

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

June 3, 2020

DRAFT Facilitator's Summary

Facilitators: Donna Silverberg and Emily Stranz; Notes: 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. These notes are not intended to be the "record" of the meeting, only a reminder for TMT members. Official minutes can be found on the TMT website: <http://pweb.crohms.org/tmt/agendas/2020/>.

Hungry Horse Update

Joel Fenolio, BOR, provided an update on Hungry Horse dam operations. The project was expecting to see some bump ups on Monday due to weather conditions, but the project had to drastically reduce releases more than anticipated and ended up in a holding stage just below 14 feet at Columbia Falls, and will backfill as the recession goes through. The project is currently at 3546.8 feet, and ramping up to 15 kcfs with TDG levels up to 114%. There may need to be another increase up to 16 kcfs later on today to hold the pool over the next week or so (outside of this weekend) to keep the stage below 13 feet going into the end of the month. He noted that this would likely last through next week, and spill may be necessary for the next couple of weeks to mitigate inflow.

Joel noted that, at Grand Coulee, things are looking pretty good in terms of powerhouse capacity at the moment, at around 190 kcfs, and the project has been spilling up to 10 kcfs due to the spill priority list.

→ **Action:** In response to a question from Sheri Sears, Colville Tribes, regarding scheduled repairs in June, Joel will confirm and report back whether repairs are moving forward and if/how they will affect powerhouse capacity.

TDG & Flex Spill Update

Dan, COE, reported that on the Columbia River, the Corps is raising McNary Dam spill caps to get TDG up to 125%. John Day and The Dalles are currently exceeding their spill caps, with John Day (120% criteria) generating 125% TDG and The Dalles (40% spill criteria) generating 122-125% TDG in the tailwater. Bonneville Dam had to take out the recently re-installed CCIW Cascades Island gauge due to the risk of damage from forecasted flows of 400 kcfs. Dan noted that, as the tailwater depth at Cascades Island has increased, TDG levels have also increased.

He also noted that the four projects on the Snake River are being managed to not exceed the 125% TDG criteria. As a result, spill caps have changed on a daily basis, and were decreased over the past couple of days to avoid exceedances.

Tony Norris, BPA, reported that Snake River projects were not able to implement performance standard spill over the weekend due to high flows and lack of load conditions. Lower Granite Dam started around 145 kcfs and peaked at 170 kcfs. On Sunday, Little Goose was unable to accomplish any reduced spill and ran up against FRM guidance at John Day due to instantaneous maximum discharge. Scott Bettin, BPA, clarified that, without enough load, the powerhouse can't be turned entirely on. Yesterday, Little Goose was able to get 8 hours, and Lower Monumental had 5 hours of performance standard spill in the morning. In an effort to get additional hours of reduced spill to alleviate adult passage issues, BPA talked with the Corps about changing the Spill Priority List, but that would not resolve the issue.

Ice Harbor Dam had no performance standard spill over the weekend, and only a few hours yesterday. Lower Columbia projects were not able to flex with the high flows.

In regards to concerns from Salmon Managers, Tony clarified that if there is room in the river to release additional water after storage, then the intention is to operate and use pools accordingly to get as many of the 8 hours of performance standard spill accomplished. It was suggested to revisit this topic of implementation at the Year End Review. Jay Hesse, Nez Perce, noted a desire to have the clarification and implementation discussions with the entire TMT body, rather than a sub-group (such as the Flex Spill Team). Salmon Managers appreciated that there is an operational cost to moving the spill hours and acknowledged the biological costs to fish as well.

Fish Updates

Claire McGrath, NOAA, reported that they are done using smolt traps in the Snake, Salmon, and Grande Ronde rivers. At Lower Granite, yearling Chinook and steelhead continue to decrease, and there has been a spike in sub-yearling Chinook passage in the past week. Sockeye passage spiked in mid-May, and there are smaller numbers of juvenile coho. At Bonneville, yearling Chinook and steelhead passage is nearing an end, with declines in sockeye and coho passage as well. Sub-yearling Chinook are not passing significantly yet.

On June 1, adult Chinook counts at the lower Columbia projects transitioned from spring Chinook to summer Chinook. At Bonneville, spring Chinook YTD passage was 55,575, or 39% of the 10-year average, and the first day of passage for summer Chinook was 1,079. Jack Chinook YTD passage is 5,248, or 27% of the 10-year average; Sockeye YTD passage is 229, or 76% of the 10-year average; and steelhead YTD passage is 3,276, or 63% of the 10-year average. The project continues to see a lot of shad, at 108% of the 10-year average, and a few lamprey ranging from 7-57 per day.

At Lower Granite, adult Chinook YTD passage is 14,607, or 31% of the 10-year average; jack Chinook YTD passage is 1,287, or 20% of the 10-year average; with a couple of steelhead, and some shad showing last week. Not much is happening at Priest Rapids other than a few Chinook.

Charles Morrill, WA, noted that after the first day back at Performance Standard spill at Little Goose, the project has seen over 1,000 adults pass. Doug Baus, Corps, confirmed that as far as June 2, there was a significant improvement in passage at Little Goose Dam, concurrent with the Performance Standard spill operation (8-hours of 30% Performance Standard spill in the morning) intended to improve adult passage. Looking ahead, there is a good chance that this operation will continue. He also reported that the operation at Lower Monumental Dam, from Tuesday through Friday June 5th (8 hours of Performance Standard spill at 30 kcfs and a uniform pattern), already has shown an improvement in Chinook passage. Chinook counts are on the low side at Lower Granite, and hopefully will increase over the next few days.

In response to a question from Jonathan Ebel, ID, the Corps noted that they believe changing the spill pattern from bulk to uniform did not have as much influence as changing the spill percentage and reducing flows, although more analysis is needed. Tom Lorz, CRITFC-Umatilla, added that, once higher flows are reached, the different spill patterns are virtually the same.

Spring Chinook Passage

Claire reported that between Lower Monumental and Little Goose dams the observed counts are within the expected range (keeping in mind fallback rates). The FPC informed Salmon Managers they have not received updated PIT-tagged data since May 27. Prior to the gap in data, the observed conversion rate has fallen below the 70% predicted interval over the past week to ten days. Claire noted this has been an ongoing issue, and there is some disagreement among Salmon Managers on whether this is severe enough of an issue to act upon, or whether it's even a problem at all, based on assumptions about how longer travel times in the Snake River relate to upstream performance and spawning success.

Claire presented data that reflect lengthening travel times, relative to what is expected based on historical data, which has not been resolving over several weeks since mid-May, and continues. She noted the challenges in making management recommendations given the day-to-day variability, and that the proposed SOR is not a reaction to immediate conditions, but to a sustained trend that potentially will have significant impacts on fish survival and performance upstream.

SOR 2020-03

Jonathan introduced SOR #2020-03 (posted on the TMT website). The intent of the SOR is to increase the number of hours of Performance Standard spill at Little Goose Dam to reduce travel times of adult spring/summer Chinook, specifically:

1. Operate a 12-hour block of Performance Standard spill from 0400-1600 hours, with extended Performance Standard spill hours implemented every other day from June 8-20. On off days, spill will occur as stipulated in the FOP.
2. Offset impact to juveniles by increasing the number of hours spilling to the 125% TDG gas cap at Lower Granite Dam by three (for a total of 19 gas cap spill hours). Operation to occur only on days when 12 hours of Performance Standard spill are implemented at Little Goose.

It was noted that the SOR does not have consensus among Salmon Managers / FPAC, because of concerns that increasing performance standard spill hours negatively impacts juveniles and their powerhouse encounter rates at Little Goose and other projects along the lower Snake River. Some Salmon Managers wanted to look closer at options within the flex spill agreement before using an SOR. Doug suggested reviewing the Fish Passage Plan for Little Goose for more information on adult diel passage distribution at the project, which may be less skewed than present data, as Jonathan noted.

The TMT discussed and clarified potential outcomes of the SOR specifications. Discussion points included:

- Extended travel time early in the season isn't 1-to-1 for extended travel time later in the season (cumulative effect on survival).
- Delay effect varies according to time of year and species.
- Changing effects impact and target certain stocks and populations that are migrating at different times.
- A need for more information on slow versus fast travel times.
- The SOR does not include continuance of the special operation coordinated for Lower Monumental Dam; operational changes can be made there without an SOR, and are still being evaluated as concerns have lessened.
- Any non-written assumptions in the SOR need to be identified (including the possibility of adjusting the ASW at Little Goose to high crest). Salmon Managers had previously requested feedback from the Corps on whether adjusting the ASW to high crest during Performance Standard spill would have a significant impact on tailrace TDG, and if TDG conditions in the tailrace were a consideration in the ability to store above MOP and release at night.
 - Both FPAC and Salmon Managers requested the ASW at high crest during Performance spill hours (if not impacting TDG). During gas cap spill, the ASW goes back to low crest.
 - The Corps confirmed that they would adjust the ASW to high crest during hours of 30% spill and back to low crest for the remaining hours. When flows drop below 85 kcfs, the ASW will be changed to high crest during all hours, consistent with criteria in the FPP.

- FPAC acknowledged that implementation of the SOR could be challenging for AAs.
- Little Goose spill bay data issue on the TMT website creates an ongoing challenge for monitoring (doubling data), which was acknowledged by the Corps.
- SORs that are complex require AAs to translate how they can implement them.

BPA and the Corps then discussed the policy limitations for implementing the SOR from an operational standpoint:

- BPA can commit to providing the extended hours at Little Goose (#1), using the pool as necessary to accomplish that. However, the request to adjust flex spill operations at Lower Granite (#2) should be elevated to the Flexible Spill Working Group.
- The Corps agrees with BPA; from an operational standpoint they can operate the request stated in specification #1. Additionally specification #2 goes beyond the scope of what the Corps can implement at this time due to both the lack of consensus at TMT, and potential policy implications associated with the additional operational offsets at Lower Granite Dam. The Corps acknowledges BPA’s objection to specification #2. Doug noted that the advance notice (operational start date of June 8) does provide time to resolve any issues in a different forum. The ASW adjustment can be implemented as requested.

After a short caucus for Salmon Managers to discuss the operational limitations, the authors of the SOR decided they wanted to move forward with the SOR. The general consensus was to poll on the whole package of the SOR, rather than polling on #1, although Salmon Managers recognized that AAs might not be able to include #2. BPA clarified that if Salmon Managers wanted to vote on the whole SOR, it would be elevated to the Flex Spill Working Group.

TMT Members were polled on:

- 1) The SOR as a whole package (which cannot be implemented as written at this time); and
- 2) Only specification #1 from the SOR (which can be potentially implemented today)

NOAA	1) Supports 2) Supports	COE	1) Objects 2) Supports
OR	1) Objects and elevates (supports ASW request) 2) Objects and elevates	USFWS	1) No objection 2) Abstains
WA	1) Abstains (if implemented, does support the package) 2) Abstains	ID	1) Supports 2) Supports
Kootenai	Absent	MT	1) Supports 2) Supports
Colville	1) Supports 2) Supports	Nez Perce	1) Supports 2) Objects and elevates
Umatilla	1) No objection 2) Objects and elevates	Warm Springs	Absent
BOR	1) No objection 2) No objection	BPA	1) Objects (suggests elevation if wanted) 2) Supports

Based on the votes for objection and elevation, the SOR was elevated to the Flex Spill Working Group.

Further comments from TMT Members:

- NOAA and IDFG put forth the SOR as written, acknowledging that risks to juveniles was a concern other Salmon Managers had and would prefer the SOR as a package. That did not affect their support for only implementing specification #1 of the SOR.
- Oregon noted that only some Salmon Managers were authors of the SOR.

Adjustable Spillway Weir at Little Goose Dam

Currently at Little Goose Dam, the adjustable spillway weir (ASW), as identified in the FPP, is in the low crest position (at elevation 618 feet) until flows drop below the trigger of 85 kcfs and returns to a high crest position. Salmon Managers requested to change the current low crest elevation to high crest during Performance Standard spill only, and then back to low crest during Gas Cap spill. The Corps can and will implement the change starting tomorrow morning and continue until it meets the criteria identified in the FPP when daily average outflow drops below 85 kcfs (to remain in high crest). It was noted for TMT Members that there is a slight risk that the weir could get stuck in one position, as it is not built to move daily.

Lower Monumental Forebay

The project has been storing all day for morning generation. This evening there will be a barge coming through (which last week caused a 1-foot increase in the pool) so Scott Bettin, BPA, requested the ability to fill into the upper part of the pool for tonight and Friday night to capture the increase when the barge transits to the loading dock and is loaded. He noted that they may also need an expanded 2-foot range in the pool at Ice Harbor Dam. This had not been an issue in the past, and is a consequence of the requested change to only implement performance standard spill in the morning for adult fish passage. Oregon voiced concerns on the biological effects of the change and requested more information on impacts for fish.

Effective today through Friday, Lower Monumental will have an expanded 2-foot MOP range defined as 538-540 feet, and Ice Harbor will have an expanded 2-foot MOP range defined as 438-440 feet.

The next TMT meeting is a conference call on June 10th at 9:00 AM.

This summary is respectfully submitted by the DS Consulting Facilitation Team. Suggested edits are welcome and can be sent to Colby at colby@dsconsult.co.

Columbia River Regional Forum
Technical Management Team OFFICIAL MINUTES
June 3, 2020
Minutes: Melissa Haskin, BPA (contractor, FLUX Resources)

Today's TMT meeting was chaired by Doug Baus, Corps, and facilitated by Donna Silverberg, DS Consulting, and was conducted via conference call and webinar. See the end of these minutes for a list of attendees.

1. Review of Meeting Minutes and Summaries

Minutes and summaries for 5/27 and 5/29 have not been posted and will be up for review at the next TMT meeting.

2. Hungry Horse – Joel Fenolio, Reclamation

Joel Fenolio, Reclamation, gave an update on Hungry Horse operations. Over the past few days, temperatures peaked in the high 80s in the Flathead Basin. The project was expecting a bump in inflows as the area saw 2-3 inches of precipitation. However, by Saturday, the project had to reduce releases. Reclamation is holding stage at Columbia Falls just below 14 ft. It is operating to 14 ft. and will continue that until the recession goes through. The reduction was more drastic than the agency anticipated based on the forecast.

Currently the project is ramping up to 15 kcfs and TDG is at 114%. It may need to increase up to 16 kcfs and will likely continue that through next week. Precipitation is expected this weekend and temperatures will be in the 50s to 60s, so snowmelt will not be coming off as quickly as last weekend under the 80-degree temperatures. The project is currently at 3,546.8 ft. and inflows will likely be between 16 and 18 cfs today. The project will likely be passing inflow by the end of the day. Fenolio notified Montana DEQ and Fish & Wildlife & Parks this morning.

At Grand Coulee, Fenolio reported powerhouse capacity is looking good and that the powerhouse capacity is 190 kcfs. The project is spilling 10 kcfs for lack of load due to its placement on the spill priority list. Repairs were scheduled for June and Sheri Sears, Colville Tribe, asked if that would decrease powerhouse capacity. Fenolio thinks they have been delayed but said he will get back to Sears.

3. TDG and Flex Spill Update - Dan Turner, Corps, and Tony Norris, BPA

Dan Turner, Corps, reported on spill operations. The Corps is managing McNary Dam to the spill cap for 125% TDG per the flex spill agreement and has raised the spill caps to get the TDG to 125%. John Day is being managed to 120% TDG, which is generating 125% TDG. The Dalles is being operated to 40% spill, which is resulting in TDG of ~122-125%. At Bonneville, the Cascades Island gage (CCIW) was re-installed after it had been removed due forecasted high flows. It was then removed again due to concerns of damage from high flows.

Today at 0530, Bonneville spill was 150 kcfs, which generated 125% TDG at Cascades Island. On April 27, spill was also 150 kcfs (for 16 hours) but TDG was only 120%. Turner noted that this is a good illustration that as tailwater depth increases, so does TDG production.

On the Snake River, the Corps is managing projects not to exceed 125% TDG and changing spill caps on a daily basis. Currently, the Corps is decreasing spill caps as TDG is exceeding 125%.

Tony Norris, BPA, reported on performance standard spill for BPA. Flows in the lower Snake River increased over last weekend, starting at 145 kcfs and peaking at 170 kcfs on Sunday. There was increased spill across the system due to lack of load conditions. BPA did not flex at any of the Snake River projects this weekend. At Little Goose there was significant wind and high water Sunday, which also contributed to lack of load conditions. It was not possible to store above MOP to maintain the 8 hours of 30% spill, as releases of stored water would have exceeded Flood Risk Management guidance downriver at John Day. BPA did talk with the Corps about adjusting the spill priority list; however, the two agencies were unable to come up with a solution that would alleviate conditions. The instantaneous maximum discharge at John Day under peak runoff per the Corps FRM guidance was 400 kcfs across the weekend. On Sunday, discharge was 390 kcfs, and BPA and the Corps were managing for uncertainty from Snake River flows. Dave Swank, USFWS, said he would like to revisit the intent of this and how it needs to be implemented in the future. Jay Hesse, Nez Perce, added that his preference would be for the full TMT group to discuss the matter, not the Flex Spill team subgroup. Norris noted that moving forward, if there is room in the river to move additional water after storage, BPA intends to operate and use the pools to reach as many of the 8 hours as possible. He noted that there is a cost to BPA to move its flex spill to the morning, as river flow drops.

BPA was able to flex for 8 hours yesterday at Little Goose. Likewise, it was able to reduce spill in the morning at Lower Monumental yesterday, but not down to performance standards due to high flows and lack of load conditions. At Ice Harbor, BPA did not flex over the weekend but did flex a few hours yesterday (Tuesday, June 2). BPA was not able to flex on the Lower Columbia projects due to high flows.

4. Fish Update - Claire McGrath, NOAA, and Doug Baus, Corps

4a. Fish Summary:

Claire McGrath, NOAA, updated the TMT on fish passage. McGrath provided charts and graphs, available on the TMT website under today's agenda.

Juveniles: Smolt traps are done in the Snake, Salmon, and Grande Ronde rivers.

At Lower Granite, yearling Chinook and steelhead are decreasing while subyearling Chinook spiked last week. A small number of coho juveniles are still passing the project.

At Bonneville, yearling Chinook and steelhead are reaching the tail end of passage. Sockeye and coho numbers have been declining as well.

Adults: On June 1 at the lower Columbia projects, Chinook switch from being counted as spring Chinook to being counted as summer Chinook. At Bonneville, daily counts for Chinook were 919 to 1,485 over the last week. On June 1, a total of 1,079 summer Chinook passed the project. For 2020, spring Chinook passage was 65,175, which was 101% of 2019 and 39% of the 10-year

average. Jack Chinook are at 5,248, which is 74% of 2019 and 27% of the 10-year average. Sockeye have been passing at a rate of 1-81 per day with a total of 229 for the year, which is 76% of the 10-year average. Steelhead have been passing at 6-21 per day with a YTD of 3,267, which is 147% of last year and 63% of the 10-year average. This year, shad numbers are high (108% of the 10-year average) but not as high as last year. Lamprey are still passing the project, at a rate of 6-67 per day over the last week.

At Lower Granite, over past week there were 147-526 Chinook per day. The YTD for Chinook is 14,607 (114% of last year but 31% of the 10-year average). Jack Chinook have been passing at 30-71 per day over the last week with a YTD of 1,287 (58% of 2019 and 20% of the 10-year average). Shad have begun to show in low numbers at the project.

McGrath provided a graph for Priest Rapids. There is not much to report at that project.

Charles Morrill, WA, noted that yesterday, the first day of returning to performance spill, over 1,000 adults were counted at Goose. As a reminder, the TMT coordinated to shift all hours of performance standard spill at Lower Monumental to one 8-hour block each day beginning at 0600, switch both performance standard spill and gas cap spill to a uniform pattern and spill in a bulk pattern during lower spill.

4b. Fish Passage:

Doug Baus, Corps, updated the TMT on operations for adult fish passage at Little Goose and Lower Monumental. The Corps implemented performance standard spill at Lower Monumental as an 8-hour block starting at 0600 yesterday. Adult Chinook counts began to increase at 0500 and the count stayed strong through noon, reported Baus. The operation appeared to result in an improvement in passage.

Jonathan Ebel, ID, noted that the cumulative difference between Lower Monumental and Little Goose is still significant and indicated a slow down below Little Goose. The increase yesterday potentially could have been a backlog of fish that had been traveling between the projects for some time and may not have had an opportunity to cross the project before yesterday. The backup of fish below Little Goose has been building for weeks and was worsened this weekend by a lack of performance spill, but not caused by it, said Ebel.

Chris Peery, Corps, reported that the largest “bumps” in counts occurred after flows decreased as spill receded. Fish reacted to the reduction in spill coupled with a reduction in flow, he noted. At Lower Monumental, the counts were likely more evenly distributed because the project has two fish ladders, whereas at Little Goose there is only one ladder and fish tend to react more strongly to tailrace conditions.

During performance spill, BPA had to use the pool. Norris is not sure why but it was within MOP. BPA should be able to operate to performance spill over the next few days. If there is an issue, they will use the pool to store above MOP to make 30% spill happen.

5. Spring Chinook Passage - Claire McGrath, NOAA and Jonathan Ebel, ID

McGrath shared the adult PIT-tag data tools from DART and the Fish Passage Center (FPC) on Spring Chinook passage.

As of yesterday, FPC had not received PIT-tag data since May 27. DART has also been experiencing some ongoing issues that McGrath has noted at past TMT meetings.

Fish managers began talking last Tuesday at FPAC about spring Chinook passage. Salmon managers expressed a range of opinions. Travel times have been lengthened; specifically the percentage of fish converting from Lower Monumental to Little Goose within 3 days has been on a downward trend for weeks. The harmonic mean travel time is 2 days. Many fish are catching up by the 4th day, said McGrath. Some managers believe it is a problem that affects spawning success while others do not. The SOR on today's agenda is a reflection of a trend, said McGrath. Ebel added that the low passage at Lower Granite is more a reflection of low passage at Little Goose. Morrill echoed Ebel.

6. SOR 2020-03 - Little Goose Dam Performance Standard Spill Hours for Adult Passage - Jonathan Ebel, ID, and Claire McGrath, NOAA

Ebel and McGrath presented SOR 2020-03, which is not a consensus SOR from the salmon managers but a recommendation from Idaho Department of Fish and Game, NOAA Fisheries, Colville Tribes, and the Nez Perce Tribe. The SOR seeks to increase the number of performance standard spill hours at Little Goose to reduce travel times for adult Chinook. The SOR asks for two operations, as summarized below:

1. Every other day, starting June 8 and continuing through June 20, extend the hours of Little Goose performance standard spill to a 12-hour block from 0400-1600 hours. On alternate days, Performance Standard spill will occur as stipulated in the FOP (8-hour block).
2. On the days of 12-hour blocks of Little Goose performance standard spill, extend the hours of gas cap spill at Lower Granite by three hours, for a total of 19 hours of gas cap spill and 5 hours of performance standard spill. On alternate days, performance standard spill will occur as stipulated in the FOP.

The majority of fish pass during performance standard spill and counts drop off at the end of the performance spill period, said Ebel. Thus, extending the amount of spill time may lead to more fish passing on a given day, said Ebel. As noted in the SOR, Ebel remarked that the DART adult passage tool shows that approximately 70% of PIT-tagged fish enter the ladder between 0900-1300 hours suggesting they may require time to adjust to abrupt changes in conditions. The second part of the SOR is to mitigate impacts to juveniles since increasing performance spill will affect juveniles at Little Goose.

Peery noted that doubling the hours of performance standard spill is not going to double counts, adding that at Little Goose fish move more in morning. Baus directed TMT members to Figure LGS-2 in the Fish Passage Plan (FPP) that illustrates the diel passage distribution for adults. Throughout the season, spill affects counts differently. Fish migrating a month ago are going to different places than fish traveling now, remarked Peery. Many fish held up at Little Goose are likely middle fork Salmon River Chinook, soon to be south fork and upper fork salmon, among others. The delay effect varies according to time of year and species. For instance, in fall, fish need to get to their spawning grounds more quickly than in spring so a delay is more impactful.

Julie Ammann, Corps, asked if Lower Monumental is no longer a concern. Ebel replied that it is being evaluated separately. The Lower Monumental issue is one that has not been seen in the past and can be managed without an SOR. Managers will continue to evaluate the operation through its end on Friday. Fish managers are currently not asking for an extension and the SOR is not contingent upon continuing the operation at Lower Monumental.

Morrill added that it could be beneficial to fish to change the Little Goose adjustable spillway weir (ASW) to high crest during 30% spill. Swank added that the ASW conversation was not a part of the SOR because it is can be coordinated without an SOR. He also noted that concern at Lower Monumental has decreased. The ASW discussion was tabled for later in the meeting.

BPA and the Corps felt they could implement part 1 of the SOR but that they would need guidance from the flex spill working group in order to implement part 2, as it is beyond the latitude of what the action agencies can implement due to lack of consensus and additional operational changes at Lower Granite Dam. With a proposed start date of June 8, there is still time for the TMT to elevate the issue to the flex spill working group to evaluate prior to implementation.

The TMT took a short recess so salmon managers could discuss if they wanted to push the two operations in the SOR through separately. After returning, the facilitator polled TMT members and agencies on both the full package (#1 and #2) and the partial package (#1 only).

TMT members and agencies were polled on implementing BOTH operations #1 and #2 in the SOR. Per TMT guidelines, members may vote with one of the following responses: support, not object, object, object with elevation, or abstain. As a matter of process TMT does not generally poll on things the action agencies cannot implement, noted Baus. The votes for the full SOR package (#1 and 2) were as follows:

Agency	TMT Representative	
Army Corps of Engineers	Doug Baus (Chair)	Object
Bonneville Power Administration	Tony Norris	Object
Bureau of Reclamation	Joel Fenolio	No objection
NOAA Fisheries	Claire McGrath	Support
US Fish & Wildlife Service	Dave Swank	No objection
Washington	Charles Morrill	Abstain
Oregon	Erick Van Dyke	Object and elevate
Idaho	Jonathan Ebel	Support
Montana	Jim Litchfield	Support
Nez Perce Tribe	Jay Hesse	Support
Umatilla Tribe/CRITFC	Tom Lorz	No objection
Colville Tribe	Sheri Sears	Support
Warm Springs Tribe	Absent	Absent
Kootenai Tribe	Absent	Absent
Spokane Tribe	Absent	Absent

Members noted the following caveats:

- ID would not have drafted an SOR only to increase gas cap spill hours at Lower Granite and supports the SOR as a package.

- WA is abstaining because of difference in opinion about travel time but strongly supports if the SOR goes through as a package with both parts 1 and 2.
- Tom Lorz, Umatilla Tribe/CRITFC, is perplexed that an increase in performance spill hours at Little Goose can be approved at TMT but that an increase of gas cap spill at Lower Granite would need to be resolved at the flex spill working group. Norris agreed with Lorz saying that additional hours at Little Goose would be outside the flex spill agreement and should also be elevated to the flex spill working group since it would be a change to the agreement. Hesse pushed back saying that the agreement for 2020 specifically allows for adaptive management decisions and changes if there is consensus support.

TMT members and agencies were polled on implementing only part 1 of the SOR, which could possibly be implemented today. Polling responses were as follows:

Agency	TMT Representative	
Army Corps of Engineers	Doug Baus (Chair)	Support
Bonneville Power Administration	Tony Norris	Support
Bureau of Reclamation	Joel Fenolio	No objection
NOAA Fisheries	Claire McGrath	Support
US Fish & Wildlife Service	Dave Swank	Abstain
Washington	Charles Morrill	Abstain
Oregon	Erick Van Dyke	Object and elevate
Idaho	Jonathan Ebel	Support
Montana	Jim Litchfield	Support
Nez Perce Tribe	Jay Hesse	Object and elevate
Umatilla Tribe/CRITFC	Tom Lorz	Object and elevate
Colville Tribe	Absent	Support
Warm Springs Tribe	Absent	Absent
Kootenai Tribe	Absent	Absent
Spokane Tribe	Absent	Absent

Members and agencies shared the following thoughts in addition to their votes.

- NOAA sees the SOR as balancing risk to adults and juveniles. They prefer both be implemented but would support #1 separately if they need to.
- ID commented that the SOR was written to alleviate concerns at multiple levels through compromise. Their preference would be that the SOR be implemented as an entire package but adult passage is the more immediate concern.

Baus said the Corps can implement Part 1 of the SOR starting June 8. Hesse commented that moving forward with an operation that has objections seems questionable. Additionally, the SOR as a whole will be elevated to the Flex Spill Working Group due to OR's object and elevate vote.

Regarding the Little Goose ASW, it is currently in low crest due to flows being above 85 kcfs, per criteria in the FPP. At the request of several salmon managers, including Charles Morrill, WA, the Corps will change the weir to high crest during performance standard spill and back to low crest during gas cap spill. The Corps can implement this immediately (the first change would be tomorrow at 0400 when 30% spill begins) until flows drop below the FPP trigger of 85 kcfs to change it back to high crest all hours. Peery contacted the project to see if this change would be

possible since it was not built to be changed twice daily. The project said it can operate this way but that system is sensitive and there is risk it will be stuck in one position.

In addition, BPA notified TMT that in order to move all hours of Lower Monumental performance standard spill into the morning, there may need to be an expansion of the MOP range at Lower Monumental and Ice Harbor to allow for the afternoon spill reduction for the fish transport barge. BPA has been storing all day to prepare for a barge coming this evening which will reduce LoMo outflow and drop the Ice Harbor pool. It may require a 2-foot pool at Ice Harbor and Lower Monumental to capture the bounce. Prior to the change requested by TMT, the reduction occurred during performance standard spill of 30 kcfs. Now it will occur during gas cap spill, which will be a much larger reduction in outflow from about 140 kcfs and will cause the pool to bounce. Erick Van Dyke, OR, wondered what this would do to fish.

Effective today through Friday, the Corps will implement an expanded 2-foot MOP range at Lower Monumental (538 ft. to 540 ft.) and Ice Harbor (438 ft. to 440 ft.) in order to accomplish the TMT request to move all performance standard spill hours into the morning.

8. Next TMT

The next TMT meeting is call on June 10 at 9 a.m.

Today’s Attendees:

Agency	TMT Representative
Army Corps of Engineers	Doug Baus (Chair), Lisa Wright, Julie Ammann
Bonneville Power Administration	Tony Norris, Scott Bettin, Eve James
Bureau of Reclamation	Joel Fenolio
NOAA Fisheries	Claire McGrath
US Fish & Wildlife Service	Dave Swank
Washington	Charles Morrill
Oregon	Erick Van Dyke
Idaho	Jonathan Ebel
Montana	Jim Litchfield
Nez Perce Tribe	Jay Hesse
Umatilla Tribe/CRITFC	Tom Lorz
Colville Tribe	Sheri Sears
Warm Springs Tribe	N/A
Kootenai Tribe	N/A
Spokane Tribe	N/A

Other Attendees (non-TMT members):

Army Corps of Engineers – Dan Turner, Aaron Marshall, Eric Hockersmith, Chris Peery
 BPA – Shane Mosier, Melissa Haskin (CONTR, FLUX Resources, Note taker)
 Clearing Up – K.C. Mehaffey
 DS Consulting – Donna Silverberg (Facilitator), Colby Mills, Emily Stranz (Facilitator)
 Yakama Nation Fisheries – Tom Iverson
 Oregon DEQ – Paula Calvert
 Columbia Basin Bulletin – Mike O’Bryant