

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

September 15, 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; it is not intended to be the "record" of the meeting. Official minutes can be found on the TMT website: <http://pweb.crohms.org/tmt/agendas/2021/>. Suggested edits for the summary are welcome and can be sent to Colby at colby@dsconsult.co.

Review Meeting Summaries & Minutes

TMT Members approved the facilitator's summaries for the August 25 and September 1 meetings.

Dworshak Dam Operations

Jon Roberts, Corps, reported on operations at Dworshak Dam. The project is continuing to transition into lower flows, as described in the Dworshak Board's operational plan. Outflows are 4.3 kcfs and elevation is 1,524.5 feet (4.5 feet from end of month target). Flows will continue to reduce in order to stretch water throughout the remainder of the month to support Lower Granite and the Lower Clearwater. Jon noted that operations are adjusted in real time, with at least 2 days at each rate prior to the next decrease (see operation scenario posted on the TMT website).

Warm weather is expected in southern Idaho on Wednesday, followed by cooler temperatures on Thursday that will lead into a significant regional weather event expected to hit the Salmon, Grande Ronde, and Clearwater areas with rain and cooler temperatures. Highs will be in the 50s with nighttime temperatures below freezing in some places. River temperatures are expected to reduce by a couple of degrees. The end of 10-day forecast shows slight chances of rain with ambient air temperatures remaining in the 70s or cooler.

Water temperatures at Anatone are between 69-70 degrees F as flows fluctuate out of Hells Canyon. The majority of water coming into the Lower Granite pool is cool for this time of year, around 70 degrees F, with Orofino between 65-66 degrees F. The Lower Granite tailwater is expected to stay around 65 degrees F for September, and the project is operating to keep the fish trap near 68 degrees and to meet lower Clearwater temperature objectives (per the Board's Plan).

Jon explained that the gradual release of water in the Lower Clearwater is to avoid an abrupt temperature change once augmentation flows from Dworshak are complete; the intent is to mimic natural conditions as much as possible. Jon noted that another update will be provided at the next TMT meeting.

System Operational Request

Jay Hesse, Nez Perce Tribe, reported on SOR #2021-6, which recommends restoring the application of Zero Nighttime Flow limitations and criteria at the Snake River projects, as implemented prior to the 2020 CRS BiOp. The request is to return to the previous criteria and maintain nighttime flow for ecological river function to allow anadromous fish to move up and downstream. Jay noted that Snake River steelhead returns remain extremely low this year.

Fish Managers who supported the SOR remain concerned regarding the frequency of zero flow operations, limited biological monitoring, and a lack of impact assessment from last year's operations. Last season's PTAGIS analysis conducted by the University of Washington is still being reviewed by Action Agencies (AAs) and has not been provided to TMT. Charles Morrill, WA, added that the assessment of last year's operation did not provide any new information on how operations might be adjusted this year, and that the Salmon Managers do not have the tools necessary to assess potential impacts from the operation. However,

biological data shows an abundance of adult steelhead, fall Chinook and juvenile passage, which remains a significant concern to Salmon Managers. Additionally, Charles noted that without monitoring in place, WA prefers to err on the side of conservation, particularly given the current status of steelhead.

After further discussion and clarifying questions surrounding the SOR, the AAs requested 1 week to review internally with their respective policy teams. NOAA stated that the only new information available since last fall is data on operation implementation and fish passage during 2020-21, and stated that fish managers could ask BPA if they plan to add this information into the UW analysis. NOAA acknowledged co-Managers concern that zero flow conditions can reduce attraction to passage and affect delay, mortality, and overall ecological function of a river system. At co-managers' request, NOAA reviewed the information they used in the BiOp to determine that the operation would not have biological effects that rise to the ESU level, including juvenile and adult passage timing and overwinter mainstem behavior and habitat. NOAA stated they remain interested in discussing any new information if it becomes available.

→ **ACTION**: A TMT meeting will be held on Wednesday, September 22, to revisit the SOR, poll, and discuss how to move forward. AAs will be prepared to bring more clarity on expectations for operational frequency and evaluation, and monitoring.

Libby Dam Operations

Leon Basdekas, Corps, was introduced as the new Senior Water Manager for the Corps' Seattle District. The TMT welcomed Leon.

Kristian Mickelson, Corps, reported on operations at Libby Dam. The project transitioned to summer operations following the end of the sturgeon pulse in June. The current end of September elevation target (based on May WSF) is 2,449 feet, and the project this morning was at 2,451.37 feet.

Kristian presented an update to the end of September operation at Libby, which is posted to the TMT website. Rain events in August increased flows above forecast, and the observed April to August volume was 4,864 kaf. Releases increased on September 4 from 7 kcfs to 8 kcfs to target the end of September elevation of 2,449 feet, and will ramp down to 4 kcfs to aid habitat restoration near Bonners Ferry. Although 95% of forecasts show drafting to 2,449 feet by the end of September, this could change depending on weather, and releases will not be increased to hit the target.

Water Management Plan Update

Doug Baus, Corps, reported that the Corps will have a draft of the Water Management Plan (WMP) posted no later than October 1. The process and review schedule will remain the same as in past years; feedback and edits can be sent to AA TMT representatives in tracked changes, recommended changes will be posted on the website. Emily Stranz, DS Consulting, added that this year TMT will have an opportunity to discuss recommended changes and the AA's rationale for incorporating/not incorporating changes at a DSC Process Meeting. The Corps also welcomes any questions from TMT members offline.

→ **ACTION**: Brian Marotz, MT, will follow up with Greg Hoffman, Corps, offline to discuss any anticipated changes in the WMP to early spring draft at Libby Dam.

TAC Update on Steelhead Runs

Charles Morrill, WA, provided an update from TAC regarding steelhead runs:

As of September 12, 2021 the cumulative steelhead passage since July 1 at Bonneville Dam (50,516) is the lowest on record, and the cumulative unclipped steelhead passage (19,583) is the lowest since clipped/unclipped counting began in 1994. The clipped passage is 30,933 to date. Based on AFF sampling and the 5-year average run timing, the projected total A-Index clipped and unclipped

steelhead passage is expected to be 52,600 (hatchery A = 33,400, and wild A = 19,200). It is too early in the run to update the B-Index component, however it is likely that the total B-Index return will exceed the preseason forecast (7,600 total fish). To date, the total B-Index passage at Bonneville is estimated at 5,300. TAC expects to provide an update of the B-Index return at its next meeting on September 20.

Hungry Horse Dam Update

Joel Fenolio, BOR, reported that until last week, Hungry Horse Dam was targeting being at 3,548 feet to accommodate inspection of the morning-glory spillway at the start of October. The inspection has been moved to October 25-29, so the project has ramped down to target the Columbia Falls minimum and will work to be as close to 10 feet from full as possible. Given current projections elevation is expected to be around 3,545/3,546 feet by October 25, although adjustments may be made next week depending on incoming inclement weather.

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 Wednesday, September 22, 2021 at 9:00 AM.

The next regularly scheduled TMT meeting is a conference call on October 6, 2021, at 9:00 AM.

Columbia River Regional Forum
Technical Management Team
DRAFT OFFICIAL MINUTES
Wednesday, September 15, 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 Meeting Summaries

The 8/25 and 9/1 facilitator's summaries were approved with no additional edits.

2. Dworshak Dam Update – Jon Roberts, Corps NWW

The Corps is continuing to step down Dworshak outflows according to the Dworshak Board operational plan. Currently, releases are 4.3 kcfs and the forebay is 1,524.5 ft, which is about 4.5 ft. from the end of month target. The Corps will continue to step down flows through the end of the month to support Lower Granite Dam and the Clearwater.

Operations are being adjusted in real time and are weather-dependent. Roberts shared that between each step down, there is at least a two-day period. The 10-day weather forecast calls for warmer weather in southern Idaho. Cooler temperatures will enter the region this weekend along with some precipitation in the Salmon, Grande Ronde, and Clearwater areas. This should lead to a reduction in river temperatures following the event. There is some additional precipitation, though not much, expected again near the end of the 10-day period. Highs will be in the 50s and lows will be below freezing in some areas for most of the 10-day period. Heading into the end of the 10-day forecast, air temperatures may rise into the 70s.

The Snake River at Anatone is 69°F-70°F, meaning incoming water at Lower Granite is cool. At Orofino, river temperatures are 65-66°F.

Roberts reported that the Lower Granite tailwater has not been above 68°F since September 1. It has been hovering around 65°F and is expected to remain there for the foreseeable future. With the low flows, the model is less reliable and it isn't usually used this time of year. The Corps is providing these results as requested by Jay Hesse, Nez Perce.

The Lower Granite pool is maintaining stratification with surface temperatures near 70°F and 25 to 30-meter depth temperatures of 61°F. The fish trap has been around ~66.5°F. Roberts shared that it may rise to 67°F over the next few days.

Natural temperatures in the Clearwater will decrease as cooler fall temperatures persist and water out of Dworshak Dam is stepped down. Roberts noted that the gage at Lewiston/Spalding will come up 60°F by September 15, bringing it within 10 degrees of Lower Granite. This is intentional and meant to reduce the risk of an abrupt temperature change once augmentation water runs out. Roberts noted this is a good place to be in and added that he will provide another update at the next scheduled TMT meeting.

3. System Operational Request (SOR) 2021-6 – Jay Hesse, Nez Perce Tribe

Hesse presented SOR 2021-6 “Snake River Zero Nighttime Flow” on behalf of OR, WA, Nez Perce Tribe, Yakama Nation, Warm Springs Tribe, Spokane Tribe of Indians, and the Columbia River Inter-Tribal Fish Commission/Confederated Tribes of the Umatilla.

Since 2005, zero nighttime flow at the lower Snake River projects was implemented only after the “few, if any” adult steelhead abundance trigger was met, starting no earlier than December 1, as established in the 2005 SOR. The operation that was evaluated in the 2020 NOAA and USFWS Biological Opinions did not have a steelhead trigger and allowed for zero nighttime generation to begin as early as October 15. Last year an SOR was submitted request implementing zero flow consistent with the 2005 SOR, with a slight modification to the start date for calculating the adult steelhead run-to-date. This year, the fishery managers seek a similar operation and recommend restored application of Zero Nighttime Flow limitations and criteria (date and abundance).

Hesse commented that this SOR prevents zero flow operations at a time when juvenile Chinook as well as adult Chinook, coho, and steelhead are moving through the river. He added that this year’s steelhead run is very low. Additionally, last year’s operation did not meet fishery manager’s expectations. The group expected zero flow to be used about once every 3 to 5 days, as described in the BiOps. However, implementation was closer to 10-19 times between October 15 and December 4, 2020, depending on the project. Zero flow turns the reservoir into a static, no-flow lake with no downstream passage. This request ensures some flow to restore a normal aquatic ecosystem for migrating anadromous fish as they move upstream and downstream.

Brian Marotz, MT, asked how much flow is needed to benefit passage. Hesse replied that zero flow results in no spill or flow through the powerhouse but some flow through the adult ladder. This SOR requests either minimum generation (11-12 kcfs) or 5 kcfs at speed-no-load.

Jonathan Ebel, ID, asked the Action Agencies about restrictions in the forebays during zero nighttime flow. Tony Norris, BPA, responded that at Lower Granite he would not expect the forebay to vary greatly. At some point, he said, there is so much flow in the river that it becomes neither cost efficient or physically possible to use the operation. There is a limited amount of storage at Lower Granite. Typically, BPA is not storing for 24 hours. Sometimes, it will store for up to 12 hours but usually the agency is storing for 4-6 hours, he said.

Tom Lorz, Umatilla Tribe/CRITFC, asked about the monitoring piece. He noted it was discussed during last year’s SOR discussion and asked about the current status of the report or data. Doug Baus, Corps, said the short answer is that the Corps is not tracking that to his knowledge. Claire McGrath, NOAA, said she does not remember making a commitment to provide a report. Lorz expressed that someone needs to be monitoring and reporting and added that he’d be curious what would be monitored since most of what is in the system is PIT-tagged adult steelhead and there are so few it would be impossible to get an accurate idea of how the operation is affecting the fish in the system. Baus noted it is possible to track ladder information for monitoring by looking at the PTAGIS analysis conducted by the University of Washington (the contract is through BPA, noted Hesse), which is still being reviewed by the Action Agencies. Some draft results were provided at a TMT meeting in January. That report has not been finalized and will

not be shared outside the Action Agencies until the full review has occurred, said Hesse. Norris does not have information on when the report will be available.

Lorz said he would be concerned if this operation goes ahead without monitoring. McGrath noted some monitoring was discussed at FPAC. In last year's TMT notes there was discussion of a sub-group being formed. NOAA followed up at FPAC and had a sub-group start to do some work, including a literature review. Following that, there was no draft proposal to SRWG. NOAA is monitoring how BPA is using zero generation, specifically how many hours are being used. Some of this information is available in seasonal updates. If there is a different way to look at hourly information, a request could be made to BPA, she said. As far as biological monitoring, it would be an investment of funding and project planning.

Lorz commented that it is troubling that NOAA has blessed an operation without a monitoring component. He asked what assurances can be given this year since last year what was implemented did not match up with the agreement made at RIOG.

Dave Swank, USFWS, added that there may be additional data available in the future. Chris Peery, Corps, confirmed this. Video monitoring of bull trout will begin in November and continue through winter for the next two years. These data will be sent to USFWS. Swank noted that while the intent of the video is to capture bull trout, there is potential that other fish will be recorded. This information could possibly be used for analysis in the future.

Charles Morrill, WA, noted that it does not have the tools to assess if there is an impact or not to the fish but that it will err on the side of conservation. Erick Van Dyke, OR, expressed that he is not supportive of turning a river ecosystem into a lake ecosystem.

Norris requested an additional week to further review the SOR with BPA's policy team. He suggested adding an unscheduled TMT meeting to next week to address the SOR. The Corps is also not prepared to provide a polling response today and would like additional time. While some SORs can be decided in-meeting, others require additional coordination. Van Dyke expressed that this is the second or third time an action agency has requested additional time. Stranz reminded TMT that the SOR process allows agencies to request a SOR be tabled until the next scheduled TMT to allow for time for the agencies to consult internally.

Norris will take the information and concerns from today's meeting back to BPA's policy team for consideration. He added that the intent of the wording about historical use of zero generation was not reflected appropriately last year but that it was coordinated and consulted correctly in the EIS, proposed action, and the biological assessment provided to NOAA.

McGrath added some additional thoughts on behalf of her agency regarding last year's operation and the rationale it used in the BiOp. There is new information this year: how the operation was implemented last year and what fish passage looked like. NOAA will take a closer look at this and will ask BPA if they plan to add last year's data from the University of Washington. She added that NOAA appreciates that stopping the river flow is objectionable and not a preferred condition. NOAA's primary concern is if zero flow will reduce attraction to preferred passage for juvenile and adults, which could increase delays and mortality. There is also a potential for fish to be disoriented with fluctuations in flow throughout day, she added. When NOAA

evaluated this operation in the BiOp, it did not have a specific study to use with a large sample size or acoustic monitoring to make its decision. The data were imperfect and that is not unique to this project, she shared, saying that at times her agency has to make assessments on less than perfect information. In the BiOp, NOAA considered if there was an effect that would rise to the ESU level. The agency's answer was no. Relatively few adults are migrating past Snake River dams after October 15. Historical analysis shows less than 10% of fall Chinook and less than 20% of steelhead. Additionally, most – but not all – migrate during daytime hours so restricting the operation to night also has less of an impact, she said. The agency also considered juveniles. Fall Chinook juveniles overwinter in the Lower Snake River but the flow changes would likely not affect migration or survival in a biologically significant or measurable way, she said. If there is any other new information available, NOAA is interested in discussing it.

4. Libby Dam Operations – Kristian Mickelson, Corps NWS

The current end of September elevation target, set by the May water supply forecast of 5,191 kaf, is 2,449 ft. Today, the project is sitting at 2,451.37 ft.

Mickelson recapped summer operations. Releases hovered around 9kcfs following the end of the sturgeon pulse in June. In July, releases were dropped to 7 kcfs (the bull trout minimum) due to low flow conditions. The reservoir hit peak elevation on July 25 at 2453.9 ft. (5.1 ft. from full). This is a typical target elevation, he remarked. Moving into fall, the area experienced significant precipitation events and ended the season with an April-August volume of 4,864 kaf. On September 4, based on the data, the Corps increased releases from 7 to 8 kcfs to hit the end-of-month target of 2,449 ft. The Corps is currently holding at 8 kcfs and will hold there until the reservoir is close to 2,449 ft. before ramping down. This does not seem to be affecting restoration work occurring near Bonners Ferry, but increasing releases further could. Incoming water this weekend may affect operations, but the Corps does expect to hit 2,449 feet by the end of September.

5. Water Management Plan Update – Doug Baus, Corps NWD

The Corps will have a draft 2022 Water Management Plan posted on the TMT website no later than October 1. Comments and suggested changes should be sent to Doug Baus and Lisa Wright at the Corps, Joel Fenolio at Reclamation, and Tony Norris and Scott Bettin at BPA. Specific language and changes are preferable to general critiques that require interpretation. Use of the “Track Changes” feature in Microsoft Word is encouraged. Comments are due by October 31. The Corps will then compile comments and post a new draft online. The holidays can be a difficult time to reach people and coordinate so the Corps requests comments as soon as possible. The comments and recommended changes will be posted to the website, as they have been in the past. Emily Stranz, DS Consulting, added that there is a small process change this year. The suggested edits as well as the rationale for including them or not including them will be discussed offline at a TMT process meeting.

After the update, Brian Marotz, MT, asked if there are any anticipated changes to the early spring draft at Libby Dam. Baus noted that from a high-level perspective, there will not be a lot of changes from last year's draft due to the new proposed action and BiOp. Last year, there were more changes due to those updated documents. Greg Hoffman, Corps Seattle District, is the best person to answer the question regarding Libby and the two will discuss this offline.

6. TAC Update on Steelhead Runs – Charles Morrill, WDFW

Morrill provided an update from TAC regarding steelhead runs via the web meeting chat and email to TMT members:

“As of September 12, 2021 the cumulative steelhead passage since July 1 at Bonneville Dam (50,516) is the lowest on record, and the cumulative unclipped steelhead passage (19,583) is the lowest since clipped/unclipped counting began in 1994. The clipped passage is 30,933 to date. Based on AFF sampling and the 5-year average run timing, the projected total A-Index clipped and unclipped TMT – September 15, 2021 Facilitator Summary Page 3 of 3 steelhead passage is expected to be 52,600 (hatchery A = 33,400, and wild A = 19,200). It is too early in the run to update the B-Index component, however it is likely that the total B-Index return will exceed the preseason forecast (7,600 total fish). To date, the total B-Index passage at Bonneville is estimated at 5,300. TAC expects to provide an update of the B-Index return at its next meeting on September 20.”

7. Hungry Horse Dam Update – Joel Fenolio, Bureau of Reclamation

Fenolio reported that until last week, Reclamation was targeting 3,548 ft at Hungry Horse Dam to accommodate inspection of the Morning Glory spillway in early October, but the inspection got pushed back to October 25 through October 29. In response, Reclamation is trying to fill as much as possible and ramped down to targeting Columbia Falls minimums. Some adjustments might need to be made next week. Fenolio expects the project to be at ~3,545-3,546 feet by the time the inspection starts.

8. Other

Kevin Shaffer introduced Leon Basdekas, Corps who will be taking over as the permanent Senior Water Manager for the Corps’ Seattle District. This position was previously held by Jon Moen and temporarily filled over the summer by David Bogema.

Today’s Attendees:

Agency	TMT Representative
Army Corps of Engineers	Doug Baus (Chair), Lisa Wright, Julie Ammann
Bonneville Power Administration	Tony Norris, Scott Bettin
Bureau of Reclamation	Joel Fenolio
NOAA Fisheries	Claire McGrath, Trevor Conder
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	Absent

Agency	TMT Representative
Kootenai Tribe	Absent
Spokane Tribe	Absent

Other Attendees (non-TMT members):

Corps – Jon Roberts, Kristian Mickelson, Chris Peery, Alexis Mills, Aaron Marshall, Dan Turner, Catherine Dudgeon, Greg Hoffman, Leon Basdekas
Yakama Nation Fisheries – Tom Iverson
DS Consulting – Emily Stranz (Facilitator), Colby Mills
BPA – Melissa Haskin (CONTR, FLUX Resources, Notetaker)
Clearing Up – K.C. Mehaffey