

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

August 16, 2023

Facilitator's Summary

Facilitation Team: Emily Stranz & Nancy Pionk, 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; 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/2023/>. 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 official meeting minutes and facilitator's summary for the August 2 meeting. The August 9 meeting minutes and facilitator's summary will be reviewed at the next meeting.

Dworshak Operations – Grant Bell, Corps, provided an update on current operations and forecast modeling for Dworshak Dam. The current forebay elevation is 1,553.6 feet with discharges of 9,400 cfs. The Lower Granite tailwater temperature is currently 67.37 degrees F and is slowly trending downward. With the end of the SOR, there was a good amount of water available over the weekend. The current temperature is 74.4 degrees F at Anatone and 74.3 degrees F at Orofino. Both Orofino and Anatone's temperatures were climbing yesterday with Orofino reaching into the upper 80's. As of August 9, the forebay stratification was at the 20–25-meter range. At the conclusion of the SOR operations, the stratification increased in elevation and stratification continues to increase, notwithstanding the hot weather conditions.

The Dworshak Extended Inflow Forecast shows an inflow uptick due to an early August storm; inflows have dropped since then and are now back down to seasonal low inflows which is expected to continue through August into September. Looking at the 10-day weather forecast, today is likely to be the hottest day of the year (above 100 degrees F), with cooling expected by Friday. Temperatures are expected to drop further within the next 10 days. The extended weather forecast is showing a high of 107 degrees F for Lewiston today, and 106 degrees F on August 17, with temperatures dropping from the high 90's Friday to the low 90's by Sunday followed by temperatures in the 80's by next week.

Regarding temperature modeling, the observed data shows mid-afternoon spikes due to the high temperatures; this is expected to continue today and tomorrow. The modeling shows temperatures trending down as stratification is regained in the pool. Looking forward, temperatures are expected to stay between 67-68 degrees F. While the climate temperatures will begin to cool down, the water temperatures will be a little higher moving forward; however, temperatures are expected to eventually balance out. Another decrease in Dworshak discharge is expected in the future as water passes through the system. The water supply forecast shows sufficient water through the end of August.

Dworshak Board 2023 Operational Plan

Jay Hesse, Nez Perce Tribe, shared the Dworshak Board's 2023 Operational Plan. Jay noted that the Dworshak Board is an outcome of a Memorandum of Agreement between the Nez Perce Tribe, the Corps, NOAA, BPA and ID related to the management of 200 KAF of water reserved for the Nez Perce Tribe's use in the Snake River adjudication agreement. The Dworshak Board met recently and outlined a Plan for managing this reserved water. As in past years, the Plan seeks to extend the release of this water as long into September as possible, during hot water conditions, and to gradually ramp it down as the natural thermal cooling regime occurs later in the year. Jay noted that this is a Doble testing year for Dworshak Dam which is a constraint beginning on September 25. The Plan anticipates an initial release of 8,000 cfs on September 1 and stepping down releases by 1,000 – 2,000 cfs every day or two through September 25.

The 200 KAF is the volume of water stored between 1,535- and 1,520-foot elevation. This year's reduced inflows constrains the total amount of volume available for 2023.

The Plan outlines the considerations and objectives involved in utilizing this water and covers both the use of the Lower Clearwater River by juvenile salmonids and lamprey for rearing. The Plan seeks to gradually change conditions for juveniles and adults. Objectives include maintaining a suitable rearing environment in Lower Granite Reservoir and temperatures below 68 degrees F in the Lower Granite tailrace. The Plan's objectives also seek to keep Dworshak reservoir as high as possible through the end of August which is a high use period for recreational purposes and to minimize the de-watering of cultural sites and the potential impact to those sites by recreation. It sets out specific operational criteria, including daily temperature thresholds in the Lower Clearwater River.

Questions and Comments from Members of the Public – There were no questions or comments from members of the public.

The next scheduled TMT meeting is on August 23, 2023, at 9:00 AM.

**Columbia River Regional Forum
Technical Management Team
OFFICIAL MINUTES
Wednesday, August 2, 2023
Minutes: Andrea Ausmus, BPA (contractor, CorSource Technology Group)**

Today's TMT meeting was held via conference call and webinar, chaired by Lisa Wright, Corps, and facilitated by Emily Stranz, DS Consulting. A list of today's attendees is available at the end of these minutes.

1. Review Summaries and Minutes – August 2 (August 9 pending)

Charles Morrill, WA, said the notes looked good to him.

- August 2 – Approved
- August 9 – reviewed at next week's meeting

2. Dworshak (DWR) Operations – Grant Bell, Corps-NWW

a. Current Hourly Data (August 16)

- Current Forebay Elevation: 1553.6 feet
- Current Discharge: 9400 cfs

b. Snake & Clearwater Rivers Temperature Data

- Lower Granite (LWG) tailwater: 67.37°F
 - Slowly trending downward.
- Natural temperatures (°F):
 - Coming out of SOR, the Corps sent a fair bit of Dworshak water over the weekend, which is hitting during the heatwave with most of the water centered on today.
 - Orofino: 74.3°F
 - Yesterday reached into the 80s.
 - Anatone: 74.4°F
 - Yesterday climbed up in temperature as well with the warm conditions.

c. LWG Forebay Temperature Strings

- August 9
 - Stratification at 20-25m mark.
- As DWR pulled out of the SOR

- Stratification increased in elevation to the 13 and 14 meter-marks.
- Today (August 16)
 - Stratification has come up nicely in the pool.
- Of note:
 - Even with hot conditions, stratification has still been increasing the thermal barrier midway through the pool.
 - Stratification continuing to increase with the conditions.
 - Forebay is looking nice right now.

d. DWR Extended Inflow Forecast

- Earlier August storm provided an uptick of an above 90% climatology.
- It had dropped since then and flows went back down to 90% climatology.
- Nice to get the bump but it was not a long-lasting trend and are back to the quite low inflows for this time of year.
- Bell expects to see this moving forward still through August and into September.

e. 10-Day Regional Weather Forecast

- August 16 is very hot, likely hottest day of the year.
- Moving forward temperatures of > 100°F will decrease.
- They are expecting things to cool off by Friday (August 18) and by the weekend temperatures are expected to drop significantly.
- They are seeing more cooling moving forward through the ten days.
- Today and tomorrow are going to be the last days of the significant heat and we are expecting conditions to cool off following that.

f. Weather Forecast for Lewiston, ID

- August 16 High 107°F
- August 17 High 106°F
- Friday – Sunday dropping from the higher to the lower nineties.
- Followed by temperatures in the eighties in the next week.
- Almost out of the heat and moving on to good conditions.

g. Current Model Results – August 15

- In the observed data there are midafternoon spikes due to the amount of heat in the area due to the high temperatures.
 - Expect that to continue today and tomorrow.

- Still seeing that temperature trend gradually down as they regain the stratification in the pool.
- Temperatures are expected to stay between 67°F – 68°F in forebay.
- Although the forecast is going to cool down, the higher temperatures recorded at Orofino and Anatone still need time to travel down to make it to LWG.
 - The weather will cool off, but the water temperature will be a little higher moving forward.
 - In the model results those are going to balance out a little bit.
- Bell expects at some point another decrease in DWR discharge as the water passes through the system, but he said that we are a little far out still for that.
- In term of water forecast, Bell said that we are still looking at having sufficient water through the end of August, which is good news.

3. Dworshak Board Operational Plan – Jay Hesse, Nez Perce Tribe

Hesse shared that Dworshak Board is an outcome of a memorandum of an agreement established between the Nez Perce Tribe, the Corps, NOAA, Bonneville, and the State of Idaho. It is related to the management of 200 kaf that was reserved in the Snake River Basin Adjudication Agreement.

a. 2023 DWR Operational Plan

- The Dworshak Board met and outlined the plan for managing the 200 kaf of water,
- The plan is similar to the last several years in which it tries to extend the use of the release of that water as long into September as possible with some characteristics that gradually ramp it down.
 - Hopefully tying the current hot water conditions now with the natural thermal cooling regime later in the month.
- There is a constraint this year with double testing.
 - 2 out of 3 years double testing occurs at DWR.
 - Constrains their ability to finetune the management of the water later in September.
 - Double testing will start on September 25.
- Plan to start with and 8 kcfs release on September 1.
 - Slowly step down by 1 – 2 kcfs every one to two days throughout the season to get to September 25.
- The 200 kaf is the water stored between the 1535’ – 1520’ elevations and with the reduced inflows, this year’s base flows, it constrains the amount of volume that they will be able to work with at this point.

Brain Martoz, MT, asked for more basics on the objectives for the plan for this year as it is new for him.

Hesse said that the plan goes through the things they consider in terms of utilizing the water and it covers both the use of the Lower Clearwater River by juvenile salmonids and lamprey for rearing and the adult fish coming upstream. He said that the object for both is to not drastically change the environment in a short period of time but gradually change those conditions. He said that the Operational Plan that is listed on the TMT agenda walks through what each one of those objectives is; for the juvenile fish that are rearing in the river, including lamprey, the condition to maintain suitable rearing environment in Lower Granite Reservoir and temperatures below 68°F in the tailrace of Lower Granite and hopefully connecting that to the cooling regime. It has objects to keep Dworshak reservoir as high as possible through the end of August, August is the timeframe for recreation use, so keeping that pool level higher through the end of August, acknowledging that that's drawn down substantially but to keep it higher for recreational purposes and to minimize the watering of cultural sites and the potential impact to those by recreation is part of the objectives in this. Hesse said that it gives specific criteria that the Corps tries to manage as well. Daily temperature changes that they would not want to see in the Lower Clearwater and some temperature thresholds that they do not want to go above in the Lower Clearwater. Hesse said that it is the operational criteria for that transitioning ramping down as natural cooling occurs and we run out of the cooling water.

Marotz said that he would go back to the document and he appreciated the summary.

4. Public Comments:

5. Set agenda for next meeting – August 23, 2023

- a. Dworshak Update

Today's Attendees:

Agency	TMT Representative(s)
Army Corps of Engineers	Lisa Wright (Chair), Aaron Marshall
Bonneville Power Administration	Scott Bettin, Ben Hausmann
Bureau of Reclamation	Joel Fenolio
NOAA Fisheries	Trevor Conder, Kelsey Swieca
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 (CRITFC)
Colville Tribe	
Warm Springs Tribe	
Kootenai Tribe	
Spokane Tribe	

Other Attendees (non-TMT members):

COE – Grant Bell

DS Consulting – Emily Stranz (Facilitator), Nancy Pionk

CorSource – Andrea Ausmus (BPA note taker, Contractor)

Energy Keepers – Eve James

Clearing Up – K.C Mehaffey

Oregon DEQ – David Gruen

Columbia Basin Bulletin – Mike O'Bryant

Chelan PUD – Jay Fintz

Portland General Electric – Ruth Burris