

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

July 28, 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. 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

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

Dworshak Dam Operations

Willow Walker, Corps, reported on operations at Dworshak Dam. Looking at the 10-day forecast, some precipitation is entering the region on Thursday and Friday, specifically in the Clearwater and lower Snake River areas. Saturday will see the hottest temperatures during the day and at night, with a heat dome and potential thunderstorm. The cloud cover and rain moving towards the lower Snake should help manage water temperatures.

The Corps has been operating to the raised tailwater temperature criteria for Lower Granite (69.5 degrees F), although temperatures have only reached 67.8 degrees F. The anticipated weekend heatwave could heat things up a bit, although Dworshak releases will remain at 5 kcfs through the weekend. The Corps expects the tailwater to cool back down on Monday, and temperatures are not expected to rise above the 69.5-degree F criteria. The Corps plans to increase Dworshak releases on August 4 and 5 to prepare river temperatures for Doble testing; the biggest impact to temperatures is expected to be August 9-12. These coordinated plans have been included in modeling and do not change any estimates for the end of flow augmentation.

Willow reviewed the alternative operations as of July 28 to operate Lower Granite and/or Dworshak to extend Dworshak's water as long as possible, noting no changes since the last TMT update. It is estimated that Dworshak would need to draft 3ft deeper to provide water through the end of August (1,532 feet rather than 1,535 feet); which is less than the 10-foot range originally forecasted based on previous conditions. The Corps will be able to provide an updated estimate at the August 4 TMT meeting. Decisions regarding both the lower pool elevation and the RSW shutoff during Doble testing will be addressed next week, to allow for the best estimate of impacts.

Willow reported that the fluctuations in the Lower Granite tailrace temperature over last 4 days has been between 0.5-1-degree F, which correlates to the opening and closing of the RSW. In response to a query, Willow will look closer at any impacts on ladder temperatures and report back at the next TMT meeting.

Summary of SOR Operations

Doug Baus, Corps, reported on the summary of ongoing SOR operations 2021-3, -4, -5 (posted to TMT website). Regarding requests for updates on SOR 2021-4, Action 4; the Corps continues to coordinate regarding environmental compliance; they anticipate being able to implement the request, however, will provide a final decision at the August 4 TMT meeting. Jay Hesse, Nez Perce Tribe, appreciated this updated timeline and looks forward to further coordination on this decision.

Dave Swank, USFWS, reported back on USFWS' concern for bull trout passage impediments due to the lower-than-normal draft for the end of August and September. USFWS is okay with a 5-ft lower-than-

normal-draft, however, anything beyond that would pose too great a risk to bull trout access to spawning streams.

Regarding SOR 2021-3, and the Lower Granite RSW operation, flows are too low to continue maintaining this operation and the project will close the RSW and spill will be shifted via conventional spillbays using spill pattern LWG-8. FOP spill operations will resume and if river flows are too low to maintain FOP spill and minimum generation, the project will implement minimum generation and spill the rest. Further conversation on spill pattern LWG-8 will be coordinated through FPOM.

Jay asked if the Corps had an update on projected flows for next month and if they expect to be at this flow level (insufficient for RSW) for the entirety of August. Flow levels are expected to remain consistently lower in the near-term, but if conditions are presented (for example during upcoming Doble testing) that provide sufficient inflows, the RSW may re-open. The current STP shows Lower Granite inflows forecasted around 27 kcfs. Willow noted that flows could increase above the threshold during Doble testing.

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 August 4, 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, July 28, 2021

Minutes: Melissa Haskin, BPA (contractor, FLUX Resources)

Today's TMT meeting was held via conference call and webinar, chaired by Doug Baus, Corps, and facilitated by Emily Stranz, DS Consulting. See the end of these minutes for a list of attendees. Stranz reminded TMT members of the following TMT guidelines: 1) TMT members will treat each other with respect; 2) TMT members will separate the issue from the person they are speaking to; and 3) When speaking, folks are representing their agency and not speaking their individual opinions.

1. Dworshak Dam Update

Willow Walker, Corps, reported on operations at Dworshak Dam. The 10-day weather forecast calls for precipitation in both the Clearwater and Snake River basins Thursday and Friday. Additionally, a heat dome will enter the region and temperatures will likely rise beginning Friday, with the expected peak on Saturday. Thunderstorms are possible. Cloud cover and rain will help keep water temperatures from rising significantly, according to the forecast. Nighttime temperatures will be warm through Saturday but expected to cool back down quickly on Sunday.

The Corps has been operating to maintain the Lower Granite no higher than 69.5°F, as requested in SOR 2021-5. At this time, the tailwater has hit a high of 67.8°F, but will likely increase closer to that cap, without going over it, during the incoming heat wave. Walker took TMT through the forebay temperature string for Lower Granite, showing the temperature differentials in deeper detail. Currently, water at the 15-meter depth is nearing 68°F. The 20-meter water may reach 69°F. Rain should help stratification in the pool. Dworshak Dam releases will remain at 5 kcfs, since the heatwave is expected to be brief, with temperatures dropping again sometime Monday. The Lower Granite outage for Doble testing is scheduled to begin August 9 and will impact the river most ~August 9-12. Ahead of that, around August 4-5, the Corps will increase Dworshak releases to cool the river. Since this has already been planned and modeled, the end of augmentation flow is still expected to be ~August 27. Historically during Doble testing, when air temperatures are in the triple digits, closing the RSW has created additional water savings from Dworshak. This may be an option this year and could be discussed at next week's TMT, should members wish to consider it.

Currently, models are showing the end of August elevation 3 feet lower than normal, at 1,532 ft., instead of 1,535 ft. The original SOR requested a deeper draft of up to 10-feet. By next week's TMT, the Corps should be able to narrow in on the estimate for the draft.

Jay Hesse, Nez Perce, asked about the temperature fluctuations over the past 4 days in the Lower Granite tailrace. There has been some oscillation, within about 0.5°F, which correlates to the opening and closing of the RSW. This is not an artifact of where the temperature instrument is related since it is strategically placed in the tailrace where mixing should have already occurred. Trevor Conder, NOAA, asked about how ladder temperatures have changed with the RSW opening and closing. The Corps will investigate and report back next week.

2. Summary of SORs 2021-3, 2021-4, and 2021-5 Coordination - Doug Baus, Corps-NWD

Baus directed the group to a summary of SOR coordination available on the TMT website. The group has requested ongoing updates on SOR 2021-4, which Baus provided. The SOR requests:

1. *Temporarily change to Dworshak summer flow augmentation:*
 - a) *Modify the end of August draft limit at Dworshak from 1535 to 1525, and*
 - b) *Start 200 kaf Settlement releases September 1—operating to ~1510 rather than 1520 by end of September*

As the document states:

1. *The Corps is committed to the investigation of the requested operation and can provide weekly updates to TMT on progress.*
2. *The Corps is unable to commit to any additional specifications at this time because there are numerous other parties that need to be coordinated with therefore the specific outcome is not certain.*

The Corps believes they can implement the SOR as requested and is continuing to coordinate with the Nez Perce Tribe, USFWS, and NOAA. The Corps is investigating environmental compliance and will make a final decision. It is aiming to make the decision at the next TMT meeting on August 4, 2021. At this time, there will be better information on the anticipated end-of-August Dworshak elevation. Jay Hesse, Nez Perce, shared that his organization believed it is important that the decision timeline is stuck to and made at next week's TMT.

Dave Swank, USFWS, provided an update that relates to the SOR. There was a concern about impacts to bull trout from a lower-than-normal Dworshak Dam elevation. Swank noted that his agency would be okay with an additional draft, up to 5-feet below the normal end-of-August and end-of-September elevation. Beyond that, impediment would be too great, he said.

Baus also provided an update on SOR 2021-3. As described in the Fish Passage Plan, when river flow is too low to maintain RSW spill and minimum generation, the Corps closes the RSW and distributes spill according to the non-RSW spill pattern (FPP Table LWG-8). Flows are too low currently, so the RSW will be closed and spill be resumed per the FOP, which calls for a target spill of 18 kcfs June 21-August 14. If flow is too low to maintain FOP spill and minimum generation, the Corps will operate to minimum generation and spill the remainder of the flow.

Hesse asked for projected flows for the next month. In the near term, the flows will continue to be too low for RSW operation. It is Baus' understanding that if there is sufficient flow, that the Corps would re-open the RSW. The STP calls for flows of ~27 kcfs through the end of the month. Baus also noted that releases out of Hells Canyon can be difficult to navigate, especially when flows are low. Releases are managed by Idaho Power and can vary greatly and the Corps does not have control over them.

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	Absent
NOAA Fisheries	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/CRITFC	Absent
Colville Tribe	Absent
Warm Springs Tribe	Jen Graham
Kootenai Tribe	Absent
Spokane Tribe	Absent

Other Attendees (non-TMT members):

Corps – Alexis Mills, Dan Turner, Aaron Marshall, Chris Peery, Willow Walker, Scott St. John
 BPA – Melissa Haskin (CONTR, FLUX Resources, Notetaker)
 DS Consulting – Emily Stranz (Facilitator), Colby Mills
 Columbia Basin Bulletin – Mike O’Bryant
 Portland General Electric – Ruth Burris
 Clearing Up – K.C. Mehaffey
 Yakama Nation Fisheries – Tom Iverson