

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

August 29, 2018

Facilitator's Summary

Facilitator: Emily Stranz; Notes: Colby Mills, 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. 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/2018/>

Review Meeting Minutes and Facilitator's Summary

Emily conducted a round of introductions for TMT members in the room and on the phone. The group approved both minutes and summaries for their August 15 and August 22 meetings, with two minor edits to be incorporated into the August 22 minutes:

- Page 3, Paragraph 1: Change "water available" to "water temperatures";
- Add Julie Ammann (USACE) to participants.

Dworshak Dam Operations

Steve Hall, Corps, updated TMT on Dworshak Dam operations. Currently the project is operating at 1,537.4 feet elevation (on track to hit 1,535 feet by midnight on August 31st), with 7.6 kcfs outflow and 1 kcfs inflow. TDG levels have been between 101.5-102% at the project tailrace and below 100% at the hatchery. Water temperatures in the Lower Granite tailrace were around 67.5 degrees F yesterday. Steve noted that water temperatures in Orofino dropped down to 63 degrees F, while Anatone was just below 70 degrees F. Weather forecasts for Lewiston are clear and cool, with highs in 80-degree F range and lows in the 60 and 50 degrees F, which will help to manage water temperatures.

Idaho Power has been releasing less water as they wind down their summer draft.

Steve provided a temperature model run from yesterday (available on the TMT website), showing that temperatures will remain close to 68 degrees F for a couple more days. Heading into September, temperatures are expected to continue dropping, primarily a factor of available solar radiation. He provided a second model run, from this morning, showing cooler temperatures further into September. Steve explained that they are planning to reduce discharge as we head into September to prolong the availability of cool water.

The following is a summary of the Dworshak Boards Operational Plan provided by Doug Baus, USACE: 1) On or about August 31 Dworshak will be drafted to approximately elevation 1535 feet and discharge is expected to be about 7.5 kcfs; 2) between September 1 and September 4, reduce discharge to approximately 5.5 kcfs; 3) target Lower Granite tailwater temperatures not to exceed 68°F; 4) target Clearwater River at Spaulding daily average water temperatures not to exceed 56°F; 5) target Clearwater River at Peck and Spaulding daily average water temperatures change of no more than 1°F, and; 6) by approximately September 25, conduct smooth reduction to minimum outflow (about 1.5 kcfs), when the reservoir pool draft to elevation 1520 feet.

Operations Review

Reservoirs:

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

- Hungry Horse: midnight elevation was 3,554.5 feet, releasing 2,250 cfs and inflows of 700 cfs. He noted that the project is on track to be 10 feet from full by the end of September.

- **Grand Coulee:** midnight elevation was 1,280.2 feet, which is on track for reaching the 1,279.6 feet target for the end of August.

Joel noted that he will provide a more detailed update on the Upper Snake River flow augmentation at the next TMT meeting.

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

- **Libby:** midnight elevation was 2,444.4 feet, with average inflows of 5.3 kcfs with outflows of 9kcfs (bull trout minimum);
- **Albeni Falls:** midnight elevation was 2,062.4 feet, with yesterday’s average inflows at 14.1 kcfs and outflows of 8.9 kcfs;
- **Dworshak:** midnight elevation was 1,537.7 feet, with yesterday’s average inflows at 1.4 kcfs and outflows of 7.6 kcfs;
- **Lower Granite:** yesterday’s average outflows were 26.1 kcfs;
- **McNary:** yesterday’s average outflow was 137.2 kcfs; and,
- **Bonneville:** yesterday’s average outflow was 126.2 kcfs.

Water Quality

Dan Turner, Corps, reported that the end of summer spill is August 31, at midnight. TDGs are looking good and are well below state standards. He noted that The Dalles is showing strange data as the TDDO gauge appears to be malfunctioning; USGS is currently working to fix the gauge.

Fish

Paul Wagner, NOAA, reported on fish. He provided the following adult passage data:

Bonneville	of 10-year average	Lower Granite	of 10-year average	Little Goose	of 10-year average
Fall Chinook	47%	Fall Chinook	38%	Steelhead	17%
Fall Chinook jacks	38%	Fall Chinook jacks	22%	Unclipped/wild Steelhead	17%
Steelhead	27%	Lamprey	467%	Lamprey	130%
Unclipped/wild steelhead	29%				
Lamprey	146%				

Russ Kiefer, ID, reported that 79 adult sockeye have been trapped in the Salmon River basin, 11 of which were wild/natural. Paul finished with an update on fall Chinook juveniles. He noted that they continue to pass, although in fewer numbers; Paul noted that passage will continue later into the season, and there may even be an increase in passage as water temperatures cool off. At Lower Granite less than 1,000 are passing per day, with less than 100 per day for the past week at Little Goose. Lower Monumental, McNary, John Day, and Bonneville have even fewer passing.

Power System

Tony Norris, BPA, reported that there is not much wind, but this is expected to change soon with the cooler temperatures in the forecast. He confirmed that temperatures are more moderate, and had nothing else to report.

The next TMT meeting is a conference call on September 5, 2018, at 9:00am.

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

August 29, 2018

Minutes: Melissa Haskin, FLUX Resources

1. Introduction

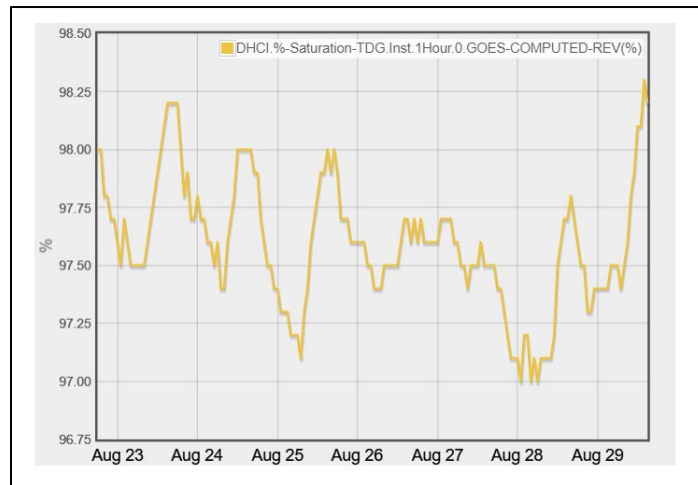
Representatives of NOAA, Corps, WA, ID, MT, Umatilla Tribe, Warm Springs Tribe, BPA, USFWS, Reclamation, and others participated in today’s TMT meeting chaired by Doug Baus, Corps, and facilitated by Emily Stranz, DS Consulting. See the end of these minutes for a list of attendees.

2. Review of Minutes and Summaries

The 8/15 and 8/22 meeting summaries and minutes were approved pending one edit to the 8/22 Official Minutes (→ change “water availability” to “water temperatures” on page 3, first paragraph, last sentence) and one change to the attendee list (add Julie Ammann, Corps).

2. Dworshak Dam Operations – Steve Hall, Corps

Steve Hall, Corps NWW, reported on operations at Dworshak Dam. The forebay is currently at 1537.4 ft elevation, with outflows of 7.6 kcfs and inflows of 1 kcfs. TDG is 101.5-102% in the project tailrace and below 100% at the downstream hatchery, near 97.5% on average (see DHCI gauge hourly data in figure below).



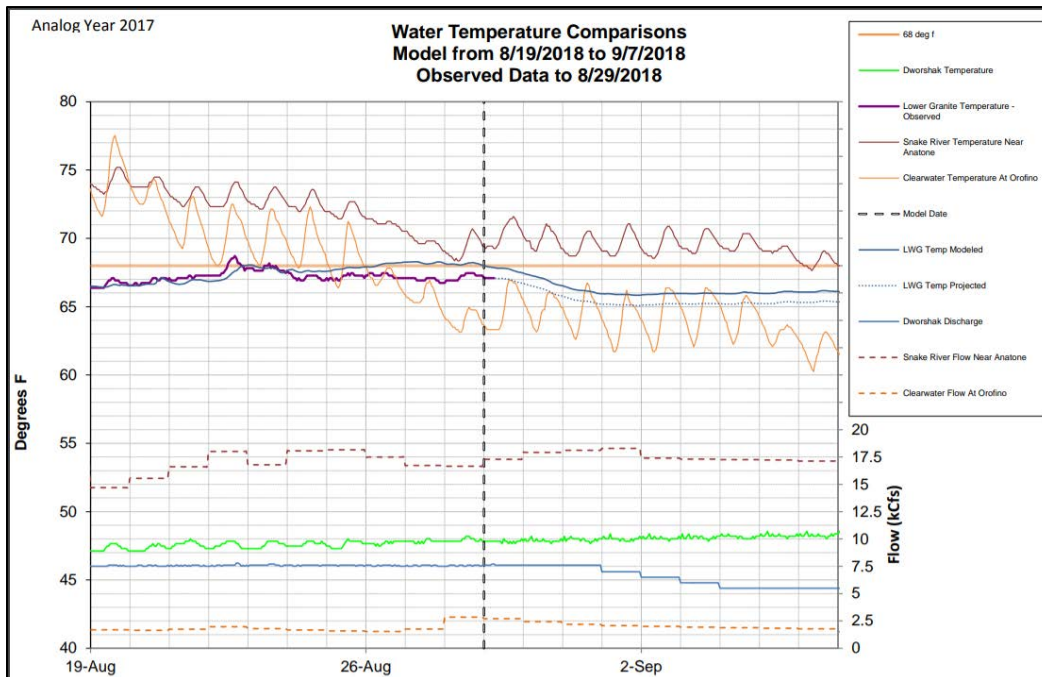
Temperatures in the Lower Granite Dam tailwater are hovering around 67°F but things are cooling off. The Corps is on track to hit Dworshak elevation 1,535 ft on August 31. Orofino temperatures are down to 63°F and at Anatone they are just below 70°F. Lower Granite forebay temperatures are cooling down. Hall noted a malfunction in the forebay temperature string data, which was showing some “funky values.” The malfunction has now been fixed.

Idaho Power has been releasing less water as it is winding down its summer draft. Releases are below 20 kcfs (see figure below for Hells Canyon flows over the past 5 days).



The weather forecast for Lewiston is clear and cool with temperatures in the 80s for highs and lows in the 50s and 60s this week.

The water temperature model (copied below) shows temperatures in the Lower Granite tailrace remaining close to 68°F for the next few days, then dropping as available solar radiation diminishes. The Corps is planning to reduce Dworshak discharge going into September to reserve cold water for later use, as determined by the Dworshak Board.



Doug Baus, Corps, summarized the current Operational Plan that was coordinated with the Dworshak Board:

1. On or about August 31, Dworshak will be drafted to elevation 1,535 feet – discharge is expected to be about 7.5 kcfs.

2. Between September 1 and September 4, reduce discharge to approximately 5.5 kcfs.
3. Target Lower Granite Tailwater temperatures not to exceed 68°F.
4. Target Clearwater River at Spaulding daily average water temperature not to exceed 56°F.
5. Target Clearwater River at Peck and Spaulding daily average water temperature change of no more than 1°F.
6. By approximately September 25, conduct smooth reduction to minimum outflow (about 1.5 kcfs) when the reservoir drafts to elevation 1,520 feet.

Charles Morrill, WA, commented that FPAC discussed what would have happened if Dworshak had been reduced to 5 kcfs last Friday and held through the end of August. This would have created an additional 40 kaf for release in September, which is up to 1 kcfs for 20 days, he said. He wanted to share that because last week TMT chose not to go there. He respected the decision but wanted to share what would have happened if TMT had taken that step.

Steve Hall replied that it's always a challenge and based on the model results, that operation would have resulted in temperatures in the Lower Granite tailrace exceeding 68°F. There were several days where the temperatures did temporarily exceed 68°F, he said. "I'm not sure a reduction to 5 kcfs would have been prudent given the 68 degree criteria."

Morrill responded, "We didn't even look at the model on August 24 to see if it was a viable option. You may have, but we didn't see it. I think we had an opportunity to take a closer look at that and the decision was made not to."

a. Reservoirs – Joel Fenolio, Reclamation, and Lisa Wright, Corps

Hungry Horse: elevation 3,554.5 ft, inflows of 700 cfs and releasing 2,250 cfs. Reclamation is on track to have the reservoir at 10-feet from full (3,550 ft) at the end of September. Flows may need to be increased at some point to stay on track with 2,300 cfs, the flat flow through the end of September.

Grand Coulee: elevation 1,280.2 ft, which is on track to reach 1279.6 ft at the end of August (5 ft from full). Ruth Burris, Portland General Electric, asked when the minimum elevation would be reached. Joel Fenolio, Reclamation, reported that it would likely happen at midnight on August 31.

Libby: elevation 2,444.4, inflows of 5.3 kcfs, outflows 9.0 kcfs (bull trout minimum).

Albeni Falls: midnight elevation 2062.4, ft, inflows 14.1 kcfs, outflows 8.9 kcfs.

Dworshak: midnight elevation of 1,537.7 ft., inflows 1.4 kcfs, outflows 7.6 kcfs.

Lower Granite: outflows 26.1 kcfs.

McNary: outflows 137.2 kcfs.

Bonneville: outflows 126.2 kcfs.

b. Water Quality – Dan Turner, Corps

The end of Summer FOP spill is August 31 at midnight. TDG is under the gas cap. The Dalles tailrace gauge TDDO has been showing “weird data” and the USGS is looking into it.

c. Fish – Paul Wagner, NOAA

Adults: The current year-to-date adult counts at Bonneville and Lower Granite are:

Bonneville: Fall Chinook 27,742, 47% of the 10-year average; fall Chinook jacks 3,644, 38% of the 10-year average; total steelhead 58,391, 27% of the 10-year average, unclipped steelhead 23,538, 29% of the 10-year average; Lamprey 42,428, 146% of the 10-year average.

Lower Granite: Still early in the season for fall Chinook, with a total of 445, 38% of the 10-year average; fall Chinook jacks 49, 22% of the 10-year average; steelhead 3,022, 17% of the 10-year average (unclipped 1,278, 17% of the 10-year average). Lower Granite Dam steelhead counts are generally higher than Little Goose Dam counts because they include steelhead that held over in the Little Goose pool. Lamprey are at 116, more than have been seen for “quite some time.” So far 183 have been counted at Lower Granite.

Russ Kiefer, ID, updated TMT on Snake River sockeye. So far, 79 have been trapped in the Salmon River basin and 11 of those were natural.

Juveniles: Subyearling fall Chinook will continue. Sometimes they rally into September/October as temperatures cool. So far they haven’t bumped up yet like they sometimes do. Counts are less than 1,000 per day at Lower Granite. Little Goose counts are less than 100 per day for most of the last week. Counts are also dwindling at the lower Columbia projects.

d. Power – Tony Norris, BPA

With moderate temperatures and not much wind, there is little to report.

5. Next TMT. The next TMT meeting is a conference call on September 5, 2018, at 9 a.m.

Today’s Attendees:

TMT Members:

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	Paul Wagner, Trevor Conder
US Fish & Wildlife Service	Dave Swank
Washington	Charles Morrill
Oregon	N/A

Idaho	Russ Kiefer
Montana	Jim Litchfield
Nez Perce Tribe	N/A
Umatilla Tribe	Tom Lorz (CRITFC)
Colville Tribe	N/A
Warm Springs Tribe	Jen Graham
Kootenai Tribe	N/A
Spokane Tribe	N/A

Other Attendees (non-TMT members):

Corps – Steve Hall, Amanda Morelos, Alfredo Rodriguez, Jon Roberts, Dan Turner, Aaron Marshall

PGE – Ruth Burris

Clearing Up – K.C. Mehaffey

DS Consulting – Emily Stranz (Facilitator), Colby Mills

FLUX Resources – Melissa Haskin (Notetaker)

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