

**COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM**

May 17, 2024

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://pweb.crohms.org/tmt/agendas/2024/> Suggested edits for the summary are welcome and can be sent to Colby at [colby@dsconsult.co](mailto:colby@dsconsult.co).*

**System Operational Request #2024-1** – Jonathan Ebel, ID, presented SOR #2024-1, on behalf of IDFG, CRITFC, Nez Perce Tribe, ODFW, WDFW, and Yakama Nation. The SOR requests the suspension of smolt barge transportation from Lower Monumental Dam for the remainder of the 2024 transport season to decrease within-day variation in outflow at Lower Monumental and Ice Harbor Dams, and to stabilize reservoir dynamics of the Lower Monumental pool. Jonathan added that the intention of the SOR is to support conditions for in-river migrants.

Jonathan emphasized the unique situation at Lower Monumental (LMN), it being the only dam of the collector projects that requires an operational change to load transport barges. He highlighted the negative impacts of flow fluctuations caused by the current operation, and from the SOR group’s perspective, the observed negligible benefits of transportation from LMN for yearling Chinook and steelhead. Jay Hesse, Nez Perce, added that the transport operation is currently scheduled through June 20 and planned for every other day transport.

Chris Peery, Corps, agreed that significant flow fluctuations are detrimental to fish, and the Corps would like to have operations that don’t cause significant fluctuations in flow and reservoir levels. Possible actions could include shutting down spill for the 15-20 minutes that the barge transits to and from the loading dock and resuming spill while the barge is being loaded (previously, spill was curtailed for a 3-hour period during transfer and loading). Increasing generation at LMN during the transfer and loading in is another way to limit flow fluctuations and pooling; BPA confirmed that increasing generation at LMN is an option from their perspective and operations.

TMT Members were polled on the SOR as written:

TMT Member	Polling Response	Rationale (Optional)
NOAA	Object	<p>NOAA emphasized how complicated, data-heavy, and multifaceted this issue is; while they appreciated the conversation that has been started, it requires additional in-depth conversation and analyses. From NMFS’ perspective, there are survival benefits to transportation at Lower Monumental Dam. While they recognize those benefits vary across species, the best available science suggests that halting transportation for 2024 would likely result in fewer returning spring Chinook and steelhead adults in subsequent years. NOAA emphasized the benefits of transportation for wild stocks, specifically wild steelhead, which remain a significant management concern.</p> <p>NOAA also emphasized that the survival benefits of transportation are greater in low flow years like this year. The</p>

TMT Member	Polling Response	Rationale (Optional)
		SOR assumes flow patterns observed earlier in the season will resume at equal magnitude and duration, while NMFS understands that the fish transport barge only requires spill reductions during active tailrace traverse and the Corps will only shut down spill during this period. The reduced time of spill reduction, as well as the impending shift to every other day transport, suggests that flow fluctuations for barge transport will not be equivalent in magnitude and duration as they were earlier in the season. NOAA suggested working to understand the true implications with the available options; they believe this issue would be more holistically addressed in an off-season technical working group.
Oregon	Support	OR supported the SOR because it provides the regionally supported alternative recently used for stabilizing migration conditions, while maintaining the broad intent of the USG commitments to stay the litigation on this issue.
Washington	Support	WA appreciated NOAA’s comments and the efforts from Action Agencies to diminish flow fluctuations. WA noted survival data from this year that show very different passage patterns from years past. Analyses suggest that peak passage for hatchery and wild migrants has passed, so for WA, priority concern has shifted to avoiding impacts to sockeye and sub-yearling Chinook. WA agreed that this is a data-rich, multifaceted issue that needs more discussion, and from their perspective, in the near-term there is a greater benefit to ceasing transportation.
Yakama Nation	Support	Yakama Nation agreed that flow fluctuations degrade in-river conditions and are problematic for both migrating juveniles and adults. Given that most steelhead have passed already, and that sockeye and sub-yearlings don’t fare as well in barges, Yakama Nation thinks that ceasing transport is the most prudent option. They agreed with OR that the SOR is consistent with the USG commitments. Using generation to offset flow fluctuations would likely not be an agreeable alternative from their perspective, and more discussion is needed on how to address this issue in the future.
Reclamation	Objects	No additional comments.
Corps of Engineers	Objects	The Corps continued to support the transportation program and the benefits associated as identified previously by NOAA. They acknowledged the perspectives stated and noted they would be open to continuing dialogue on this issue in the future. The lack of consensus on the SOR factored into the Corps’ objection.
Idaho	Support	ID will continue to engage on this issue and analyze the data. They disagreed with NMFS’ assessment and requested more data to support their argument. They reiterated that continuing transport this year might have a negligible benefit for wild steelhead, however, they think that it will have a negative impact on sockeye and fall Chinook. From IDFG’s perspective, NOAA’s concept of “best available science” is not accurate/wide enough.

TMT Member	Polling Response	Rationale (Optional)
		They view this as the start of a long-term conversation in balancing transport and mitigation actions versus the current operational regime, to solve the issue more efficiently for fish.
Nez Perce Tribe	Support	<p>The Nez Perce Tribe voiced that they have been consistent in pursuing operations that minimize within-day flow fluctuations and this SOR is consistent with that position in strategic and in-season operations. The Tribe’s motivation in engaging this SOR is to maintain adult passage with minimal delays. The data available demonstrate that current conditions with stable flows provides stable passage for adults through the system from McNary past Lower Granite Dam.</p> <p>Uncertainty remains around the proposed modifications for shortening spill; the operation will still result in changing hydrodynamics in forebays and tailraces as well as some flow fluctuation that is not optimal for adults and juveniles moving in the river. The Tribe appreciated NOAA’s perspective but also did not agree with their concept of “best available science;” this is not viewed as the full picture by the Tribe. They reiterated that this is a complex application and in-season decision that is unique with multi-species impacts. They view this issue as an in-season adaptive management opportunity to apply multi-year data to current conditions and will remain fully engaged in long-term discussion for future applications once this spring migration season concludes.</p>
BPA	Object	BPA supported NOAA’s considerations regarding transportation and is open to future conversations on this issue. They found it curious that this issue has come up considering the operation has been implemented for 15 years and has been included in every FOP since 2009. Any new information can be discussed moving forward.
<p><i>The Kootenai Tribe of Idaho, Confederated Tribes of the Colville Reservation, Confederated Tribes of the Umatilla Indian Reservation, USFWS, Montana, Spokane Tribe of Indians, 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*

Doug noted that the Corps will not be implementing the SOR. Transportation at Lower Monumental will resume on Saturday May 18, continuing every other day through June 20. The Action Agencies considered alternative methods to decrease within-day variation in outflow and reservoir elevations and will use increased generation and resume spill during the barge loading period. Chris added that by using spill and generation during this process, MOP adjustments at Lower Monumental and Ice Harbor dams will be minimized, if not avoided altogether.

In response to queries, the Corps clarified that the full duration of ramp up/down during barge transit across the tailrace would be several minutes in addition to the 15-20 minutes of barge transit time. When the barge is traversing, spill will not occur, and using generation will minimize “bounce” in the Lower Monumental forebay; there will be a short duration increase in generation, and spill will be resumed while

TMT – May 17, 2024 (Friday)

the barge is loading. BPA clarified that almost all projects are on minimum generation spill the rest; the only places where adjustments would affect flow is at a percentage spill operation. Tony noted that the increase in generation is not a power benefit, and is not something that is marketed, it is a brief adjustment in the system and generation will be decreased at another project during that time. The timing of operations will continue as planned and moving it earlier in the day could be something to explore in the future.

Jay Hesse, Nez Perce Tribe, emphasized that the decision to increase generation without more discussion is problematic to the Tribe, Yakama Nation expressed the same. They expressed concern that this operation could unintentionally impact fish migration at other projects. The Corps emphasized that they are working to minimize MOP adjustments, as previously requested by Salmon Managers.

- **ACTION:** Idaho and the Nez Perce Tribe will elevate the AA's decision to RIOG; Oregon, Washington, and Yakama Nation signaled support for the elevation.

Idaho reiterated that with transport resuming on May 18, juvenile sockeye will be arriving in large numbers and will be going through the lower Snake River projects in the next week. Transporting them on barges has a negative effect, and ID believes that fewer sockeye adults returning will result from this decision. In response to a query about response to potential adult delay, NOAA noted that more internal discussion and analysis is needed, as well as consideration at the RIOG/policy level. They acknowledged the concerns expressed and emphasized that it would be most effective to continue the discussion in an off-season technical work group to understand all the implications for transportation at Lower Monumental. WA appreciated the acknowledgement of concerns, and noted from a fish managers' perspective, this seems like a missed opportunity to cease an operation that has significant uncertainty; they were disappointed, noting that from WA's perspective, the biological impacts are set aside in this operation.

**Questions and Comments from Members of the Public** – There were no questions or comments from members of the public.

**The next scheduled TMT meeting is on May 22, 2024, at 9:00 AM.**

**Columbia River Regional Forum  
Technical Management Team  
OFFICIAL MINUTES  
FRIDAY, May 17, 2024**

**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.

An unscheduled TMT meeting was held on Friday May 17, 2024 @ 1 pm to coordinate System Operational Request (SOR) 2024-01, "Cease smolt transportation at Lower Monumental Dam in 2024", - dated May 16, 2024.

**1. System Operational Request – 2024-1 – Jonathan Ebel, IDFG; Chris Peery, Corps-NWW; and Doug Baus, Corps-NWD**

**a. Cease smolt transportation at Lower Monumental Dam (LMN) in 2024**

Stranz started the meeting introducing the SOR as submitted by Idaho and other State and Tribal Fisheries.

Ebel presented the SOR on behalf of IDFG, ODFW, WDFW, Nez Perce Tribe, CRITFC, and Yakama Nation. They request that barge transport of juveniles from LMN be suspended for the remainder of 2024.

LMN is unique among the three collective projects because it is the only dam that requires an operational change to load juvenile migrants on the barges. Specifically, the spill needs to be reduced while the barge transits the tailrace and docks at the juvenile fish facility and then undocks from the facility and leaves. As operated, they have kept spill reduced during the entire period of loading.

Under the current operational regime this spill reduction, which has occurred in the past but was balanced by turbine flow, was causing large fluctuations in flow at LMN and Ice Harbor (IHR), as well as, changing reservoir dynamics between LMN and Little Goose Dam (LGS).

These dynamics are represented in *Figure 1* in 'SOR 2024-1' and may have a number of negative impacts to both juvenile and adult migrants that could negate the potential benefits of transportation from LMN.

- The large fluctuation in flow can slow adult passage at IHR. Adult passage is complex, their travel time is complex, and the large fluctuations of flow coincide with a slowing adult travel times [see Figure 1]. *Similar changes in adult travel time occurred with ponding operations and subsequent or consequent large variation in flow in 2020, 2022, and 2023 during the performance spill operations at LGS.*
- Rapid changes in flow may harm juveniles in reservoirs above, at, and below LMN. The response of LGS tailwater, which increased 1 to 1.5 foot within an hour of reducing spill and flow at LMN earlier this month and end of April. That is ~29 miles upstream and suggests a reservoir dynamic that is very bad for juvenile migrants in the river.

With these observations in mind Ebel, et. al., looked at the benefits species may accrue for individuals transported from LMN relative to their in-river counterparts. *“If we stop transporting at LMN, what would we lose?”* Figures 3 and 4 represent wild yearling chinook and figures 6 and 7 represent steelhead and Chinook.

The benefits of transport from LMN are negligible for yearling Chinook and moderate for wild steelhead. In the SOR it is discussed in reference that transport has negative impacts on Sockeye and the first Subyearling Chinook that migrate before June. Ebel said that this was shown in a 2018 NOAA study and is referenced in the SOR.

The percentage of juvenile migrants subject to transport is very low which means the vast majority of fish are in the river and are not destined to be transported. Because of the large proportion of juveniles in the river, an operation that degrades in-river conditions and reduces survival for the vast majority of populations may offset any positive from transport at LMN, even for wild steelhead. Moreover, passage indices suggest that peak passage of steelhead and yearling Chinook are behind us for 2024 and sockeye have just arrived, 400 tags at Lower Granite (LWG) counted yesterday, and an increasing number of yearling Chinook are entering the hydro system. Both of these species respond negatively to transport.

Ebel said that viewed as a whole, we believe that suspending transportation at LMN is the best course of action for fish for the remainder of 2024.

Jay Hesse, Nez Perce, reminded TMT that juvenile transport from LMN is scheduled through June 20 and would then be suspended through the rest of the year already. He said essentially, we are talking about the next 30 days in terms of the suspension action.

Kelsey Swieca, NOAA, asked if it would be possible to have the Corps or others provide some of the discussions that occurred at the TMT process meeting about alternative methods to address flow fluctuation.

Stranz said that we could, she asked if that would be helpful before we polled on the SOR.

Swieca said that it could be held for after. She said whatever Stranz felt would be best process wise, but she thought that is an important component to have on the table before they put in their polling.

Stranz said that Peery was available to respond.

Peery said that they did have discussions. He said first of all he does not think that anyone will disagree that significant flow fluctuations are not good for the system over the fish. He said that the Corps would definitely like to have operations that do not cause significant fluctuations in flow and pool levels. Peery said in discussions that they have had since then they have had since the last TMT, and information shared online from BPA, the Action Agencies (AA) think that they can diminish those flow fluctuations with some of the things talked about at the last process meeting. That would include not diminishing spill for the duration that the barges are loading and also ramping up generation. Peery confirmed with BPA and the project that both of those are possible. He said that those are the ways that they have managed the barge operation at LMN in the past. He said that he is not sure how the decision was made to use pooling ponding of water during the fish barge operations of LMN this year, but it seems to be the crux of the problem here and we can diminish that.

Stranz asked if BPA had more to add. She said that Ben Haussmann shared some information to TMT about generation but asked if there was anything else that BPA would like to say.

Tony Norris, BPA, said that it is simple enough to adjust outflow using generation to smooth that out, and would make it easier to manage the forebays. He said that they are confused considering that this operation to reduce spill and fill about MOP to facilitate the transportation barge transiting the powerhouse or the spillway has been in place specifically since 2009 so it is a bit of a surprise to BPA, but they can implement a flow change to minimize the fluctuations.

Ebel said that he is curious from someone delving into this as we are looking at that flow fluctuation but also where we are at in the fish runs for this year and the winners and losers from transportation as a whole. He said maybe this will come up somewhere afterwards in the comments actually. Ebel said that we can look at this mathematically and maybe eventually we will go forward fully is that an operation that reduces or degrades in river conditions right now or somehow reduces survival in these projects (specifically in this case from LGS to the confluence with the Snake) has a very large impact on the view of the actual benefits of transport as a migration action under the current operational regime of 125% TDG gas cap spill and that is a broader issues. Ebel said that he wanted to make sure that people keep that in mind as we move forward and in terms of justifying maintaining transport for the rest of the year or also known as the inverse of the request.

Baus said that he would like to pivot back to Swieca, he said that we just had a brief conversation regarding opportunities to minimize flow fluctuations. He asked if there needed to be more discussion or if it gave adequate dialogue regarding the topic.

Swieca said that she just wanted to make sure that it was reiterated here before TMT moved into polling. She said that it will be brought up again in NMFS' polling response. She said that she wanted to make sure that it was on the table and heard prior to moving into that polling period.

**Polling:**

*Support / Object / Not Objection / Abstain*

NOAA:	Object
OR:	Support
WA:	Support
Yakama Nation:	Support
BOR:	Object
Corps:	Object
ID:	Support
Nez Perce:	Support
BPA:	Object

**Response:**

NOAA:  
Swieca said that she wanted to start her comments by recognizing as

Ebel had that this is a very complicated issue, it is a data heavy issue, and it is an issue that with a lot of tendrils that touch a lot of pieces of our operation of the system right now.

From NMFS' perspective there are survival benefits to transportation at LMN and while they recognize the degree of those benefits vary across species, the best available science suggests that the cessation of transportation for 2024 would likely result in fewer returning Spring Chinook and Steelhead adults in subsequent years. Importantly the benefits transportation are greater for wild stocks and are the greatest for wild Steelhead, which are the subject of particular management concern. It is also important to emphasize that the survival benefits of transportation are greater in low flow years, like this year, and NMFS does not believe that should be overlooked.

As written, the SOR makes the assumption that the flow patterns observed earlier in the season will resume at equal magnitude and duration but following discussions at the TMT process meeting it is NMFS' understanding that the fish transportation barge operators will only require spill reductions during active tail race traverse, which is ten to fifteen minutes on their way in and ten to fifteen minutes on their way out, instead of the roughly three hour spill reductions that occurred earlier in the season. The reduced time interval has implications for the volume of water that would contribute to the flow fluctuations. This, as well as the impending shift to every other day transport operations suggest that the flow fluctuations to accommodate barge transport will not be equivalent in magnitude and duration as they were earlier in the season, and we should work to try to understand what the true implication will be knowing what options are available on the table.

Swieca said as she mentioned before this is a really complicated, data-heavy, and multifaceted issue that requires additional in-depth conversations and analyses and these discussions are warranted. She said that again NMFS appreciates that this SOR brings these discussions to the table, but they strongly believe that this issue would be more holistically addressed in an off-season technical working group, hence their objection to a modification for the 2024 season.

OR:

Van Dyke said that Oregon supports because it provides the regionally supported alternative recently used for stabilizing migration conditions while maintaining the broad intent of the USG Commitments to stay the litigation on this issue.

WA:

Morrill said that he appreciates Swieca's comments and the fact that the Corps and BPA have worked to diminish the amount of flow fluctuations.

He said that one of the pieces of information that we have to work with is Steve Smith's survival data (SAR data) and that Morrill believed is based on a full season. This year's passage patterns are totally different than what has happened in the past. In looking at passage indices suggests that



we are well past the peak of hatchery and wild migrants past LWG and assume that the follow up is true for LMN Morrill thinks that the concern over impact to Sockeye and Subyearling Chinook should take priority at this point in time.

From that perspective, Washington believes that it is appropriate to support the SOR as is written. Morrill said that he agrees that it is a data rich multiple tendril that needs more discussion, but for right now, Washington's perception is that it is of greater benefit to cease transportation than it is to resume it.

Yakama Nation:

Keely Murdoch said that Yakama Nation agree that the flow fluctuations degrade in-river conditions and are problematic for both migrating juveniles and adults. Given that most Steelhead have passed already and Sockeye and Subyearling Chinook do not fare as well in barges. These are all among the reasons that Yakama Nation are supporting the SOR. Murdoch said that is why they think this is the most prudent decision. The Yakama Nation agrees with Oregon that the SOR is consistent with the USG Commitments. She said that as far as using generation to offset flow fluctuations, in this case, Murdoch thinks that would be a hard sell for them. The Yakama Nation does agree that more discussion is needed, but Murdoch thinks they would like to see this SOR move forward and then continue discussions on how this would be addressed next year.

BOR:

No comments

Corps:

Baus reiterated that the Corps of Engineers still does support the transportation program and the benefits associated with that as identified as previously noted by NOAA.. Baus thanked Ebel for putting all of the information together, it does tee up the idea that further conversations regarding this topic may be had in the Regional Forum and the Corps is open to continuing dialogue on this conversation into the future.

But the Corps does not support deciding at this time and just due to the lack of consensus on this SOR is part of the reason the Corps is objecting.

ID:

Ebel said that we will continue to dive into this topic. He said that he disagreed with NMFS in their assessment of this and would like them to show some data to support their argument. Ebel said that he continues to analyze the subject looking at and trying to translate these into numbers of fish. He said that he would say that continuing transport for this year might have a negligible benefit for wild Steelhead when viewed as the population as a whole for this migration year. It will have a negative impact on Sockeye, and it will have a negative impact on Fall Chinook. The concept of the 'best available science', Ebel thinks, as stated from NMFS', he can also say that he is looking at a larger swath of what would be considered the best available science, in his opinion.

With that, Idaho supports the SOR, Ebel definitely view this as the start of the long conversation of the realities of balancing transport as a mitigation action versus the current operational regime we find themselves in solving these conflicts in a way that is efficient and better for the fish, all fish.

Nez Perce:

Jay Hesse said that the Nez Perce Tribe has been consistent in pursuing operations that minimize within day flow fluctuations and this SOR is consistent with that position in both strategic and seasoned operations. Hesse's motivation in engaging this was originally, and remains, focused on maintaining adult passage with minimal adult delays.

While the data that we have is certainly correlated and does not prove causation, it is at least demonstrating that current conditions with stable flow for adults are effectively passing through the system from McNary up past Lower Granite Dam. That is positive in terms of the adults. Hesse said that it is uncertain to him what the proposed modifications in terms of shortening the spill reduction will be, he said that he assumes that it will be less. Yet that operation will still result in changing hydrodynamics both in forebay and tailraces and some level of flow fluctuation that Hesse views as not optimal for adults and juveniles that are moving within the river.

Hesse said that he appreciates NOAA's thoughts and expression, with one exception in the reference of "best available science". Hesse said that he thinks that is an unfortunate application and timing of that statement and he will not react further to that, but he thinks that it has to be noted that is not viewed as the full picture at this point by at least the Nez Perce Tribe.

He said that it is also his understanding both from NOAA's statement, and positions within the USG Commitments in 'Appendix B', that the US Government is concerned about effective adult passage and from all operations and there is adult delay criteria list in that. Hesse said that is an important aspect to realize and that we are not attaining those now. It may be something to consider application to if this SOR is not adopted. In terms of applying those criteria to this operation associated with transport similar ways that are already written into the Commitments document.

Hesse said that he would reiterate that this is a complex application and in-season decision that is unique in terms of the multi-species aspects. He said which are motivated, from his perspective, from the adult passage, but having the other factors for juvenile collection and in-river migration conditions that he thinks others have addressed in terms of timing of runs of juveniles and the relative impacts to overall populations. Hesse said that he has taken this as an in-season adaptive management, looking at the science that we have to multi-years but applying that to current conditions and he thinks that this is the most prudent decisions for the remainder of the 2024 transportation session but remain fully engaged in

having a longer-term discussion. He said that this is not pre-decisional on future applications and like others he thinks this requires discussion after this Spring migration season has concluded.

Hesse said that he thinks that it is prudent to suspend operations in this year under these conditions to benefit adult passage and ultimately SARs and in-river conditions for other species.

BPA:

Tony Norris said that BPA supports NOAA's considerations regarding transportation and BPA is open for future discussions related to that under these conditions.

Norris said that it is curious that it has come up this year considering that this operation has been implemented in this form for 15 years and it has been included specifically in every FOP since 2009. Norris said if we have new information that needs to be discussed we can have those discussion here in the future.

Ebel said that it has been in the FOP but because of the realities of implementation of the FOP this year in the interaction of its previous operation that was in the FOP with the spill regime and how that is being implemented it has caused the problem. It is interacting with parts of the FOP. Just that part of the FOP has been in there for a long time, the other piece has not, and when these two things got put together then we have the dynamics seen in Figure 1.

Norris asked if he was referring to the higher spill levels.

Both Ebel and Morrill responded positively. Ebel said the Min-Gen Spill the Rest, 24/7.

Morrill said that Ebel described it well, that the highest spill levels are different than what we have seen before and has resulted in the conflicting issues that we are dealing with.

- Baus noted the Corps will not cease transportation as requested in the SOR.
- **Moving forward, the previously coordinated operation is to resume transportation from May 18 through June 20.**
- Within the SOR there was a request to decrease within day variation and outflow. Baus said that the AA all recognize and acknowledge this request. As requested, the Corps was asked to look into how they would go about doing that. One method looked at was when barge loading is occurring there will be an increase of spill to help decrease the within day variation and outflow at LMN. There was also a request to look at using generation to decrease within day variation in outflow at LMN.
- **Use increased generation and/or increased spill as tools to decrease within day variations in outflow at LMN.**

Peery, added that when TMT was first discussing this at the process meeting, talking to the operators and the tug captains, they stipulated about a 20-minute transition for them to cross the tailrace. At some point that got shortened to 15-minutes and then he noticed Swieca even said 10 to 15 now. He just wanted to manage expectations. It is about 20-minutes of reduced spill that the captains have requested in order to make that transition and then that they will not leave the navlock guide wall until the flow has been reduced.

Baus thanked Peery for the clarification and noted that it made him realize he did not mention part of this too. The other request we heard was looking into this to minimize what we have heard all season is minimizing MOP adjustments. He said that he wanted to highlight moving forward by using more spill and more generation during this process they will minimize those adjustments. He said that he would like to highlight moving forward the Corps anticipates minimizes the within day variation and also avoiding the need for the adjustments of MOP at LMN as well as IHR. Baus also wanted to caveat and remind everyone that they are human and though they will maintain MOP operations as they do, there are excursions from time to time, human error can and does occur, but from the program level from the overarching principle level normalizing outflows of LMN will significantly avoid any need to make MOP adjustments at LMN as well as IHR because they are going to continue outflow during the traverse as well as the loading period.

Stranz said stepped in for a process. She said if TMT was following the flowchart on the SOR, we have polled and provided an opportunity for TMT to comment. There were multiple objections. Usually those who object are the ones that elevate. She said that you could object to the decision and elevate. She said that this is an opportunity to share whether or not you would like to elevate this decision to RIOG. She wanted to remind TMT of that step.

Hesse asked if she wanted to follow the process and get reactions or if she wanted to have clarification questions or discussion about the course.

Stranz said that she was reminding TMT that if they would like to signal that they would be elevating that there is that opportunity, but Hesse can go forward with whatever question or comment he had.

Hesse said he had heard different things now on the duration of the curtailment and he would like further clarification. NOAA's statement was that it was 10 – 15 minutes and now TMT has heard that it is 20 minutes. Hesse said that he wanted to understand if it is 20 minutes at the full reduction or is the 20 minutes inclusive of the ramp down and ramp back up. Hesse asked if it is not inclusive, what is the full duration of ramp down and ramp up. He also asked if he heard correctly that concurrent with this operation the spill reduction will be routed through the turbines and generation will be increased during that time frame.

Peery said that it does take several minutes to ramp down and that would be prior to the 20-minute transit time, and it is the tug captains their duration was 15 – 20 minutes, so the ramping down and then ramping back up would be in addition to the 15 – 20 minutes of transit time.

Baus responded to question two regarding generation. As the barge is traversing the tailrace. Prior, ceasing spill, when you take for example on Saturday LMN inflows are 120 kcfs, if you cut off 110 kcfs and then keep one unit running at 11 kcfs, that has a huge impact in the LMN forebay, so you get a significant increase. Previous conversations we were asked to investigate that to see if they could cease spill and then use generation as a tool to avoid that significant increase in the LMN forebay. Baus told Hesse the short answer is yes, when the barge is traversing, they will cease spill having one unit on, only, has a significant bounce in project outflow so by using generation as a way to increase project outflow we will minimize that bounce. On the loading portion, approximately three hours (maybe more/maybe less) before we had significant spill reductions (~20 – 30 kcfs range for a period of 3 hours) and they were asked to

investigate if they could spill more, and they did. At this time, they are going to resume the 125% gas cap spill, which will result in a significant amount of additional spill that would not have occurred otherwise during that approximate three-hour period. Baus said to answer Hesse's question for a portion of this there will be a short duration increase in generation that will also be matched with an additional period of additional spill. Baus said in this conversation in a way to normalize project outflows includes both a period of additional generation but also periods of additional spill.

Norris said that this increase in generation is not a grand power benefit. He said that they would be swapping generation that would have otherwise occurred at Grand Coulee or Chief Joseph with this generation. He said that it is not something that would be marketed, it would just be a brief adjustment in the system.

Ebel said that he admonished himself for the specification, he said he should have said "suspend transportation to improve conditions for in-river migrants" so that it was a little broader. He said that he does appreciate all the effort that the Corps and BPA have put into solving the problem of variation to flow but in thinking about its impacts and specifically because even a small change in survival of in-river migrating fish can negate the benefits of transportation under these conditions. He asked if there will be any change in the time of day, typically transport is done in the evening, and at that point it is a time when fish are more likely to start sounding into bypasses or turbines and things like that. He asked if we are looking at the typical schedule that occurs with LMN, or a little earlier in the day.

Peery said that he was not foreseeing any change in their schedule, they still have loading at Lower Granite and Little Goose that happens prior in that day and so moving earlier would definitely take more coordination and it is not something they had considered at this point.

Stranz asked for clarity if that was a recommendation from Ebel to move it earlier.

Ebel said that he is wrapping his head around the complexity of this in terms of thinking about it from the fish perspective. He said from an engineering perspective this has lessened the flow, he believes that Baus is probably correct. From a fish perspective not for short periods of time there is a rapid decrease in spill, so any fish in the forebay it going to go through the bypass, you are basically flushing them in a certain area, down. You are changing the river currents close to the dam by a significant amount which is actually what occurred during the flex spill for quite a long period of time. Ebel said that he is just trying to wrap his head around the details because it is still an extreme change, it is just a different type of change than has occurred in this year's conditions. He said that he is thinking about that, and NMFS is right this is complex, so we are trying to balance things and stability is always better, but Ebel said that he thinks the Corps did come up with an engineering-based solution, which is generally their job.

Stranz said maybe this is something that we all explore as this conversation continues over time.

Hesse said that he believes that the decision without discussion to increase generation is problematic and that aspect requires further discussion. He said as Yakama Nation mentioned in their highlight comments, that aspect is a hard reach for Nez Perce given the USG Commitments document. Hesse asked Norris in terms of the shifted production. He said that Norris had mentioned that it would likely be shifted to Grand Coulee or Chief Joseph. He said that he wanted to make sure that they are not creating or

unintentionally having a consequence to fish migration conditions at some other project by shifting this production for a short period of time creating dynamic conditions in other locations. He said that it would probably be difficult for Norris to say exactly where that is at but asked if he could give some reassurance that those types of adjustments will not disrupt fish mitigation or management at other locations.

Norris said that considering that almost all the projects, minus the Dalles and John Day, with The Dalles operating at min-gen spill the rest, and John Day with 16 daylight hours of Performance Standard Spill, the only places where adjustments that would affect flow at any part in the river would be at a percentage spill operation. So, the percentage spill, if it were experienced at John Day or the Dalles, the percentage spill would still be met and then at Grand Coulee or Chief Joseph you might never notice that as it trends to have any change in flow attenuated as it moves through the mid-C and down to McNary, so it would not affect McNary's hourly flow rate at all.

Baus responded to Hesse. He said that he is a little perplexed. He said that when the Corps is requested to for example “do not increase MOP at LMN when we see spill for a barge traverse”, there are only three places for the water to go: out the turbine, out the spillway, and the forebay. They were requested not to adjust MOP operations so if they cannot store it in the forebay it only has two other places to go. The spillway, when the spillway is being turned off for the barge traverse that has take two of their options off the table. There is only one last option, that is out of the generator. Baus said that he was concerned when he heard comments about the USG Commitments document because he feels like the Corps was asked to investigate alternative operations to pass water during this to minimize MOP increases as well as flow fluctuation. Their tools are limited to where the water can go. Baus just wanted to highlight that, as BPA reiterated, these operations are to move water and manage water for fish, the choices are limited. They were asked to investigate how they could do that to minimize flow fluctuations, what they articulated accomplishes those objectives.

**Elevate Response:**

Ebel said that Idaho elevates.

Hesse said that Nez Perce elevates as well.

Van Dyke said that Oregon supports Idaho's desire to elevate.

Stranz asked if that means that Oregon elevates or that you just support Idaho in elevating.

Van Dyke said that they stand side by side with those who offered their desire to elevate.

Murdoch asked as she is new here what the difference is between elevating and supporting.

Stranz said that if you were to signal that you were elevating this you would have to go through your internal RIOG representation to let them know that you would like to elevate this to the RIOG. Supporting is something that TMT does not\_\_, she thinks that Van Dyke is just expressing that supports Idaho and Nez Perce's decision to do that, but maybe will not act internally on it.

Van Dyke said that he will be supporting it and contacting his representative as everyone else would.

Van Dyke is elevating

Morrill said that he is contacting his RIOG rep and letting him know that Oregon supports Idaho and the Nez Perce, and that Michael will engage as needed.

Murdoch said that the Yakama Nation will support the elevation as well.

Ebel clarified that if you are elevating it is just a bunch more work, but that is okay.

Murdoch thanked for her clarification.

➤ Idaho, Nez Perce, Oregon, Washington, and Yakama Nation will elevate to their respective RIOG representative contacts.

Ebel said to finish up, the Corps is starting transportation tomorrow and he would like to reiterate that Sockeye are arriving in large numbers. They are going to be through the Lower Snake in the next week and he would like to say again that getting them on barges has a negative effect on them. There will be fewer adults returning based on our understanding of Sockeye and the barges over a long period of time because of this decision. Ebel said that he assumed that the Corps is going to act on that decision tomorrow and not delay but that is an implication of that decision.

Morrill nodded in agreement.

Hesse said that he would like to understand if underneath this immediate or interim operation while this heads to RIOG what the reaction will be to any black dots that show up in terms of adult delay. He asked if there would be a similar reaction to that in the Commitments document. He said that he hopes that is not the case, but he wants to plan through this stuff. He asked if NOAA thought through what an immediate reaction would be if three dots persist at IHR or McNary Dam for adult movement underneath this operation. He said that since he is asking NOAA for their response understanding that the spill reduction is now, he is not sure what a few minutes are for ramping up and down in terms of addition, but he has heard that 20 minutes plus two few minute things, so maybe Peery could add in it. Hesse asked if that 30 - 40 minutes or spill modifications different or changed NOAA's position from a 10 – 15-minute time frame.

Swieca said that she is not going to address the question about what they will do if they observe three dots live during the SOR meeting, she said that she thought that would be a question that would come up and be addressed at the RIOG and Policy level. So that is going to need additional communication and she will not provide a response at this meeting. She said that she apologized for being a couple of minutes off in her estimation of time it takes a barge to traverse the tailrace and thanked Peery for the clarification that her range, which had an upper level of 15 minutes is more likely to an additional five minutes bringing it up to 20 minutes. She apologized for having her information incorrect but appreciated Peery's clarification so we can all be on the same page. She ended by saying that what she left on the table before and NMFS' perspective, this is a really important conversation, but this is a very broad and very complicated conversation that they strongly believe belongs and would be most effective to have in an off-season technical work group where we could truly understand all of the implications of transportation at LMN. She said that she heard the comments raised by Idaho about Sockeye concerns and as NMFS mentioned in their comments, they understand that the benefits of transportation vary among seasons, and they are more variable for Sockeye and sub-yearlings. With that being said that those transportation results are not unique to LMN and those also apply to the other projects. This is a really big, broad question and

issue that deserves a lot of really in-depth communication and discussion that NMFS believes will happen in the off season and are committed to it happening in the off season and look forward to looking at what everyone brings to the table as best available science. She said that she knows that use of term triggered some people before, and she understands why but NMFS appreciates working through all of that in a technical workgroup where we can dive into everything and give it the time that it truly deserves to understand the pros and cons of this situation off season.

Norris asked if it would make a difference for those who are considering elevating, if only implemented the increased spill portion of the Corps' operation were implemented and not the increase in generation.

Hesse said that he appreciated Norris signaling that and putting it out and asking that question. He thanked Norris for that. Hesse said that he is deeply troubled by the addition of that aspect into the USG's response to this situation without robust discussion amongst the Fish Managers. It is complex, that aspect, is really complex and goes across the agreement stuff as he had indicated before. He said that it does not change his position in terms of elevation, but it certainly is a big part of it is at this point.

Ebel said that he also appreciated Norris, and he did not think that they would put that in there, so he was actually thinking that the rapid pulsed pod events, we had a couple of them of short duration. He said that from an engineering perspective, again, he appreciates Norris bringing it in there and then bringing it up about it being taken out but from their perspective the discussion on transportation at LMN given the next five years of agreed to operations (agreed to by others) warrants broader consideration and that is best directed from the Policy-level. To directly answer Norris, no it does not change his elevation.

Morrill said that he appreciated Swieca's acknowledgment of the concerns around transportation for Sockeye and sub-yearlings. He said that his comment from a Fish Manager's perspective is that they are seeking adaptive management and from that perspective it seemed to Morrill that the AA missed an opportunity to cease an operation that has some uncertainty about it. He said that he appreciates the technical side of that but thinks that he feels disappointed that the biological side of it seems to have been set aside and told "No, we are going to go ahead and do this anyway." He said that was the comment that he wanted to share.

Peery said that he wanted to point out that in the process meeting when the topic of the option of using more generation as one of the tools to try to reduce the flow fluctuations came up, the general comments they heard were yeah, it is worth considering that as an option and so they did. He said that he thought that it was Ben Haussmann who checked on it and provided a comment back in an email after looking into that. Peery said that he thinks that it is an useful tool, we have used it in the past, which is one of the reasons why we have not see these levels of flow fluctuations associated with the barging operations. As Ebel pointed out we have seen it because of other operations, Little Goose specifically, and fortunately we are not seeing that this year. It is one of the tools that they thought were worth including. Peery said that he thinks that it is worth using in terms of not producing an operation that is going to cause noticeable fluctuations. If we can ramp up generation at the same time that we are ramping down spill, it keeps the flow consistent.

Stranz said that she would say that she thought it was a question and it was highlighted as a tool and there was the question of whether or not it was available but there was not



necessarily much conversation because the information was not available at that point. Stranz said that she wanted to note that.

Baus said to be clear if we are not going to be able to use that tool then we need to continue to have adjusted MOP operations on the table, because if they cannot spill during the traverse and they are being asked to not adjust MOP operations the water has to go somewhere. Baus said that he wanted to highlight that, he said that he appreciated Norris being willing to be flexible but if BPA is not going to increase generation, then we need to get the adjusted MOP conversations back on the table because we cannot do both. You cannot not spill and cannot not generate, and you cannot keep the pool down when you have 120 kcfs coming at you.

Norris said that he agrees with Baus but, at least the increase in spill between the traverse would minimize those exceedances by some increment and considering that the default operation is to exceed MOP and reduce spill for the barge transit that the increased spill would minimize those excursions to some extent.

Baus said that he understood, and the operative term is minimize. He said that he agreed with Norris but he wanted to make sure that those in the meeting understood to be clear that he had originally communicated that they would be no longer needing that flexibility but if they lose the tool for generation, then he agrees with Norris, that it would not be deployed much but it would be minimized.

Ebel said that he recognize that by using the generation tool, they are actually minimizing the impact of the transport operation. He said by that he means river miles but at this point the Corps has announced their decision. And the Fish Managers provided an option that he does not think has been considered by the AA and NMFS because of the historical inertia of suspending transport, which actually solves all of this problem for the rest of the year. Or any further discussion on which way we move water through the dam that is off the table, especially if you rephrase it to suspend transportation to improve conditions for in-river migrants. He wanted to say that in closing. Norris and Baus are absolutely correct, and it does solve the spatial extent but then it causes a different fish impact that would then need to be evaluated in the context of intent of the FOP. Particularly the intent of 24-hours spill, 24 hours a day of one gas cap spill at LMN relative to transport. He asked which one takes precedence, or which one is the dominant intent of the FOP. He said that he is going to bring this up through RIOG, he thinks ideally maybe they can piggyback, they have a meeting on May 29 and maybe somehow, they can get this on that agenda.

Hesse said that he wants to comment that part of the Corps justification for not implementing this was the lack of consensus, the lack of consensus was from the Federal family, that there was full consensus across the Tribal and State managers represented on this call. Hesse said that he wanted to point that aspect out and he will move on the next stage.

## **2. Next Meeting – May 22, 2024**

**Today’s Attendees:**

<b>Agency</b>	<b>TMT Representative(s)</b>
NOAA Fisheries	Kelsey Swieca, Trevor Conder
Oregon	Erick Van Dyke
Washington	Charles Morrill
Kootenai Tribe	
Colville Tribe	
Umatilla Tribe	
Yakama Nation	Keely Murdoch
Bureau of Reclamation	Chris Runyan
Army Corps of Engineers	Doug Baus (host), Julie Ammann
US Fish & Wildlife Service	
Idaho	Jonathan Ebel
Montana	
Spokane Tribe	
Nez Perce Tribe	Jay Hesse
Warm Springs Tribe	
Confederated Salish and Kootenai Tribes (CSKT)	
Bonneville Power Administration	Tony Norris, Ben Hausmann

Other Attendees (non-TMT members):

COE – Dan Turner, Chris Peery, Tiffany Dixon, Denise Griffith

BOR – Eric Rothwell

DS Consulting – Emily Stranz (Facilitator), Colby Mills

CorSource – Andrea Ausmus (BPA note taker, Contractor) *recording only*

Northwest Power and Conservation Council – Kate Self