

TMT – September 1, 2021

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

September 1, 2021

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. 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. 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 will review the August 25 facilitator's summary at the next TMT meeting.

Dworshak Dam Operations

Jon Roberts, Corps, reported on operations at Dworshak Dam. Midnight elevation was 1,535.11 feet, with the project stepping down outflows to 6.6 kcfs, to reach 1,520 feet and minimum discharge by the end of September.

Nighttime temperatures have been cool, even reaching freezing levels at high elevations. This is keeping the headwaters very cold coming off the mountains. The valley will warm slightly on Sunday and Monday, increasing nighttime temperatures a bit, and will immediately cool back down further in the 10-day forecast, with some potential rain in the area. Precipitation will be low, providing cloud cover to maintain daytime temperatures in the 70-degree F range, and keep the river system cool for this time of year. Even cooler weather and potentially more precipitation is in the forecast moving towards the middle of September.

The RSW at Lower Granite closed with the end of spill last night; the change is reflected in the cooler tailwater temperature, which is now at 63 degrees F. Incoming temperatures in the Snake River continue to hover between 69-70 degrees F. The Clearwater River through Orofino has remained under 68 degrees F for a few days. In the Lower Granite forebay water is being pulled from the 25-meter mark at 62 degrees F, and with the changes and mixing from the last 12 hours, tailrace temperatures are expected to drop further. Water at the fish trap is expected to remain in the 63-64 degrees F range.

Jon noted that they plan to stop running the Lower Granite temperature modeling, noting that there is no concern of jeopardizing the tailrace or fish trap temperatures for the remainder of the year. Looking ahead, the project will transition to implementing the Dworshak Board operation plan, gradually stepping down flows over 2-4-day periods, to maximize efficiency in the lower Clearwater and extend Dworshak water through the end of September. Jon will provide another update with temperature requirements and projections for the end of September at the next TMT meeting.

Jay Hesse, Nez Perce, thanked Jon for his efforts, and requested that the Lower Granite temperature modeling continue through the next TMT meeting on September 15, given that the Dworshak Board's objectives include tailrace and fish trap temperatures; Jon will bring updated data to the next TMT meeting.

Spill Priority List

Dan Turner, Corps, reported that summer spill season has ended, and with the transition to fall and winter spill, the state Water Quality Standards (WQS) will revert back to 110% for TDG. The Corps is producing a new draft Spill Priority List (SPL) to address forced spill for lack of load conditions, which is typically based around needs for fish; input from fish managers is helpful. Fish Managers recommended using the SPL from fall 2020, noting that the document can be revisited for in-season adjustments at any time. Scott Bettin, BPA, suggested capping Lower Granite at 10 kcfs (just flow through RSW); Dan will evaluate this and report back to the TMT, however, Erick Van Dyke, OR, noted that he did not support the cap.

TMT – September 1, 2021

Operations Review

Reservoirs: Joel Fenolio, BOR, reported on Bureau of Reclamation projects:

- **Hungry Horse:** midnight elevation was 3,553.6 feet, with outflows of 2,800 cfs. The project is targeting 3,548-3,550 feet for the end of September. Project staff are planning for spillway inspection and will target a couple feet lower.
- **Grand Coulee:** midnight elevation was 1,277 feet, with the project operating to Bonneville minimums and targeting above 1,565 feet for recreation over Labor Day Weekend.

Lisa Wright, Corps, reported on Corps of Engineers projects:

- **Libby:** midnight elevation was 2,453.4 feet, with average inflows of 6.3 kcfs, and outflows of 7 kcfs;
- **Albeni Falls:** midnight elevation was 2,062.3 feet, with average inflows of 4.9 kcfs, and outflows of 8.7 kcfs;
- **Dworshak:** midnight elevation was 1,535.1 feet, with average inflows of 0.6 kcfs, and outflows of 7 kcfs;
- **Lower Granite:** average outflows of 19.5 kcfs;
- **McNary:** average outflows of 84.4 kcfs; and
- **Bonneville:** average outflows of 104.3 kcfs.

Water Quality: Dan reported that TDGs are looking good after the end of summer spill season. Douglas County PUD is working around gauge issues.

Fish: Claire McGrath, NOAA, reported declining numbers of juveniles across the projects, most of which are Chinook sub-yearlings, which is expected for this time of year.

At Bonneville, fall Chinook, coho, steelhead, and lamprey are increasing in passage, with low counts of sockeye, pink salmon and shad. Fall Chinook YTD passage is 127% of the 10-year average and fall Chinook jacks YTD is 143% of the 10-year average. Steelhead are seeing a record low year, with the lowest counts since counting began in 1938. Typically, 75% of the run would have passed by this point, steelhead YTD passage is 27% of the 10-year average and 30% for wild. Claire noted low counts over the last few years. Jay added that numbers for spawn year 2022 won't be assessed until July 1. Charles Morrill, WA, provided TAC's summary for coho and Chinook:

TAC met on August 30, 2021, and reviewed information for the summer steelhead run. As of August 29, 2021, cumulative passage since July 1 at Bonneville Dam (33,906) is the lowest on record, and the cumulative unclipped passage (15,414) is the lowest since clipped/unclipped counting began in 1994. Passage timing at this point in the run is variable. Based on AFF sampling through August 29 and 10-year average run timing passage is expected to be 42,600 total A-Index steelhead, consisting of 25,700 Hatchery A, and 16,900 Wild A steelhead through October 31. Because B-Index steelhead typically return in September and October, there is not enough information to provide an update about the B-Index component. The cumulative passage of coho at Bonneville Dam is 28,085 as of August 29, which is the second highest cumulative count to date. Total passage of Chinook in the fall management period is 84,431, which is the 7th largest passage on record to date. It is too early to update a run-size projections for coho and fall Chinook.

Coho had a pre-season forecast of 1.3 million fish returning to the mouth; counts are increasing rapidly at Bonneville, with YTD passage over 700% of the 10-year average, and jacks at 300% of the 10-year average.

Lower Granite is seeing increasing numbers of fall Chinook adults, YTD passage at 112% of the 10-year average, while steelhead are seeing a record low of 26% of the 10-year average; some sockeye are still trickling in. Dave Swank, USFWS, added that 2014 holds the passage record, and this year coho are on pace to break that record. Pacific lamprey are 90-95% through their run and will continue to trickle in through September in low numbers; YTD passage is 52% of the 10-year average, although better than last year.

TMT – September 1, 2021

In response to a query about lamprey translocation efforts this season, Jay noted an increase in the target for translocation. Over 1,000 lamprey were collected this year by the Nez Perce Tribe, with half going to the hatchery and half released in the river. Jay will provide specific numbers at the September 15 TMT meeting.

Power System: Tony Norris, BPA, reported shorter days and milder temperatures in September, resulting in less power usage.

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

The next scheduled TMT meeting is a conference call on September 15, 2021, at 9:00 AM.

Columbia River Regional Forum
Technical Management Team
DRAFT OFFICIAL MINUTES
Wednesday, September 1, 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. Dworshak Dam Update – Jon Roberts, Corps NWW

As of last night at midnight, Dworshak discharge was 6.6 kcfs and the forebay was just slightly above 1535 ft. and heading into September at 1,535.11 ft.

The 10-day weather forecast calls for cool nighttime temperatures, dipping as low as freezing in some of the higher elevations. There will be a little bit of a warming trend on Sunday and Monday, cooling back down later in the 10-day forecast with a possibility for a small amount of precipitation. Cloud cover should lead to highs of about 73°F, which is cool for this time of year.

Roberts reminded TMT that the Lower Granite RSW closed last night with the end of spill. This affects the tailwater temperature drastically and quickly. Currently, the tailwater is 63°F. Incoming flows from the Snake River are in the 69°F-70°F range. This is also cool for this time of year. The Clearwater gage above Orofino has been below 68°F for several days.

Looking at stratification in the Lower Granite pool, the trap is pulling water from 20-25 meters deep and is currently 63°F-64°F. At the 25-meter depth, water is 62°F. This cooler water will mix in the pool throughout the day and bring temperatures down further.

Roberts took TMT through the current temperature model results and noted that this will be the last week the Corps provides model results for 2021 temperature flow augmentation operations. At this point in the season, the models are less reliable and the Corps does not expect the tailrace to rise above 68°F from here on. The fish trap will remain cool. Jay Hesse, Nez Perce, requested that the models be run one last time for the next TMT meeting, scheduled for September 15. His reasoning is that the Dworshak Dam Board operational plan includes objectives for the tailrace and trap. Roberts said he will provide the models at the next TMT.

2. Spill Priority List - Dan Turner, Corps

It is the time of year where the spill priority list transitions to fall/winter water quality standards of 110%. The list is used by BPA to determine the order of projects to spill for lack of load. Typically, the list represents where the fish are in the river and how to best support them. Turner provided a draft based on the current order, which was last updated in July. He chose this order after reviewing the past few years' and realizing there was no default order. He noted this document can be changed at any time and asked input from TMT.

Several salmon managers, including Charles Morrill, WA, Claire McGrath, NOAA, Jonathan Ebel, ID, and Brian Marotz, MT, requested the order from last fall be used. Several managers

asked why, in past lists, Bonneville had been dropped low on the list. This could have been for a variety of reasons, from the RSW PIT-tag antenna at Lower Granite to rocks in the Bonneville Dam stilling basin, or chum that are directly downriver from Bonneville this time of year.

Scott Bettin, BPA, recommended capping Lower Granite at 10 kcfs. Erick Van Dyke, OR, was hesitant regarding this and worried it would set a precedent and should be thought through more prior to making a decision. Turner will take a look at the models and report back to TMT.

3. Operations Review

3a. Reservoirs – Joel Fenolio, Reclamation; Lisa Wright, Corps

Reclamation projects: Hungry Horse – Midnight elevation 3,553.6 ft. elevation (one foot higher than Reclamation wanted it to be August 31 at midnight). Discharging 2.8 kcfs. Targeting 3,548-3,550 feet for the end of September. **Grand Coulee** – midnight elevation 1,277 feet. Operating to Bonneville minimums and targeting 1,565 ft. for the holiday weekend.

Corps Projects: Libby Dam – Midnight elevation 2,453.4 ft., yesterday’s average inflows 6.3 and outflows 7 kcfs. **Albeni Falls** – Midnight elevation 2,052.3 ft., inflows 4.9 kcfs and outflows 8.7 kcfs. **Dworshak Dam** – Midnight elevation 1,535.1 ft., inflows 0.6 kcfs and outflows 7 kcfs. **Lower Granite** – outflows 19.5 kcfs. **McNary Dam** – outflows 84.4 kcfs. **Bonneville Dam** – outflows 104.3 kcfs.

3b. Water Quality – Dan Turner, Corps

TDG across the system is well below the 110% standard. Summer spill has ended. There is one gage issue being reported by Douglas PUD.

3c. Fish – Claire McGrath, NOAA

Juveniles: Chinook juveniles are declining, which is typical for this time of year.

Adults: At Bonneville, fall Chinook, coho, steelhead, and lamprey are passing. Shad and steelhead are also passing in low numbers. Chinook counts are increasing, and have been passing at 8,000-18,000 per day, with YTD totals of ~120,000 at the project, which is 135% of last year’s count and 127% of the 10-year average. YTD jack counts are 18,098, which is 143% of the 10-year average. It is proving to be a low year for steelhead thus far. Overall, counts are at record low levels. They haven’t been this low since 1938. At Bonneville, 1,200 to 1,600 are passing each day, which is 53% of last year and 27% of the 10-year average. Wild counts are 30% of the 10-year average.

Charles Morrill, WA, shared the following update (via web meeting chat):

“TAC met on August 30, 2021 and reviewed information for the summer steelhead run. As of August 29, 2021 cumulative passage since July 1 at Bonneville Dam (33,906) is the lowest on record, and the cumulative unclipped passage (15,414) is the lowest since clipped/unclipped counting began in 1994. Passage timing at this point in the run is variable. Based on AFF sampling through August 29 and 10 year average run timing passage is expected to be 42,600 total A-Index steelhead, consisting of 25,700 Hatchery

A, and 16,900 Wild A steelhead through October 31. Because B-Index steelhead typically return in September and October, there is not enough information to provide an update about the B-Index component.

The cumulative passage of coho at Bonneville Dam is 28,085 as of August 29, which is the second highest cumulative count to date. Total passage of Chinook in the fall management period is 84,431, which is the 7th largest passage on record to date. It is too early to update a run-size projections for coho and fall Chinook.”

Coho have been having a good season, with an expected 1.3 million returns according to pre-season forecasts. YTD passage has already surpassed the 10-year average by 700%. Jacks, while not as prevalent, are still well above average, at 300% of the 10-year average. Dave Swank, USFWS, added that this year’s coho returns (adults and jacks) are on pace to break the previous record set in 2014.

At Lower Granite, fall Chinook are increasing and are at 80% of last year’s count to-date and 112% of the 10-year average. Steelhead are still passing at 16-60 per day. Shad and sockeye are still trickling in.

Swank added that Pacific lamprey returns are 90-95% complete. Some will trickle in through September. Overall, passage is 20,928 (daytime ladder counts). This is an increase over last year but only 52% of the 10-year average. In response to a question about translocation, Hesse replied that the number of translocated lamprey this year is the highest to date. Given that the Tribe views translocation as the only really effective passage of adults into the Snake River basin, they changed the target numbers to well over 1,000 this year. Of the fish trucked into the Snake basin, half were held at the Nez Perce Tribal hatchery and half were direct released into the rivers. He will provide specific lamprey translocation numbers at the September 15 TMT meeting.

3d. Power – Tony Norris, BPA

Temperatures have been mild and days are shorter. This means less power is being used.

Today’s Attendees:

Agency	TMT Representative
Army Corps of Engineers	Doug Baus (Chair), Lisa Wright
Bonneville Power Administration	Tony Norris, Scott Bettin
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	Brian Marotz
Nez Perce Tribe	Jay Hesse
Umatilla Tribe	Tom Lorz
Colville Tribe	Absent
Warm Springs Tribe	Jen Graham

Agency	TMT Representative
Kootenai Tribe	Absent
Spokane Tribe	Absent

Other Attendees (non-TMT members):

Corps – Jon Roberts, Dan Turner, Alexis Mills, Aaron Marshall, Chris Peery, Scott St. John
DS Consulting – Emily Stranz (Facilitator), Colby Mills
BPA – Melissa Haskin (Notetaker)
Columbia Basin Bulletin – Mike O’Bryant
Portland General Electric – Ruth Burris