

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

August 4, 2021

DRAFT Facilitator's Summary

Facilitator: Emily Stranz; Notes: Colby Mills

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/2021/>.

Review Meeting Summaries & Minutes

TMT Members approved the facilitator's summaries for the July 9, 14, 21, and 28 meetings. Official meeting minutes for the June 30, July 2, 7, 9, 14, 21, and 28 meetings will be reviewed at the next TMT meeting.

Dworshak Dam Operations

Jon Roberts, Corps, reported on operations at Dworshak Dam. After a cool down period last Thursday and Friday, temperatures heated back up in the early part of this week. Rain in the basin over the weekend didn't provide much temperature relief, although it did provide some cloud cover. Yesterday reached 105 degrees F in lower part of the basin, and ambient air temperatures in the mountains were in the 80–90-degree F range. Temperatures are hot today and will remain warm tomorrow, followed by a significant regional cold front with rain, which will help cool things down, especially at night. Looking further into the 10-day forecast there is some slight warming, up to the mid/high 90s in a few spots. Temperatures will be monitored throughout the next week and through Doble testing.

Current water temperatures are elevated in the Lower Granite tailwater and are forecasted 4-5 degrees higher than anticipated. This is a result from yesterday's high temperatures. The fish trap was above 70 degrees F yesterday/last night, however, is expected to drop back down to 69 degrees F. In the pool, the 25-meter mark is expected to cool with the incoming colder water, and the regional cold front will help influence the thermocline significantly over the next 5 days, prior to Doble testing (Doble testing at Lower Granite begins on Monday between 0600-1900 hours). Lower Granite tailwater is expected to be close to 68 degrees F and anticipating that the RSW will reopen with Doble testing, the model indicates on August 9 or 10 water temperatures could potentially increase momentarily as water comes off the top; how much will depend on ambient temperatures.

Based on coordinated operations throughout the summer, the Corps is targeting a higher tailwater temperature for the last week of July and the first week of August. It is expected that there will be enough water to augment flows through the end of August (less than 1-day gap), providing cold water for broodstock collection at the Lower Granite trap. Fish collection will begin on August 17/18, and temperatures are currently forecasted to be at 67.5 degrees F, and closer to 66.5 degrees F for the last 2 weeks in August. ID and NOAA expressed appreciation for the strong technical support from the Corps Walla Walla team.

Summary of SORs 2021-3, 2021-4, 2021-5 TMT Coordination

Doug Baus, Corps, reported on the summary of ongoing SOR operations 2021-3, -4, -5 (posted to the TMT website). In regards to SOR 2021-4, Action 4, the Corps committed to making a decision on August 4th. Given the current forecast, additional draft at Dworshak Dam may not be necessary, but the Corps will maintain the flexibility to draft an extra foot (down to 1,534 feet) at the end of August and to 1,518 feet at the end of September, if absolutely necessary. Additionally, language was included to reiterate the 2005 agreement between the U.S. and the Nez Perce Tribe for water use in the Dworshak Reservoir, regarding the Nez Perce's right to annually use 200 KAF of water in September.

Jon clarified that the current forecasted end of month elevation for Dworshak is getting closer to the default target operation of 1,535 feet by the end of August. Operations at Lower Granite include: the RSW reopening at 0600 hours on August 9 (start of Doble testing), and the RSW open from 0600 hours on August 9, through the end of August as inflow allows. This alternative was modeled assuming summer spill levels changing on August

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15, per the FOP. Based on the conditions modeled and previously coordinated operational changes, there is enough water to maintain temperature criteria at Lower Granite through the last 2 weeks of August.

Jonathan Ebel, Idaho, registered concern regarding the Corps’ decision to allow for an additional foot of draft at this point in time, given that the conditions do not show an immediate need for it, and the decision could be made in a couple of weeks with more up to date information.

TMT Members were polled on the Corps’ decision on how to implement SOR 2021-4, Action 4:

TMT Member	Polling Response	Rationale (optional)
NOAA	Support	NOAA understand ID’s concerns with deciding today and recognized that the decision could have been delayed a couple weeks to accommodate their needs but believed that the operation will ultimately benefit fish. NOAA noted that their support for the operation stems from analysis that additional risk to refill is very small and acknowledged that summer operations can directly affect spring operations and refill. NOAA had no interest in delaying decisions, and recognized the sensitivity around new tools being used routinely.
Umatilla Tribes	Support	Umatilla appreciated that flexibility of operations was maintained.
Reclamation	Support	No additional comments.
Corps	Support	The Corps appreciated everyone’s time, energy, and collaborative work, that resulted in the conservation of a significant amount of water out of Dworshak.
USFWS	No Objection	USFWS has continued concern over the ability of bull trout to access the tributaries in the Dworshak reservoir. They are fine with this level of additional drafting, however, registered concern around these unknown / unusual water levels for Dworshak at this time of year. However, the level of draft in this operation is expected to be okay.
ID	Object without Elevation	Idaho objected because they believe the decision on a potential deeper draft is premature and could be decided further out as information gets clearer on volumes. They noted the importance in bridging the gap between summer flow augmentation and the Dworshak board 200 KAF; ID supports the Board’s decision to start on September 1.
MT	No Objection	MT was concerned about the possibility of changing precedence. They understand the difficulty of finding a solution and implementing a plan that works. They did not object because they defer to local scientists and agents operating projects, and are encouraged by the level of coordination.
Nez Perce Tribe	Support	Nez Perce: 1) appreciated the engagement and Corps’ decision today to have a tool in the toolbox to make available in the case it is needed. 2) Supported the decision, however, the Tribe’s preference would be to have had more water available in case weather conditions require it between now and the end of August, and to make sure the tool is adequately sized. 3) Regarding the concern about setting precedence and a pre-mature decision, they noted that it took over a month to reach this decision and the Tribe was not willing to risk not having this tool in the toolbox if it was needed. The intention of conserving water and not using any more than is necessary has been shared by all this year.
BPA	Support	BPA echoed the Corps’ statement, and noted the amazing accomplishment considering the unusual weather conditions.
Colville, CTWS, Kootenai, OR, Spokane, WA	Absent	

Based on the today's polling responses, the Corps plans to maintain the flexibility to draft to 1,534 feet at the end of August, and subsequently 1,518 at the end of September, if absolutely necessary.

Sockeye Conversion/Condition and Steelhead Counts

Claire McGrath, NOAA, reported briefly on adult Chinook and steelhead counts. (As of August 1, Chinook at Bonneville are being counted as fall Chinook.) The summer Chinook counts (arriving at Bonneville June 1-July 30) were just under 75,000 fish, or 77% of the 10-year average. First few days of the fall Chinook counts are lower than average and will be monitored.

Steelhead returns to date are of greater concern. Bonneville YTD count is 22% of the 10-year average; wild count YTD is 25% of the 10-year average. Historical data shows the run should be 1/3 of the way through by now. In July, steelhead counts at Bonneville were the lowest on record since 1943, unclipped passage was the lowest on record since counting of clipped vs unclipped began in 1994.

Sockeye are at end of their run, with counts continuing to decline as of August 2, although a few fish will trickle though in August or later. YTD at Bonneville is 49% of the 10-year average. Sockeye are nearing their end at upstream projects as well; YTD counts at the lower Snake River projects range from 83-100% of the 10-year average. Lower Granite YTD is 83% of the 10-year average, and 1/3 of those fish were trapped and transported to the Eagle Hatchery. The preseason forecasts for all stocks at Bonneville was 155,600 fish; counts at Bonneville for all stocks are currently at 97% of the forecasted counts.

Snake River sockeye returns materialized much better than forecasted, with an estimated 1,536 Snake River sockeye returning to Bonneville, over double the preseason forecast. This is good news considering the lower-than-average upstream conversion rate.

Upstream conversion of sockeye has declined, particularly in the Snake River. PIT-tags from Bonneville to McNary show 55% this year, slightly below recent trends. Conversion of Snake River sockeye from Bonneville to Lower Granite is at 25% YTD, which is well below average and is not expected to improve.

Claire noted that sockeye are still arriving in poor physical condition, with bacterial infections developing after wounds from migration. Water temperatures are still above average for this time of year, tailrace temperatures at Bonneville through McNary, as well as Ice Harbor, are averaging around 72 degrees F. The 3 projects in the upper Snake River are between 69-70 degrees F. Tributaries have come down from extreme highs in July, however, most are still above 70 degrees F. Jonathan Ebel, ID, added that their pathologists looked at injuries and bacterial cultures to determine what care the fish would need at the hatchery. They found opportunistic bacterium that show some differences in what is observed downstream versus upstream. Dave Swank, USFWS, reported on sockeye collected by the Yakama Nation at Priest Rapids Dam for reintroduction efforts in the upper Yakama system. After full bacteriology workups, staff also concluded that it is the usual opportunistic bacteria getting infected at higher rates from the high-water temperatures.

Sockeye Trap and Haul

Jonathan reported that the ID emergency trap and haul has finished for the year. An extra week was added per regional requests. The last truck left Lower Granite on July 29. Overall, 28 unclipped sockeye and 173 clipped sockeye were trapped and transported; total transported was 201. The fish are now at Eagle Hatchery and they've observed a higher-than-normal pre-spawn mortality rate, with some significant injuries. Jonathan noted that the fish stabilizing and are in good hands at the Hatchery.

Questions or comments from members of the public: no questions or comments from members of the public.

The next scheduled TMT meeting is a conference call on August 11, 2021 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
Wednesday, August 4, 2021
Minutes: Melissa Haskin, BPA (contractor, FLUX Resources)

Today's TMT web meeting was chaired by Doug Baus, Corps, and facilitated by Emily Stranz, DS Consulting. See the end of these minutes for a list of attendees.

1. Review of Facilitator's Summaries

The facilitator's summaries for the July 9, July 14, July 21, and July 28 meetings were approved with no additional edits.

2. Dworshak Dam Operations – Jon Roberts, Corps NWW

The region experienced cooler temperatures last Thursday and Friday but warmed up through the weekend. During the weekend, there was also some precipitation that provided cloud cover. Yesterday, air temperatures remained warm, hitting 105°F in the lower Basin. In the mountains, daytime highs stayed in the 80-90°F range. Today, temperatures will remain high, but the 10-day weather forecast calls for a cold front, which should bring rain to the region, pushing out smoke and providing cool nighttime temperatures. The front should begin to affect the region Thursday with air temperatures dropping to nighttime lows in the 30°F range. Orofino should see lows in the 50s while Lewiston will see lows in the 60s. All of this should provide more favorable conditions heading into the Lower Granite outage for Doble testing, which is set to begin Monday. During Doble testing, all units will be out of service from 0600 to 1900 daily with one unit passing 5 kcfs for station power. The forecast shows air temperatures remaining in the 90s during Doble testing, but further out the forecast is less reliable.

Lower Granite's tailwater is currently 65°F but expected to rise. This week's forecast underestimated by about 4-5°F, meaning that when Dworshak water was sent, the temperatures were expected to be lower, thus not enough water was sent at the right time. At the trap, water temperatures were above 70°F. This persisted through last night. The temperature at the trap is now back down to 69°F. Cool water will arrive soon. Coupled with the incoming cold front, water temperatures should drop both on the surface of the pool and closer to the trap. During Doble testing, the tailwater is expected to stay close to 68°F based on models run with the RSW open. The RSW is expected to open August 9 when the powerhouse outage begins. After Doble testing, the RSW will be opened as flows allow, per Fish Passage Plan criteria.

Looking ahead, the end of Dworshak flow augmentation is likely much closer to the end of August. Whereas last week the expectation was that water would be out 3-5 days before the end of August, the Corps can now say that due to actions taken in the region and improved forecasts, the gap will likely be less than a day. This means there is more water available for broodstock collection. Current model results show the Lower Granite tailwater temperature at 67.5°F during collection and 66.5°F during the last two weeks of August.

3. Summary of SORs 2021-3, -4, -5 TMT Coordination – Doug Baus, Corps

Baus directed the group to a summary of SOR coordination thus far this season, available on the TMT website. The document includes updates and information on SORs 2021-3, 2021-4, and 2021-5. Baus specifically directed the TMT to an update on SOR 2021-4, Action 4 (allow Dworshak to draft up to 10 ft deeper end of August and end of September, to 1,525 ft and 1,510 ft, respectively). The Corps has evaluated the request and provided an update on how it can respond given the constraints of its obligations and legal requirements. Baus shared that the Corps may draft to 1534 feet end of August and 1518 end of September if necessary. The Corps does not believe, given the current forecast, that it will be necessary. Baus provided additional information in the document about how the Corps came to this decision.

Currently, the end-of-month forecast for Dworshak Dam’s elevation is close to that described in the default operation of the proposed action. The modeling considers Lower Granite Doble testing as well as an additional 6 days of 100+°F air temperatures. Models are set to provide enough water to keep the Lower Granite tailwater at 67.5°F and the trap at 66.5-67°F and draft Dworshak Dam to 1,535 ft. with a 1-foot error margin. It is the Corps’ understanding that no additional coordination is necessary regarding the 1-foot error margin. The Corps believes an additional foot either way (positive or negative) will not be necessary but will use it if necessary.

Emily Stranz, DS Consulting, conducted a poll of the Corps’ response regarding its ability to implement Action #4 of SOR 2021-4. The results are as follows:

Agency	TMT Representative	Polling response
Army Corps of Engineers	Doug Baus	Support
Bonneville Power Administration	Scott Bettin	Support
Bureau of Reclamation	Joel Fenolio	Support
NOAA Fisheries	Claire McGrath	Support
US Fish & Wildlife Service	Dave Swank	No Objection
Washington	Charles Morrill	Absent
Oregon	Erick Van Dyke	Absent
Idaho	Jonathan Ebel	Object
Montana	Brian Marotz	No Objection
Nez Perce Tribe	Jay Hesse	Support
Umatilla Tribe	Tom Lorz	Support
Colville Tribe	Kirk Truscott	Absent
Warm Springs Tribe	Jen Graham	Absent
Kootenai Tribe	Absent	Absent
Spokane Tribe	Absent	Absent

ID: A decision to draft deeper is premature in ID’s view. This decision could have been delayed until further in the season as conditions become known and forecasts improve, noted Ebel. The water in question could potentially bridge the gap between summer flow augmentation and when the 200 kaf per the Dworshak Board begins, which is slated for a September 1 start this year. ID prefers waiting to make the decision on this part of the SOR.

NOAA: NOAA understands ID’s concerns and agrees that the decision could be delayed to accommodate the system’s overall needs. However, NOAA believes the operation will benefit fish while protecting the 200 kaf for use in September. NOAA’s support stems from analysis

provided by its experts with respect to system refill and spring operations. Water used now has an impact on both of those factors and is why NOAA would prefer not to delay the decision.

USFWS: USFWS is concerned that bull trout may not be able to access tributaries since Dworshak Dam reservoir is lower than normal for this time of year. Swank thinks this additional draft will be okay and not cause additional concern, but he does have ongoing concern.

MT: Montana is concerned about the possibility of this action setting precedence for future operation. Marotz clarified that his agency polled “no objection” because they are deferring to the local scientists and agencies operating the projects. He is encouraged by the level of coordination in the region.

Nez Perce Tribe: The Nez Perce appreciates the Corps’ decision to make this tool available. While the Tribe voted “support,” it is their preference to have more water available in case extra water is required to get to the end of August. Hesse is hopeful that the weather forecast does not deteriorate in the next few weeks since there is little room for error. The Nez Perce agrees with MT that the action/tool should not be considered precedent setting. That said, it took a month to get to this decision. The Tribe is unwilling to have tools unavailable for use because members of the team would like to wait longer for a more accurate forecast. This team tends to make decisions slowly. Hesse believes the language in the SOR and the Corps’ response is clear: that the agency will use no more water than necessary.

BPA: BPA commented that it has been amazing what the team has been able to do faced with unprecedented hot weather.

Based on today’s poll, the Corps will implement SOR 2021-4 Action 4 as described in the document attached to today’s agenda.

4. Sockeye Conversion/Condition and Steelhead Counts – Claire McGrath, NOAA

As of August 1, Chinook at Bonneville Dam are being counted as fall Chinook, thus far coming in below average. Summer Chinook (those passing June 1-July 30) came in at an YTD of ~75,000, which is ~77% of the 10-year average.

At Bonneville Dam, the YTD count of steelhead is 15,784, which is ~22% of the 10-year average. Wild YTD is 8,500, which is also low, at 25% of the 10-year average. Data show that we should be 1/3 of the way through the steelhead run, so these numbers are concerning. July showed the lowest number of steelhead passage on record since 1943. Unclipped steelhead were the lowest on record since record keeping began in 1994.

Sockeye are nearing the end of their run and daily passage has declined over the last few days. At Bonneville, 57 fish passed yesterday. They will continue to trickle through the project through the month. The YTD count at Bonneville for sockeye is 151,000, which is 49% of the 10-year average. Upstream, sockeye are also reaching the end of their run with daily counts in the single digits at the Snake River projects. YTD passage on the Snake River projects ranges from 83% of the 10-year average to 100% of 10-year average, depending on the project. At Lower Granite, the YTD is 607 fish thus far, which is 83% of 10-year average. About a third of those fish were trapped and transported to Eagle Hatchery by USFWS. In June, McGrath had noted that passage

in odd years tends to be lower than in even years. McGrath commented this proved true once again this year. The pre-season forecast called for counts of 155,600 at Bonneville Dam of all stocks, and what arrived was 97% of the forecast. Snake River sockeye returns were much better than the pre-season forecast of 735. Returns were more than double with 1,536 arriving to Bonneville Dam. Upstream conversion of sockeye in the Snake River declined this year with 55% converting from Bonneville to McNary. This is well below average. Conversion from Bonneville to Lower Granite was also well below average at 25%. As the rest of the fish trickle in, McGrath does not expect major improvements to passage numbers. Most fish still moving through the system have not been detected in 10 days.

McGrath also reported a high incidence of bacterial and fungal infection. Water temperatures have been warmer than average. Bonneville, McNary, and Ice Harbor have been hovering around 72°F. The upper 3 projects have been sitting at 69-70°F. Temperatures in the tributaries have come down but are still mostly above 70°F. NOAA’s pathologist found that observed wounds are the result of both opportunistic bacteria that likely thrived in the warm temperatures and cold-water disease. Swank added that his agency also conducted pathology tests, which showed typical incidence rates of opportunistic fungal and bacterial infections. The report indicated that growth was likely exacerbated by warm water temperatures and this explains the unusually high level of observable wounds. In sum, he said, it is normal for fish to sustain wounds during migration but this year the warmer temperatures may have resulted in increased infections.

5. Sockeye Trap and Haul – Jonathan Ebel, ID

Trapping ran an extra week this year, with the last truck leaving Lower Granite on July 29 instead of July 23. This year, 28 unclipped and 173 clipped sockeye were trapped for a total of 201 trapped and hauled fish. The fish are now at Eagle Hatchery. Some are injured but stabilizing. There were higher than normal pre-spawn mortality rates.

Today’s Attendees:

Agency	TMT Representative
Army Corps of Engineers	Doug Baus (chair), Lisa Wright, Julie Ammann
Bonneville Power Administration	Scott Bettin
Bureau of Reclamation	Joel Fenolio
NOAA Fisheries	Claire McGrath
US Fish & Wildlife Service	Dave Swank
Washington	Absent
Oregon	Absent
Idaho	Jonathan Ebel
Montana	Brian Marotz
Nez Perce Tribe	Jay Hesse
Umatilla Tribe/CRITFC	Tom Lorz
Colville Tribe	Absent
Warm Springs Tribe	Absent
Kootenai Tribe	Absent
Spokane Tribe	Absent

Other Attendees (non-TMT members):

Corps – Jon Roberts, Willow Walker, Alexis Mills, Dan Turner, Aaron Marshall, Chris Peery, Scott St. John, Catherine Dudgeon, Eric Chow

DS Consulting – Emily Stranz (Facilitator), Colby Mills

BPA – Melissa Haskin (CONTR, FLUX Resources, Notetaker)