to 300,000 eggs each. He cautioned that the proposed drawdown could draw pike further down toward GCL and into the Columbia River.
 - Current suppression effort targets pre-spawn adults; spawning typically occurs into June.
- Fish seem to be moving earlier than average this year, a new strategy may be more effective in supporting those early migrants.
- Is water transit time the right metric compared with fish travel time? They can diverge by 6-10 days in some seasons.
- Reclamation emphasized that GCL is already operated to pass inflows; the SOR would reshape reservoir storage not concurrent with operational directives (CRS BA and BiOp). 1 maf from GCL is 15-17ft.
- SOR signatories emphasized the intent is to maximize effectiveness by concentrating flow during the main passage window rather than spreading it thinly across a longer period.

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

TMT Member	Polling Response	Rationale (Optional)
National Oceanic and Atmospheric Administration	Abstain	NOAA/NMFS supported the concept of increasing spring flows, especially in a year where fish are migrating earlier than average. The SOR needs more work to be broadly agreeable, especially to address concerns raised by upper Columbia Tribes. They recommended continuing the discussion in the off-season.
Oregon	Support	OR noted that the SOR reflects true adaptive management and the need to act in-season when conditions change. They supported improving passage conditions for listed species and emphasized a need for improving the management process that from OR’s perspective creates roadblocks to in-season adaptive action.
Washington	Support	WA supported the concept of concentrating water during peak passage, emphasizing empirical evidence that increasing water transit time improves fish passage timing. They noted this year’s earlier migration timing makes this SOR especially relevant and expressed disappointment that there doesn’t seem to be an opportunity to try it this season.
Confederated Tribes of the Colville Reservation	Object	CTCR reiterated concerns about impacts to resident fish, boat launches, access, and ongoing research in Lake Roosevelt and supported more discussion on the issue in the off-season.
Confederated Tribes of the Umatilla Indian Reservation	Support	CTUIR strongly supported the SOR as a better way to use flow augmentation and emphasized that current spring releases are spread too thinly to be effective. They noted that concentrating the flow during peak migration makes more sense and supported continued off-season work to address concerns.
Confederated Bands and Tribes of the Yakama Nation	Support	YN supported the SOR as a new way to consider flow augmentation; the current approach spreads the water too thin to be effective. Concentrating flow during peak migration could benefit fish, as fish survival rates are much higher if the fish migrate prior to May 15. They supported continued off-season discussion, especially around resident fish impacts at GCL.
US Bureau of Reclamation	Object	BOR noted the SOR is outside the current spring operation framework and is not anticipated in existing ESA/NEPA documents. They emphasized that GCL already has a summer flow augmentation program, but not a dedicated spring volume requirement. They noted uncertainty about benefits and concerns about impacts to resident fish and reservoir operations and highlighted current operations as already meeting spring flow needs through normal refill/pass-through behavior.
US Army Corps of Engineers	Object	COE supported comments by BOR and had nothing further to add.

Idaho	Support	ID noted the SOR fits adaptive management principles and would make impacts of the operation more measurable. They emphasized that the requested operation would likely have negligible power and refill impacts based on the addendum information provided and noted the strategy could improve salmon survival and make ecological and economic sense.
Montana	No Objection	MT appreciated the collaborative effort and the goal of optimizing conditions for migrating fish within physical constraints. They were unsure that shifting water over a few weeks would create a large biological effect and noted sensitivity to resident fish concerns and suggested more hydraulic/modeling work could help.
Spokane Tribe of Indians	Object	STI had nothing further to add.
Bonneville Power Administration	Object	BPA noted the SOR was surprising given the current forecast and expected GCL operation. They did not think the benefit of the change was compelling enough to implement and questioned whether the expected improvement justified changing refill operations. They were not persuaded that the SOR as written was meaningfully different from what would occur anyway.
<p><i>The Nez Perce Tribe were not present to provide rationale, but it was noted they generally supported the approach; they did not sign onto the SOR because of time constraints. The Kootenai Tribe of Idaho, US Fish and Wildlife Service, the Confederated Tribes of Warm Springs, and the Confederated Salish and Kootenai Tribes were not present to register a polling response.</i></p>		

Action Agency Implementation

Reclamation will proceed with normal spring operations at GCL through April 30. Drum gate operations are expected to end around May 11, with GCL passing inflow until that point. The project will begin refill (targeting full by July 2), and then continue with the summer flow augmentation draft. Chris clarified that the April 30 FRM draft target is right at the drum gate maximum (within a couple feet of operating range). If drum gate operations end earlier, TMT will be notified, and operations will adjust accordingly.

TMT Members noted there was value in continuing the conversation in the off-season, to refine any future operational requests and address concerns about resident fish, access, research, and the relationship between water transit time and fish response.

Set Agenda for Next TMT Meeting

The group set the following agenda items for April 22, TMT Members may send additional items to Doug or Emily Stranz. A draft agenda will be posted to the TMT website by Monday COB.

1. **Non-Court Ordered Operations Review**
2. **Other**

Questions or Comments from Non-TMT Members

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

The next scheduled TMT meeting will be on April 22 at 9AM PST.

Columbia River Regional Forum
Technical Management Team
DRAFT OFFICIAL MINUTES
Wednesday, April 15, 2026

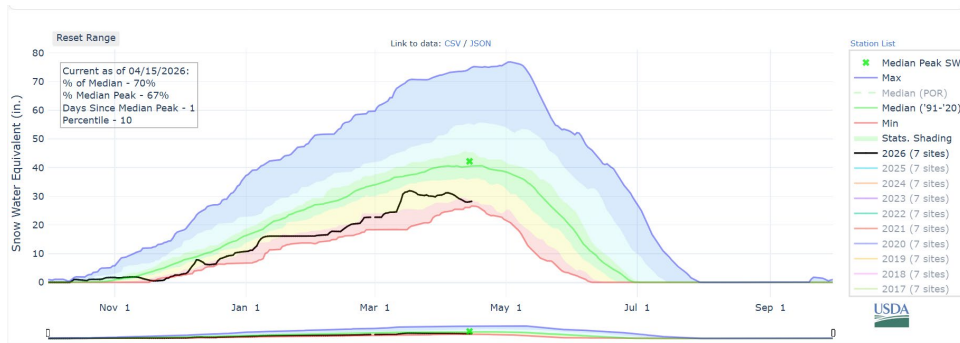
Today’s TMT meeting was held via Microsoft Teams and conference call, chaired by Doug Baus, Corps, and facilitated by Emily Stranz, DS Consulting. Minutes were collected by Andrea Ausmus, BPA (contractor, CorSource Technology Group). A list of today’s attendees is available at the end of these minutes.

1. Review Summary and Minutes – Emily Stranz, DS Consulting

- a) April 2 (April 8 pending)
 - April 2 approved

2. Dworshak Update – Jessika Solleder, Corps-NWW

- a) DWR Hourly Data (Hour 8)
 - Current Forebay Elevation: 1572.64 feet
 - Current Outflow: 9.9 kcfs
- b) Snow Water Equivalent (SWE) Plot – North Fork Clearwater



- Current SNOTEL instrumentation is reporting SWE is below median.
- Mid-March storms did build the snowpack but ever since we have been trending downward.
- Officially 1-day from median SWE peak.
- c) 10-Day NWRFC Forecast
 - Some snow is coming in next two days.
 - Then taper off and dry for a little bit.
 - Back half of the ten-day forecast is expecting to see rain at all elevations.
- d) NWRFC Clearwater Forecasted Precipitation
 - Higher Elevations: up to 2.5 inches
 - Lower Elevations: as low as 1 inch

e) Snow Flight Story Map

- [Clearwater Basin April 2026 Snow Flight](#)
- Conducted: April 7
- The Corps partners with the NRCS to do the snow flights.
- First flight of the year.
- Snow flights are used to verify data being used on the SNOTEL sites through ground truthing. They also verify the spatial distribution of the snow and the snowline through aerial surveillance. This ensures accurate reporting of the remaining snowpack to make better regulation decisions and helps to make sure that the SNOTEL sites are reporting data accurately.
- April 7 Flight
 - Cool Creek
 - Crater Meadows
 - Hemlock Butte
 - Shanghai Summit (aerial survey only)
- Observations:
 - Snowline Elevation: ~ 5200'
 - Verified that the SNOTELs were reporting accurately but the satellite imagery was overreporting.
 - Soil samples were dry to slightly damp.
 - Snow density: Around low 40%
 - Observed data that were similar to or slightly below what was currently being represented in the available data.
- Expectations:
 - In a pre-runoff loading phase and are expecting to see an early runoff.
 - Looking towards refill, DWR now has the insight of the details of the snow flight to help inform operations and is using it moving forward with regulation decisions.

Charles Morrill, WA, thanked Solleder and said that he would be in touch after he looked over the snow flight data.

3. SOR 2026-1 for Spring Flow Augmentation – Tom Lorz, CRITFC/FPAC Chair; Jonathan Ebel, ID

a) [Cumulative Wild Yearling Chinook and Steelhead PIT-tag Detections](#)
(through April 13, 2026) – Lorz

- The link provides the current PIT-tag collection at Lower Granite (LWG) and McNary (MCN) of yearling wild Chinook and wild Steelhead.
- Run time and PIT-tag data show that fish are moving a little sooner this year than typical.

- Predicated the writing of the SOR; it could provide some benefit for the early moving of fish through the benefit of flow out of Grand Coulee (GCL).

Chris Runyan, BOR, said that the first plots are LWG and there is a PIT-tag detector there that tells you the hatchery that specific fish come from and that is what is shown in the table, the location of where the hatchery was.

Jonathan Ebel, ID, said these are wild fish so it is the trap at which the wild fish were captured, tagged, and it is the release site.

Runyan asked when they were captured and tagged.

Ebel said that the highest number of fish that were captured in the traps were in the fall of the year prior to migration and a handful of the fish were trapped this year as yearlings or steelhead. They are all wild fish, for Chinook they are brood year 2024, the year they were spawned and for Steelhead they could be a number of ages, mostly tagged in the fall of 2025.

Ebel shared that the red dots are higher than the cumulative. The graphs show a cumulative frequency, it is the average of the past five years. MCN detections start to pick up around April 20 on average, instead this year they started picking up immediately upon the detection capability starting at the Project. The number of tags going out in wild fish is relatively stable lately, because, at least in the Snake populations it has been low and they are relatively stable in the Upper Columbia because there's just not that many tags going out in wild fish. What this is telling us is that the fish that are out there and are tagged are moving earlier and arriving in the mainstem reaches two to three weeks earlier than was typically seen in the past five years.

Runyan asked if that was shown in the wild Steelhead at LWG plot.

Ebel said they are not, it is a little bit higher, but we are definitely seeing it for Chinook. You can see that the Steelhead in the Snake, in terms of when they are detected they come a little bit after the Chinook. They are a little higher by we have not seen the pulse that was seen with the Chinook. There is a lot of detail to this, but Runyan was right in that the red dots are a lot closer to the black line for Steelhead at LWG but at MCN, there is almost a magnitude order of difference in terms of the number of detections which is due to the detection ability of the dam itself, combined with the number of PIT-tags going out in the Upper Columbia and where the fish are in the system, but you can see that Steelhead are moving past MCN.

Runyan said thank you and that the explanation helped. He said that he did see what the data are showing. Chinook definitely appear to be moving earlier compared to the five-year average. He said that there is variability within each of those five years, but we do see that at LWG it is tracking more near average but you typically "on average" only see about half of the fish passing prior to around May 10. If they stay on that trajectory half of wild Steelhead would be passed by around May 10 and the other half would happen after May 10. He asked if that was a correct interpretation.

Ebel said that there is some complexity there because these are wild fish and distribution and stock specific timing but for what we are talking about right now it is a sufficient interpretation or adequate for the purposes of today.

b) SOR 2026-1: Spring Flow Augmentation – *Jonathan Ebel, ID*

- SOR 2026-1 is a request to implement a different way of implementing flow augmentation from GCL and Lake Roosevelt.
 - SOR is a strategy with a change to broadly address some issues with flow augmentation from GCL in the Spring.
 - In terms of 2026, it begins flow augmentation sooner than typical to try to align it with the presence of the wild listed juveniles in the Lower Columbia as well as the Upper Columbia.
- Problem addressed:
 - Broadly, the SOR and text paints the different early flow augmentation programs that occur within the Federal CRS (e.g., water released for an area during a given period of set of guidelines).
 - The commonality between most programs is that they could be broadly couched under a definition of flow augmentation – the release of stored water, water that would have been stored or otherwise consumed. Instead the water is released at a time to increase river discharge to ideally improve the survival, migration conditions, or local environmental conditions for fish.
- The program that does not fit into this definition would be Spring Augmentation from GCL.
 - In the proposed action it is a weekly average flow request that can be made.
 - The issue with this and in the spirit of Adaptive Management, or the monitoring, the implementation of a strategy, and the response to management target of the survival of listed stocks, we cannot do that with past operations of GCL in terms of Spring Flow Augmentation, because it is difficult to determine the amount of water released and any response in survival due to the release.
- Volume Draft-Based Flow Augmentation Strategy
 - To react to differences in fish migration timings and target stocks it has a four-week strategy with a decision based on a weekly basis of the amount water to release in terms of a draft volume.
 - $\text{Weekly Outflow (GCL)} = \text{Total Volume [Volume of Inflow + Draft]}$
 - This would make the problem of monitoring responses to the management action more tractable in the long run as well as moving water to target priority stocks of listed fishes.
- The proposed SOR includes wild passage at the time of writing the SOR, PIT-tags, responses to questions received (assessment of the impact to refill of GCL), non-inclusive list of constraints, history of flow augmentation.
 - GCL would likely refill if this SOR was implemented.
 - SOR is not asking for any deviations from the listed constraints for CRS, including the temporary constraint associated with the issues with MCN spill gates.
- Additional Supportive Documents

- Ebel also referenced additional documentation that was sent to the Action Agencies (AA) but forgot to attach to the SOR. Included:
- Excel file of the supplementary materials he included addressing an issue with potential implementation of the strategy in terms of distributing water across all four weeks.
- ESP provided to the Fish Managers (FM) last week showing the projected flow with or without the SOR and the water transit times associated.

Stranz shared that the SOR included the names in support of the SOR. It did not include Jay Hesse, Nez Perce, due to time constraints. She had spoken to Hesse on the phone and he had said that Nez Perce generally supports the shift to a different strategy.

c) SOR 2026-1: Discussion

Kelsey Swieca, NOAA, asked for a brief description of the information that was sent to the AAs.

Ebel said at FPAC through discussion colleagues from the Colville and Spokane Tribes expressed some concerns. FMs started to look into how or if the SOR would have a significant_ or how we could address the concerns and whether the SOR would have an impact of the magnitude that might be a significant concern. The information that was sent was on boat launch elevations and the impact on accessibility of Lake Roosevelt at different points if the SOR is implemented and not for and how long that impact would last. And whether this draft would be predicted to cause a significant increase in the entrainment of catchable hatchery trout stock as part of their mitigation program.

Stranz asked if Dennis Moore, Colville, had anything more to add to the way that Ebel described concerns.

Moore said yes and that they did have some conversation and exchanges regarding this. He thanked Ebel for looking at some of the research and model results they had shared. He added that while the model provides a useful lens for evaluating a period of four-week post release of hatchery Rainbow Trout it does not capture the full impacts. He said that they also have krill data that has been observed that in years of deeper drawdown the recreational fishery in Lake Roosevelt declined significantly. Part of that is due to the operations that have already been done for drumgate maintenance a lot of the zooplankton moves down lower in the reservoir, and the carryover fish have followed that down. So, it is not just an issue of the net-pen hatchery releases but also the resident fish that are a carryover from the previous year. He said that they do have concerns about those impacts. While a number of many boat launches would be impacted (not all of them) but that still would impact some of their other concerns that they have for being able to provide angler access for the recreational fishery but also for their research vessels. Some of the work done at this time of year that would be impacted is the northern pike suppression efforts. That is a concern because they are trying to prevent the spread of northern pike below GCL. There is some Burbot research that takes place at this time of year that would be impacted, sampling some of the larval burbot. Those are a couple of concerns regarding the water retention time in how it would impact rainbow trout and other resident fish in the reservoir and some of the current research that is ongoing.

Ebel responded. He talked about how he had looked at the data and used some of it in the supplemental documents in a broader statistical format. He said that there are number of things, the reservoir is already down at drumgate and the issues that the research points to occur at a draft that is significantly deeper than the requested draft. He said that it would be a magnitude effect. He said that he would need more detail on the pike suppression and it would be nice to raise the concerns to provide when peak pike suppression occurs. He said in the discussion in FPAC the Spokane Tribe did let FMs know that pike spawning in Lake Roosevelt occur later than in other areas and the suppression efforts are targeting them in their aggregations in the upper parts of the reservoirs. He said that he wanted to stress that this requested operation is over by May 15. And given what we see as probable inflows and what we surmise based on experience watching the operations of GCL during the refill season and the priorities of BOR that by time that a lot of these, maybe not burbot research, are being implemented where most effective, things will be back to status quo.

Brent Nichols, Spokane, followed up on the pike suppression question. He said that they had started pike suppression three weeks ago in Lake Roosevelt. It continues weekly until late-October when they switch to their annual monitoring event to see what impacts they have had on the population. So far to date in the lower reservoir, down below the confluence, they have harvested 28 adult northern pike of those more than three quarters are females. Each one of the females can hold up to 200 – 300 thousand eggs. He said that the concern Spokane Tribe has with this action is that it would draw the pike closer to GCL and possibly below GCL into the other reaches of the Columbia River. He said that he wanted to touch on the breadth of suppression that takes place in Lake Roosevelt.

Erick Van Dyke, OR, asked Nichols what part of the pike lifecycle the current suppression action was addressing.

Nichols said that it was targeting pre-spawn adults.

Van Dyke asked if there was nothing else.

Nichols said for this time of year, nothing else. He said later in the year they switch methods and they target young of year.

Van Dyke asked for a little detail about the anticipated period of time that pike are spawning in Lake Roosevelt.

Nichols said that we do not have good information on that because of the habitat that they spawn in. He said that they typically see them spawning into June and that was what they were anticipating.

Van Dyke said if they are not looking at that at all, it makes it difficult to make much suggestion, but he said that maybe the details of the fish that they are reporting how long into the development were the adult females. He asked if they were spawned out, partially spawned out, or just developing their eggs at this point.

Nichols said at this point they have not spawned out at all, they have not partially spawned, they are still in developing eggs at this point.

Van Dyke said that was helpful and he appreciated the information.

Runyan asked about the SOR, page 4, third paragraph from the bottom, “Often, the slow release of flow augmentation is communicated as needed to cover the passage timing of as many imperiled species and populations as possible. In doing so, however, the benefits to all migrating fish diminish to near zero.” He asked Ebel to provide context. He asked if Ebel was talking about all of flow augmentation or specific parts of flow augmentation. He asked if that was a summer draft at GCL or a HGH summer draft. He asked what that was referring to.

Ebel said that statement, with a broad brush, gets to the point that fish are not passing. The distribution of fish passage across time is not uniform, there are stocks and those stocks migrate. They have a peak and most of those fish pass within a range around that peak. He said to maximize the efficacy or the ability of flow augmentation to insight a response in terms of survival by increasing the flow that needs to be targeted to that peak or to a priority section of the stock or things like that, it is what FMs do. He said in an existing analysis of flow augmentation in the Snake that it was able to be done because it is tractable, you can say what flow augmentation and what is not, you could say the fish metrics in terms of travel time and survival change very little with or without the program and generally that is because the flow augmentation, when spread out over time, is not contributing significantly in proportion of the flow that is already there, so if you only have a small amount of flow, if you are only increasing by 2 – 5% relative to the background you are not going to be achieving and are not maximizing the efficacy of the water that you are releasing. He said that we have heard in TMT and overtime, in guiding documents, that part of the reason there is water moving around the basin colored for fish throughout late Spring and into Fall is to cover a very broad range of the stocks.

Eric Rothwell, BOR, thanked Ebel for walking through this stuff. He said certainly the magnitude and timing of flow is not new or novel, it has always been one of the drivers or the Spring and Summer operations. He said that this is a volume request but if there as a flow request, like a weekly flow request, which had been contemplated in the past, and they both result in the same flow timing, whether they would be equally effective.

Ebel said then it would become an issue for FMs not knowing how effective it is because they cannot quantify the augmentation. They cannot say what amount of water that was released was colored for fish. He said that was where the adaptive management capacity_ If you cannot put a number on that value then you cannot refine the program.

Tony Norris, BPA, said that Ebel was suggesting that prioritizing a couple of the species that are migrating over others, so reshaping GCL’s refill prioritizes those species and deprioritizes others. He said that has not been a target during refill, especially when we are forecasting to be meeting or exceeding the spring Priest Rapids flow objective. He said as it relates to Ebel’s concern of not being able to quantify the augmentation. He said that GCL would be operated to its inflection points in the spring except in years when we have low flow. He said that typical TMT flow requests have come when we see low flow in late April running to Hanford Reach minimums. This has been to support Mid-C migrating fish and has been modeled this way in the BiOps since 2004 including the 2020 EIS and BiOp). During years with low flows in late-April/early-May it was modeled to incrementally move water out of May and June into late-April and early-May to prop the flow up to approximately 90 kcfs and then potentially increase as the spring freshet finally begins. Norris said that other times that we have entertained flow requests are

when we have had a significant April 10 to April 30 FRM draft and we have had a significant drop in streamflow either at Priest Rapids or MCN and we have had flow requests to incrementally draft GCL to avoid a significant drop as we wait for the freshet to begin. He said the flow augmentation that is released upstream of Grand Coulee from Canada or other Headwater Projects flows through GCL, passes GCL because we operate to those inflection points. We operate to April 10, and operate within a few feet of April 30, and we refill on the day before July 4 weekend. He said that we achieve those things regardless of inflow. He said that anything that flows into GCL flows passes through GCL and there is Ebel's accounting. There is not specified Spring flow augmentation out of GCL, out of storage, because that is really just shaping refill during the most volatile streamflow period of the season. He said right now we are forecasting a gradual flow increase into GCL and subsequently at Priest Rapids. Starting this week and next week we are seeing streamflow rises and expect to see a peak sometime around the end of May as we refill Lake Roosevelt to approximately elevation 1286' by July 2. He said that he would push back on the implication that we cannot account for water that comes through GCL. He said that it is accounted for quite precisely because anything that is released into GCL passes GCL.

Swieca said that she would say that the statement that Runyan originally highlighted is not NMFS' perspective about the efficacy of flow augmentation and it is not a surprise to anybody in the room. She said that she thought it would be beneficial to consider the unique circumstances of this here when we are talking about tradeoffs amongst species. She said that we have heard, and we have seen in the data presented that we are expecting, and we are seeing fish moving earlier than they are in a "typical year". We have also anecdotally heard that for subyearling Fall Chinook are moving out of this system a little bit earlier than they would because of warm winter temperatures. She said that she wanted to make sure in our discussion of the context of how we consider the tradeoffs among species and flow augmentation with respect of the proposal we consider the unique circumstances of this here.

Ebel said that was important, there are two pieces here, like what do we do in 2026 given that we are seeing slightly anomalous – or something a little bit different in terms of timing of a number of listed stocks and priority stock in both basins, in both the Upper Columbia and the Snake. And with temperatures we would probably see the ocean-type Chinook or those that migrate with subyearling as subyearlings for Chinook follow what anecdotally heard in terms of movement, emergence timings, and growth of Snake River Fall Chinook. He said to Norris' point of being able to account for GCL, yes you can, you can account for it precisely at a seasonal scale. When you say flow augmentation from the Upper Basin passing in Spring, in some ways that is flow augmentation that occurred _ it depends on how you want to color it because flow augmentation occurs up above GCL, the only flow augmentation that occurs in the Spring from above GCL is from Canada in the years that it is requested and the other water yearly scale you could calculate it because you know how much water goes past the dam. There is a draft at Libby, there is a draft at Hungry Horse that occurs up until October of the prior year, that water is accounted for in the System, but it could have been passed for Chum, it depends on how you want to put it. He said the point in the SOR is that while GCL is being managed to what Norris referred to as "inflection points", and Ebel said that he knew what Norris was referring to, the only scale in which you could consider or precisely

account for a Spring augmentation is across the entire year, if you would assume that the water would be otherwise stored. Ebel said that the point that he was trying to make was that if you want to use it and monitor it effectively with the tools that we have then we have got data on weekly passage, both NMFS and the States and Tribes, break up juvenile survival into shorter periods, a week or two weeks. That forms the basis of our ability to monitor, model, and test the effects of different management strategies. He said how Norris was suggesting flow augmentation can precisely be accounted does not occur at the scale that it needs to align with the fish data that we have as well as the idea of adjusting it within a year, cross years, to target priority stocks. Beginning in February Snake River Fall Chinook of Clearwater origin, the yearly strategy of that population is moving down at the beginning of April, they are down at John Day. Some of them are still in the Snake and they are going to be down at beginning of April. He said that we start the Spring and then you have the early migrants in the Upper Columbia for Spring Chinook which are highly in peril and then you end up with the Snake River stocks and then further along you end up with the subyearling Fall Chinook and you are getting towards the beginning of the Upper Columbia summers. So that gets to the point of we have these stocks, some are listed and some are not listed, FMs are looking for, and some of the populations need help and being able to identify and target some of the actions to those fish. That is why the strategy is in the SOR the way that it is and why the previous accounting at GCL has not really been able or has been changed at all to achieve that aim. He said that it is just in there as a flow request. He said that he understood where Norris was coming from, but the goal is to improve and to improve we need to quantify under our adaptive management framework, and this is a request and a strategy put on the table to increase that capability long term.

Runyan thanked Ebel for making this a little clearer on what was being asked. He said that Ebel had said that it is something different. He said there was initially some confusion with Spring Flow Augmentation at GCL, what it is, is there anything. Runyan reiterated that currently they do not release a set volume out of GCL in the Spring for flow augmentation. He said that they do have Summer Flow Augmentation, after they refill GCL we do release Summer Flow Augmentation and that is a volume. It is anywhere between 10 – 12' of draft before the end of August. That is a volume that occurs, it is based on a forecast at TDA. He said that they do not have a set volume for Springtime, what they have in the 2020 BA described as being able to do flow shaping. In the BA there are seasonal flow objectives, there is a table that identifies objectives at MCN (the Snake comes in before that so GCL cannot control anything there) and there is one at Priest Rapids as well. In the BA it highlights the ability of GCL that in some years via weekly flow requests GCL could be used to help. Norris highlighted a couple of those instances. Where maybe we draft to April 30 and we are passing inflows and there is a dip in flows, so we continue to use GCL to take out the dip and taper into a increasing hydrograph, which Runyan had heard is beneficial. He said that was one option. Another option is we are in a really dry year and we cannot even get to the flow objectives, GCL has been used to prop up the flows the best they can. He said that the Spring flow weekly flow request, in the BA, relates to a table. For instance, for Priest Rapids the objective is 135 kcfs.

This SOR, as Ebel had said, is something different and a new strategy, Runyan understood that, but he wanted to make the point, that is not what the BA talks about, we

have not done that and there are concerns that the trade off of this operation may not be fully understood. He said that we get that there are fish moving early, but we also know that there are going to be fish after May 15 as well. He said that he wanted to make clear that this is new, this is a different strategy, GCL does not release a certain amount of volume each year during Spring refill.

Runyan also noted that the flow objective at Priest Rapids is 135 kcfs in the BA, the latest ESP shows flows at Priest Rapids for the next week averaging 135 kcfs and then increasing up over the next month, into May, and we are looking at a flow projection right now of a weekly average of 173 kcfs in the week ending May 26. That flow is very similar to the flow that Ebel was targeting in his SOR so he thought it was beneficial that_

Ebel said that they were not targeting a flow.

Runyan said that they were not targeting a flow, but he assumed that flow was good. He was just saying that we are seeing that flow happening by just operating to normal course of events. But as Ebel said this is not about flow, this is about strategy and volume. Runyan was just making the point that is outside of what was described in the BA.

Ebel said that the SOR makes that point. It includes the section, not verbatim but it is referred to as augmentation, and it is the one that is different than the others in the basin. He said that the seasonal flow objectives, or average flow is across the season, so the fact that you might need it for a week or two does not get towards an average flow that is near that objective when you actually get out. Just having that at the peak is not your goal. He said that he wanted to clarify that the fact that the ESP model this week projection of flow is similar to what was provided as the projected flow with this volume draft and the fact that the operation may get there anyways that is why they are not targeting flow, because projection without flow augmentation is better for fish this week then it was last week and most of their statistical models suggest that if you put that draft on top of the flow for this weeks ESP it would be better for fish that without the draft. He said that there is an upper limit to where you want to go in terms of the amount of water flowing down a river but the seasonal objective value and the water transit times and their relationships with survival and return rates and hence can be extended to implementation of dynamics if we implement something like this over 40 year is still in the Lower River, below Priest, because of the low flows in the Snake, when they combine we are still not there. He said from the perspective of this request, conditions can be improved relative to with the request versus not implementing the request and Ebel thought that the costs, or the impacts to fish that would not experience the draft in terms of the decrease in flow the would experience as it reaches refill and switches around a little bit. One is completely dependent on the AA implementation of the refill curve and how aggressive they are at certain times when certain fish are passing but it actually distributes that impact across a longer time range than the operation itself so the benefit that could be accrued by the fish targeted by the operation is not proportional to the detriment to survival of the stocks not targeted.

Runyan shared that 1 maf at Lake Roosevelt equates to 15 – 17 feet of draft, depending on where you are in the reservoir.

Rothwell said that he would reiterate some of the points that Runyan made and acknowledge what he heard from both Ebel and Swieca. That is in-season, this year, migration timing is different and the intent here is to improve conditions for migration. Norris and Runyan said this well, that we have a strategy at GCL, an operational strategy that is to constrain operations for other purposes, we have these inflection points and those are knowns and in between, in the past, and both Norris and Runyan walked through examples, we have considered flow requests to try to improve conditions to adapt to in-season conditions that are recommended from the FMs. There is a good reason that flow requests were considered in the past and that is the dynamic nature of the system. Week to week things change, we saw that from last week to this week and this appears that this is not necessarily about flows, it is trying to do something different. He said that he thought the problem with that, and Runyan pointed it out too, is that we have considered the tradeoffs and impacts of this operation but not the idea that there is a maf in GCL and a 15 – 17 foot draft could have impacts to a lot of resources, some of which were described by the Colville and the Spokane this morning. He said that he wanted to acknowledge that he had heard the in-season concern and to underline some of the points Runyan made.

Ben Hausmann, BPA, said he had a question about the documents within the SOR, the supplemental attachment as well as the answers to the questions that Runyan had posed a couple of weeks ago. He asked about the specific benefits and whether we should be using Water Transit Time (WTT) versus Fish Travel Time, because they do differ and they differ significantly. He said even in the last year between both Steelhead and Chinook there was a 6 – 10-day difference between the two during the time period of the SOR. He said that his question was for looking at a benefit that is half a day in the lower river for Snake River fish, but the discrepancy between those two parameters is that big. He asked if the benefit was significant, and why we are using WTT if in this case Fish Travel Time is probably significantly faster. He said that he was not sure who that question should be directed to, it was an open question on the use of that particular metric and if there is that much disparity between the two.

Ebel said that they could have translated WTT into Fish Transit Time in the SOR. He said that was an extra step and they were asked about the WTT, so they provided those. He said that the answer is that those are two highly correlated things. As you are improving WTT, you are improving Fish Travel Times. They are highly, highly correlated.

Hausmann said that it is seasonally dependent because we could have a whole lot of flows at the beginning of the year, and if the temperatures are still cold fish are not really moving.

Ebel said that was true, but temperatures are not cold. He said yes, later in the season the fish travel time that we observe tend to get faster and that is because at higher temperatures their metabolisms are getting higher per unit WTT. They can swim faster and have more impetus to move but on top of that we can only get the travel times off fish that survive, and the fish that are surviving are moving faster. So we have no idea what is happening to the fish that are moving slower or if there are fish that are moving slower. That is always in consideration that is taken into account when we take fish travel time and its relationship with seasonality and water temperatures.

Brian Marotz, MT, said he was trying to understand because he recognized the objective to try to respond to the fish that are moving earlier than average and create the best environment possible for them. He said in order to do that, the way that it works in his mind having gone through two systemwide System Operational Requests (SORs), we have already taken the System a long ways, shifting water to create more of a naturalized Spring freshet to flow down from the headwaters by basically making a smaller evacuated storage in these Projects and of course you are trying to refill upstream Projects, and you are trying to create a more normative discharge downstream. Then after the Spring freshet, flows reduce gradually. But if we just focus on the Spring period that this SOR deals with, we are already shifting a lot of water into Spring out of the headwater storage projects during this time of year, within limits, because you cannot exceed flood stage anywhere along the way. He said GCL receives a lot of the water in a pulse, including a similar pulse coming from Canada through the separate agreement. What you have is two pieces, you have passthrough flows at GCL and you have change in reservoir volume. If you have a lot of passthrough flows, you do not need to release as much out of storage. If you have less passthrough flow and you want to exceed it to achieve a certain flow downstream, you have to have a change in reservoir elevation. He asked how much of this SOR is just a request for passthrough flows and how much of it is a request for a change in reservoir volume, because we are already achieving one of the two and then you only have a limited ability to change reservoir volume during that period of time that we are talking about. He said that he understood what we are trying to do but he does not understand how the request deals with the change in reservoir volume versus the amount of passthrough flow and what would be considered a measurable change given those dynamics.

Ebel said that he thought that Marotz was getting towards exactly what they are trying to do here, and why this is broken into four weeks. If you were going to do this in different years you could end up with different volumes released within a week. He said that if you have high inflows that are sufficient or meet the need of fish downstream without exceeding various existing constraints then a week's request could go to zero. If inflows are really low as written in this strategy as written in the SOR a draft could be as high as half a million acre-feet (if that falls under the constraints). He said in terms of Marotz' question the storage equals inflow minus outflow and a draft is considered negative storage then your outflow is passing, what Marotz referred to, over decades of particularly Marotz' work has improved or moved towards a more normative hydrograph above GCL. He said that a lot of the work in the basin has moved it towards a more normative spring hydrograph upstream of GCL. He said that it could be argued, and he is arguing this that the more normative hydrograph is then dampened at GCL and that what this strategy would do, because storage equals inflow minus outflow, so inflow minus storage equals outflow, because when you are drafting your storage turns negative so you are augmenting or enhancing the inflow. You are passing the inflow that is coming in and you are putting more on top of it. So then in terms of when you look at the historic hydrograph of the Columbia River within the constraints of flood control then below GCL you are getting closer to a normative hydrograph because you are augmenting it and you are increasing the peak. And there is one thing about dams is it gives you a little bit of control and because we have so much fish monitoring data, even though we argue and say we need more, we have a good idea of what fish are passing these dams so you can

now manipulate that enhancement of essentially the work that has been done for a more normative hydrograph upstream of GCL and you can make it better for fish.

Stranz asked if everyone had a good understanding of what is being asked, being requested, the interests behind it, the constraints. She asked if there was more information anyone would like to put on the table before we do the polling.

Ebel pointed out that there was an Appendix 3, which were the questions that were asked by BOR, it is at the end of the SOR and some of that relates to and is being alluded to that there is not 1 maf released from GCL, there are flow requests, there are other pops of water entering GCL that are disconnected that do at the seasonal scale, such as Norris brought up even it out in terms of its refill depending on what the AAs decide to do with this strategy.

d) SOR 2026-1: TMT Polling (Support, Object, No Objection, Abstain)

Agency	Poll
NOAA – <i>Kelsey Swieca</i>	Abstain
OR – <i>Erick Van Dyke</i>	Supports
WA – <i>Charles Morrill</i>	Supports
Colville – <i>Dennis Moore</i>	Objects
Umatilla – <i>Tom Lorz</i>	Supports
Yakama Nation – <i>Tom Iverson</i>	Supports
BOR – <i>Chris Runyan</i>	Objects
Corps – <i>Doug Baus</i>	Objects
ID – <i>Jonathan Ebel</i>	Supports
MT – <i>Brian Marotz</i>	No Objection
Spokane – <i>Brett Nichols</i>	Objects
Nez Perce – <i>Jay Hesse</i>	Absent – Supports
BPA – <i>Tony Norris</i>	Objects

e) SOR 2026-1: TMT Response Statement

Agency	Poll
NOAA	As demonstrated today, NMFS is generally supportive of the concept of attempts to increase spring flows, generally when conditions are similar to what they are this year, where we are seeing fish migrate out sooner than they would on average. With that being said NMFS thinks that there is a little bit of additional work that needs to be done to make this SOR agreeable across all parties. Of particular concern of NMFS are the concerns raised by the Upper Columbia representatives, including the Colville and Spokane Tribes. So NMFS are going to recommend that we continue this conversation off season and see if we can come up with a proposal that is more fleshed out and pursuable in subsequent years.
OR	Not sure that details at this stage is going to make any difference in terms of the polling response but the effort to actually work within the sidebars of all the details within the adaptive

	<p>management process is something that clearly in this SOR and yet we are finding that the sidebars are being pushed off as something that keeps us from actually adaptively acting in season when there are clear indicators that doing something different could benefit and still stay within the sidebars. That was more than Van Dyke intended to say, but at the same time it is exactly the kind of roadblock that this process has endured for quite a long time. So, Oregon supports actions that improve passage conditions for a listed species that are upfront currently in this and recognizes that others have difference of opinion.</p>
Colville	<p>I would like to reiterate our concerns for our resident fish population and our ongoing research projects. And, also, say that I would support additional discussion, preferably in the off-season.</p>
Umatilla	<p>While this has been said but from our standpoint, natural hydrographs are kind of a good thing. At Grand Coulee, starting May 15, we are going to basically lop off flows to 150 kcfs, so that is not a natural hydrograph. We are just going to flatten all flows coming out of GCL for refill. So our peak is going to be cut off. We think that there is going to be a fair number of the fish going to be moving before then. The PIT-tag data show that, and it is not just all species, it is all species in our views. And while we understand that might decrease some flows later in the season with the bulk of the fish are going to be moving prior to that, that is where we think we need the flow augmentation, and that is why we are trying to do this now. This makes sense to us. The BA, I don't think is a really good touch right now considering the state of affairs that we are in right now. So I think that is part of the reason we are in this mess right now because we haven't come up with a good strategy for this. So that is why we are coming up with a different strategy, is like, is this a better way to do things. And we are disappointed that there seems to be a reluctance to these changes. Our view of it is that this draft we are viewing is not wildly different than what is going to happen anyways, it is not a large one, it is actually for a couple of weeks. We are viewing that as possibly something that should be given a try. But we are going to continue to work on this and we will work in the off-season, and he looks forward to the chairmanship of Kelsey making this all work for us and we will continue to work on this. We strongly support, we need to do something different because keep doing what we do for the past thirty years does not seem to be working and to continue doing that is a definition of insanity I would prefer not to participate in.</p>
Yakama Nation	<p>We do support this because we see it as a new way of thinking about flow augmentation. I think the concept of flow augmentation has gotten lost over time, the way that we release the current 1 maf over the course of four months is like spreading the peanut butter so thin you cannot really taste it. And this is a way of using that flow augmentation water, and I know that we haven't directly linked it but, if we could move that water through</p>

	<p>a shorter period of time to have a greater influence to get fish out. We know if we are able to get fish out by May 15, we have a tremendously higher survival rate, and this is an opportunity to do that. I understand that this is new and different and that there needs to be further discussions and we support that as well because we also are considerate of the resident fish issues in GCL with the upriver Tribes and want to make sure we are taking a complete look at this when we implement it. So we support an adaptive management conversation over the next few months to try and work through this but I also see that we are not working on that adaptive management conversation over the next few weeks is sort of a failure of true adaptive management responsiveness in the Federal forums but I appreciate the opportunity to comment, thanks.</p>
BOR	<p>Good discussion everyone, as I kind of mentioned before, Reclamation must balance multiple spring objectives at GCL, and we need to remain consistent with both the ESA consultation documents. 2020 CRS NEPA Analysis, that analysis evaluated the impacts and tradeoffs of the current operation. As mentioned earlier, Reclamation, we do have a Summer flow augmentation operation at GCL that happens in the Summer, it is a 10 – 12-foot draft. We do not have a dedicated Spring flow augmentation volume requirement at GCL. This SOR asked for up to 1 maf of Spring flow augmentation which equates to potentially an additional 17 – 15-foot of draft and it was not anticipated in the BA. Our current operation does help with Spring flows at GCL by targeting things such as our April 10 elevation, our April 30 FRM draft (so we do not overdraft) and then we refill the reservoir by early July. Doing this allows for any water that were released upstream to pass through GCL. I will mention other operations such as VARQ at HGH is allowing for higher releases for this year and those releases will be passed through GCL using that strategy I just talked about. So, we heard the concerns from others, we still do have concerns as well. We understand that there are some fish traveling earlier but we also understand there are fish that travel throughout that full flow objective period, so we have concerns with that and not fully understanding it. So, due to these concerns we voted to object the SOR but thank you for all your time and discussion.</p>
Corps	<p>Corps supports the comments just made by the BOR and has nothing additional to add at this time, thank you.</p>
ID	<p>Idaho supports the SOR as an action that can be implemented consistent with adaptive management principles underlined CRS operations in the proposed action under Endangered Species Act consultation and the Northwest Power and Conservation Council’s Fish and Wildlife Program. The requested operations impacts on power generation were not discussed but we expect that they would have been negligible. Its effect on refill, at least from the AA’s perspective was not provided but the information in the SOR</p>

	<p>suggests that it was not going to be a significant issue. The SOR in an addendum presented information that the requested operation would not cause serious issues to resident fish populations and monitoring in Lake Roosevelt as they were originally communicated. In general, Idaho is seeking to use existing tools to improve salmon survival when it makes economic and ecological sense to implement them and that this requested operation meets those criteria.</p>
MT	<p>I really applaud the idea of everyone working together to try to figure out how to match the optimal conditions for the migrating fish with the timing within the constraints that are here. Many of them are actual physical constraints because of the series of dams that are built on the System. So, I have been struggling to understand the difference between the passthrough flow component, and the change in stage component. Because we do not have any anadromous fish in Montana I am sensitive to the resident fish concerns expressed about what is happening in GCL but our mission from the get go was to look at something that was optimizing conditions within flood constraints within the power revenue realities of the System today and for fish, both resident and anadromous, upstream to downstream. When I come and think about what is happening at GCL we basically have a collection point from all the sources upstream that has transformed, it is basically more like a slow river than a reservoir, and our ability is really compressed at that juncture between what can physically be done to change that elevation given the variability of the discharges coming into GCL. So, I think there must be some hydraulic models that can be brought to bear to at least continue the discussion on how to best operate it to balance it for fish within the constraints that exist. I will applaud the many minds and the great deal of experience that can be brought to bear on this. We are talking shifting some water within a matter of weeks. I find it difficult to imagine that we will be able to achieve such a huge amount of shift in flow that it will have an appreciable effect on fish, either residents or anadromous. So, I think this is not ready for prime time and I think we are on to something that we can at least optimize conditions.</p>
Spokane	<p>We have made our concerns clear.</p>
BPA	<p>The SOR, is a bit of a surprise to us, seeing that we are forecasting a seasonal objective at Priest around 170 kcfs. So it is a surprise to hear that we are being requested that we have some significant changes to GCL’s operation as we manage within the drumgate maintenance criteria and refill when we are forecasting to have pretty reasonable outflows from GCL and downstream through the mid-Columbia Projects. And I do not feel there is not some tremendous benefit that is being gained from this slight adjustment in the shaping of GCL’s refill operation. It is half a day of water time for a theoretical water travel time equation that seems like that using fish empirical travel time is probably a better metric and</p>

	<p>I believe that it is a significant departure from what we have done in the past, where we have made adjustments to reshaping GCL’s refill to fill a significant hole in stream flows that is either product of really low stream flows where we are just running on Hanford Reach minimums and need to get Mid-C flows up closer to a place where folks have identified that there is a significant improvement in fish travel time or fish survival through the mid-Columbia Projects in particular, and then also when we have had significant FRM draft and then we wait for flows as we wait for the freshet to begin. This has been the form of typical flow requests that make more sense to us. So hopefully in the future we can come up with something that works for folks and makes sense and provides the benefit for fish that we are seeking.</p>
<p>WA</p>	<p>First of all, I would like to thank everybody for their comments and discussion, it has been really good. There are a whole host of constraints and issues that we have to work around. Washington supports the concept and I agree with the need to engage in longer term discussions. The request that was provided by the FMs is based, as Norris noted, in water travel time, and that is not [inaudible] but the empirical data over the years when it goes back almost thirty years and the information that forms the basis for our request for what Ebel put together and led the discussion on shows that in fact if you increased water travel time [inaudible]. I appreciate the discussion that we have had. I think it showed that there is a wide difference in opinion on the need for increased flow from GCL. I appreciate the concerns expressed by all. Washington does support the concept of improving increasing outflows. Faster water travel time equates to improved decreased fish passage travel times. We have the opportunity to improve conditions in the Mid-C during the peak of the migration period. The empirical data suggests that we achieve the best survival conditions for migrants out of the Mid-C and out of the Snake if we get that water into the Lower Columbia by May 15. The comments that Iverson made about spreading a very thin layer of peanut butter over the toast if we follow the past actions, I think is very appropriate. Our desire to concentrate that in a peak passage time period makes sense to Washington and we support that. But I am pleased that we will continue discussion over a longer time period, I am disappointed that we do not have any opportunity with the volume of water that’s in GCL with elevations that we are at and the current ESP that we don’t have some opportunity to increase flows for some period of a time over the upcoming four weeks.</p>

f) SOR 2026-1: AA Resolution – *Chris Runyan, BOR*

- Going forward GCL will continue with normal Spring operation.
 - April 30
 - Be at elevation
 - May 11

- Drumgate maintenance is expected to end.
- Will be passing inflow until May 11 and then will start refill.
- July 2
 - Target refill
 - 4 feet from full.
 - Continue on with the Summer flow augmentation draft.

Norris clarified about April 30. Since April 30 is going to be right at the drumgate maximum it is going to be within a couple foot of operating range within 1255 – 1250' range.

Runyan thanked Norris for the clarification and let people know that if he heard that drumgate is going to end, if it gets wrapped up sooner than May 11, then he will notify people and we will adjust from there.

Stranz thanked Runyan, she thanked TMT for the good conversation. She said that it sounded like there was an appetite for continuing conversations into the off-season. She asked for TMT to let her know if there was any need for support with that.

Morrill said about the comment about 1250 – 1255', the current ESP shows GCL being at 1253' through the current extension on the ESP. He said for the concept of discussion right now, he asked, if an opportunity to discuss [unintelligible] feet of draft could be used to enhance flows during this time period, like a week or whatever it is. He said that he would like to see a continued discussion if the AAs and/or the Tribes were open to any can we find a way to use some additional water or not. He said that he appreciates the effort to look at this as a longer-range solution, but he was curious if we have some opportunities to have some form of implementation over the next four weeks.

Runyan thanked Morrill for the good question. He said offhand he thought the process was similar to the past where AAs would be available to hear a flow request. As was talked about though, the flows at Priest are right now projected to be above the flow objectives. He said that he wanted to make sure that everyone was aware of that. But let them know what the FMs are seeing. He said that we meet every week, he just cannot answer and he was not sure what Morrill was asking either right now. Maybe we can move on and call offline or bring it up next week.

Morrill said that he understood that and one of the key things that FMs are looking at the BiOp and the BA from a fish perspective are trying to do as much as they can and they do not necessarily line up with what the BA says but it does line up with the empirical data and the information that they have gleaned from ongoing empirical data and modeling information. They understand the constraints that the Federal Agencies are referring to, Resource Agencies, in Washington, we are trying to achieve the best conditions they can and those do not always line up with what has been established in the Federal process.

4. Draft Agenda – *Wednesday, April 22, 2026*

Meeting Location: Microsoft Teams

1) Non-Court Ordered Operations Review

Stranz reminded TMT that the draft agenda would be provided by Monday, close of business.

Baus said that they are planning on having Non-Court Ordered Operations Review for next week. He said that it would be helpful for today's meeting if we have items.

Lorz asked if they were going to provide the criteria for MOPs that the AAs are operating to. He said that TMT did not need to talk about MOP, just the criteria that they are operating.

Baus said as far as MOP goes, they have communicated at RIOG and a few subsequent emails that reservoir operations would be coordinated and addressed in the monthly FOP Implementation Report.

Today’s Attendees:

Agency	TMT Representative(s)
NOAA Fisheries	Kelsey Swieca
Oregon	Erick Van Dyke
Washington	Charles Morrill
Kootenai Tribe	
Confederated Tribes of Colville Reservation	Dennis Moore
Umatilla Tribe (CRITFC)	Tom Lorz, Pete McHugh
Yakama Nation	Tom Iverson
Bureau of Reclamation (BOR)	Chris Runyan, Eric Rothwell
Army Corps of Engineers (COE)	Doug Baus (Chair)
US Fish & Wildlife Service	
Idaho	Jonathan Ebel
Montana	Brian Marotz
Spokane Tribe	Brent Nichols
Nez Perce Tribe (NPT)	
Warm Springs Tribe	
Confederated Salish and Kootenai Tribes	
Bonneville Power Administration (BPA)	Tony Norris, Ben Hausmann

Other Attendees (non-TMT members):

COE – Jessika Solleder, Chris Peery, Megan Biljan, Kasi Underhill, Dan Turner, Alexis Mills, Catherine , Tiffany Dixon, Oscar Espinoza, Leah Hamilton, Eric Chow, Kenneth Sears

BOR – Ryan Fosness

BPA – Tammy Mackey

Washington Ecology – Thomas Starkey

Oregon DEQ – David Gruen

DS Consulting – Emily Stranz (Facilitator), Colby Mills

CorSource – Andrea Ausmus (BPA note taker, Contractor)

EKI – Eve James, Travis Togo, Eddie Sparks

FPC – Noah Campbell, Erin Cooper

Clearing Up – K. C. Mehaffey

Columbia Basin Bulletin – Mike O’Bryant

PSE – Jessica

DCPUD – Andrew Gingerich

GCPUD – Joseph Akers

AVA – Patrick Maher,

Chelan PUD – Jay Fintz

Energy EPS – Joshua Rasmussen

PGE – Phil DeVol

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