

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

July 25, 2018

Facilitator's Summary

Facilitator & Support: Emily Stranz, Charles Wiggins, 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://www.nwd-wc.usace.army.mil/tmt/agendas/2018/>

Dworshak Dam Operations

Alfredo Rodriguez, Corps, reported on Dworshak Dam Operations. Several supporting materials are posted to the agenda for today's meeting on the TMT website. Current reservoir elevation is 1,579.3 ft. and discharge is 12.9 kcfs, with 9.6 kcfs of generation and 3.2 kcfs of spill. The TDG level in the tailrace is currently 108.2% and is 99.9% at the Dworshak National Fish Hatchery. The river temperature is holding at around 67 degrees F in the Lower Granite tailrace. The Lower Granite forebay temperature at the 15-meter depth was 68 degrees F, and the forebay temperature at the 20-meter depth was 65 degrees F. The weather forecast for Lewiston is slightly cooler than previously forecast, with temperatures hovering around 99 degrees F for the next five days.

Alfredo reviewed graphs showing model runs of water temperature comparisons. He noted that on Sunday, July 22, the Corps increased Dworshak outflows to 12.9 kcfs to account for a modelled increase in the Lower Granite tailwater above 68 degrees F. Subsequent model runs on Monday and Tuesday (7/23 and 24) showed that the 12.9 kcfs discharge would track just below the 68 degree F threshold.

TMT members noted that they will need to keep a close eye on water usage as they approach the end of August elevation target. In response to a request from Tom Lorz, Umatilla, Alfredo agreed to provide an estimate of the average discharge needed after a week at 12.9 kcfs, in order to reach a pool level of 1,535 feet by the end of August.

Alfredo also reported on a forced outage that took place at Dworshak on July 24th. The cause of the outage is still unknown; however, it is being investigated and will be reported to TMT. All three units were forced out of service around 11:50 AM. Unit 1 returned to service shortly thereafter. Units 2 and 3 remained out of service until 10:00 PM. As soon as they were able, the Corps ramped the project back up to 12.9 kcfs. This outage is expected to cause a bump up to 68 degrees F in the Lower Granite tailrace in a few days; however, temperatures should then return below 68 degrees. It was noted that the Corps and BPA coordinated and were able to manage the situation well. However, Jay Hesse, Nez Perce, was concerned that downstream hatcheries were not alerted of the outage and subsequent decrease in flows, which caused significant dewatering and temperature increases in their systems. Jay and Alfredo agreed to follow-up with each other offline to clarify and improve the communication protocols between the project and the hatcheries in the event of an unplanned outage that significantly changes Dworshak outflow.

- **ACTION:** The Corps will continue current operations to discharge 12.9 kcfs at Dworshak Dam to maintain the Lower Granite Dam tailwater temperature of 68 degrees F or lower.
- **ACTION:** Jay and Alfredo will work together offline to clarify and improve communication protocols for unplanned outages.
- **ACTION:** The Corps will provide TMT with information regarding the average discharge needed, after a week at 12.9kcfs, to reach a pool level of 1,535 feet by the end of August.

Adult Sockeye Passage

Paul Wagner, NOAA, and Russ Kiefer, ID, reported on adult sockeye passage. Paul noted that the run is winding down in the Columbia River, which is expected for this time of the season. Russ shared that on the Snake River, fish counters at Ice Harbor noted that of the 17 sockeye counted since last Thursday afternoon, 13 were unclipped, and 4 were clipped (Note: the majority of Snake River fish are clipped and mid-Columbia fish are not clipped). The proportion of clipped versus unclipped fish tracks well with numbers expected from estimates, which is another indicator that there are likely mid-Columbia sockeye at Ice Harbor.

Russ shared that there is approximately a 100 fish differential between Lower Monumental and Little Goose, which is concerning. The cause of the differential is uncertain, as the counts are not absolute, and/or these fish could be mid-Columbia sockeye that have come up to Lower Monumental. He noted that Little Goose tailrace conditions can become unstable at low flows, and there is the possibility that an eddy in the tailrace could be delaying Snake River adult sockeye passage. After some TMT discussion and a Salmon Manager caucus, the region agreed to implement an interim two-day operation at Little Goose to assess whether the tailrace hydraulics are causing a passage delay of Snake River sockeye. The operation is as follows: From 4 AM to 4 PM on July 26 and 27, close the Little Goose Adjustable Spillway Weir (ASW) and shift the planned spill to deep spillbays with the uniform no ASW pattern defined in the Fish Passage Plan.

It was important for Salmon Managers to note that there are many uncertainties in this situation; for example, uncertainties in the adult counts, as well as the benefit of the ASW to juveniles at this time in the season versus the potentially negative impact of the ASW on tailrace hydraulic conditions at these lower flows. Despite the uncertainties, there were no objections to the interim operation: If these are endangered Snake River sockeye trying to pass at Little Goose, they are a priority run, and encouraging their passage at this time is important.

TMT Members present were polled regarding their support for this proposal:

Colville: supports;

Corps: supports;

Reclamation: does not object;

BPA: supports.

ID: supports;

MT: supports;

Nez Perce: supports;

NOAA: supports;

OR: does not object;

Umatilla: does not object;

USFWS: supports;

WA: does not object;

- **ACTION:** The Corps will implement the following operation: from 4 AM to 4 PM on July 26 and 27, close the Little Goose ASW and shift the planned spill to deep spillbays with the uniform no ASW pattern in the Fish Passage Plan.
- **ACTION:** At the request of the Salmon Managers, the Corps will coordinate with the project to request approximately 5 minutes of video footage of the tailrace hydraulics with the ASW open versus the ASW closed after tailrace conditions have stabilized, and will provide this footage to TMT members.
- **ACTION:** TMT members will meet for an unscheduled conference call on Friday, July 27, 2018, at 3 PM to check-in on the operation and fish counts. If there is no improvement observed, the meeting may be cancelled at the request of Salmon Managers.

**There will be an unscheduled TMT Conference call on July 27 at 3:00 PM.
The next regular TMT meeting will be a face-to-face meeting on August 1 at 9:00 AM.**

This summary was prepared by the impartial facilitation team of DS Consulting. Please send questions, comments or revisions to charles@dsconsult.co

Columbia River Regional Forum
TECHNICAL MANAGEMENT TEAM OFFICIAL MINUTES
July 25, 2018
Minutes: Melissa Haskin

1. Introduction

Representatives of Nez Perce, Colville, Umatilla, ID, OR, WA, MT, USFWS, NOAA, Reclamation, BPA, Corps, and others participated in today’s TMT meeting chaired by Doug Baus, Corps, and facilitated by Emily Stranz, DS Consulting.

2. Dworshak Dam Operations - Alfredo Rodriguez, Corps

Alfredo Rodriguez, Corps, updated TMT on operations at Dworshak Dam. Dworshak elevation is currently 1,579.3 ft with total outflows of 12.9 kcfs (spill 3.2 kcfs and generation 9.6 kcfs). TDG is 108.2% in the tailrace and 99.9% at the hatchery. Right now, the Lower Granite tailrace temperature is around 67°F and the forebay temperature is 67-68°F at 15 meters and 65-66°F at 20 meters. The 10-day weather forecast for Lewiston indicates temperatures around 100°F on Monday.

Last week, TMT discussed holding Dworshak outflows at either 10.5 kcfs or 12.9 kcfs this week depending on forecasts and conditions over the weekend. The Corps agreed to send an update to TMT members Sunday or Monday with its decision.

Daily model results from last Friday through this morning (July 20-25) were reviewed to show how the results changed over time and to compare scenarios. On Saturday, the model showed Lower Granite tailrace temperatures slightly exceeding 68°F for a couple days starting around Monday, July 22, then another exceedance 5-6 days out. At that point, the Corps maintained Dworshak outflows at 10.5 kcfs. On Sunday, the model comparison of 10.5 versus 12.9 kcfs showed the higher outflow would result in slightly less warming in the Lower Granite tailrace, thus the Corps increased spill on Monday to a total outflow of 12.9 kcfs.

Model results from Monday and Tuesday showed Dworshak outflows of 12.9 kcfs would maintain the Lower Granite tailrace just below 68°F. However, on Tuesday morning, all three units at Dworshak tripped offline. Unit 1 came back online quickly, but Unit 2 and Unit 3 remained out of service until just after 10 p.m. During the outage, Dworshak was restricted to 100 MW (about 2.1 kcfs) at Unit 1 and spill was reduced from 3.2 kcfs to 1.1 kcfs to avoid high TDG in the river and downstream hatcheries.

The outage also triggered the CO2 alarm, forcing evacuation of all project personnel for 2 hours. Rodriguez commented, “We did a heck of a job on this. Powerhouse staff did great. The Corps did great. BPA did great.” Other members of TMT including Erick Van Dyke, OR, and Paul Wagner, agreed. Rodriguez said it is unclear what caused the units to trip offline, but TMT will be updated as information becomes available.

Models from this morning show Lower Granite tailrace temperatures up marginally with a bump to just over 68°F 3-4 days out. Then temperatures will decrease slightly, still remaining at or just below 68°F.

Jay Hesse, Nez Perce, voiced some displeasure over the communication process between the Corps and the Tribal hatcheries. “There is room for improvement,” he commented. The Nez Perce were not notified of the reduction in flows or the expected timeline for operations at Dworshak to return to normal. This put stress on the staff at the hatcheries, who, with a sudden flow reduction of 10,000 kcfs were considering other options for holding fish and water flow management. The lack of flow almost dewatered pumps. Temperatures at the hatcheries increased by 10°F, he said. Hesse called for an offline discussion about communication saying that folks need to understand the drastic impacts of a 10,000 kcfs flow reduction on the hatcheries downstream.

➔ ACTION: The Corps and Nez Perce will collaborate to improve communication.

Jay Hesse, Nez Perce, commented that he was on board with the current plan to maintain Dworshak outflows at 12.9 kcfs, but noted that outflow will need to be reduced at some point to conserve cool water for later in the season.

3. Adult Sockeye Passage - Paul Wagner, NOAA, and Russ Kiefer, IDFG

Russ Kiefer, ID, noted there is still uncertainty about what is causing the difference in adult sockeye counts between Ice Harbor and Lower Monumental.

At the request of salmon managers, counters at Ice Harbor have been monitoring for clipped/unclipped sockeye to differentiate between Snake River sockeye, which are mostly clipped, and Upper Columbia sockeye, which are more likely to be unclipped. This information will be helpful in determining if the higher count at Ice Harbor is due to Upper Columbia sockeye straying into the Snake River.

Thus far, counters have observed 7 more Sockeye for a total of 17 at Ice Harbor. Of those, 13 were unclipped and 4 were clipped. This supports the idea that the counts at Ice Harbor may include strays from the Columbia that turn around before making it to Lower Monumental.

Kiefer noted that there is also a count differential of about 100 sockeye between Lower Monumental and Little Goose. This may be due to strays that made it past Lower Monumental before turning around, or could be due to poor conditions in the Little Goose tailrace that tends to form an eddy at lower flows when the adjustable spillway weir (ASW) is operating. The salmon managers discussed the option of closing the Little Goose ASW and switching to a uniform pattern for 12 hours/day for two days to see if adult sockeye passage improves. After caucusing, the salmon managers acknowledged there is still a lot of uncertainty as to what’s causing the

count differential, but the proposed operation is prudent considering the endangered status of Snake River sockeye and the importance of each adult to the recovery effort, especially in a low return year. TMT will reconvene on Friday, July 27, at 3pm to discuss the operation and review current data to inform whether or not to continue or change the operation.

TMT members were polled on the operation, as follows:

- Paul Wagner, NOAA: support
- Dave Swank, USFWS: support
- Erick Van Dyke, OR: do not object
- Charles Morrill, WA: do not object
- Russ Kiefer, ID: support
- Jim Litchfield, MT: support
- Jay Hesse, Nez Perce: support
- Sheri Sears, Colville: support (“It is worth a try”)
- Tom Lorz, Umatilla: no objection
- Joel Fenolio, Reclamation: no objection
- Doug Baus, Corps: support
- Scott Bettin, BPA: support

➔ **ACTION:** The Corps will implement the operation to close the Little Goose ASW and switch to the uniform no ASW pattern in the Fish Passage Plan from 4am-4pm tomorrow and Friday (July 26-27). There will be a TMT conference call on Friday, July 27, to discuss whether or not to continue the operation.

At the request of salmon managers, the Corps will coordinate with the project and District to provide the following additional information: 1) video footage of the tailrace with the ASW open vs the ASW closed (approximately 5 minutes) to see how the ASW operation is affecting the eddy; and 2) a fish passage update just prior to the unscheduled TMT.

4. Next TMT

The next TMT meeting is an unscheduled conference call Friday, July 27, at 3 p.m. to discuss the modified spill pattern operation at Little Goose. There will be a regularly scheduled in-person meeting next Wednesday, August 1.

Today’s Attendees:

TMT Members:

Corps	Doug Baus (Chair), Lisa Wright
BPA	Scott Bettin
Reclamation	Joel Fenolio
NOAA Fisheries	Paul Wagner

US Fish & Wildlife	Dave Swank
Washington	Charles Morrill
Oregon	Erick Van Dyke
Idaho	Russ Kiefer
Montana	Jim Litchfield
Nez Perce Tribe	Jay Hesse
Umatilla Tribe	Tom Lorz (CRITFC)
Colville Tribe	Sheri Sears
Warm Springs Tribe	N/A
Kootenai Tribe	N/A
Spokane Tribe	N/A

Other Attendees:

Corps – Dan Turner, Aaron Marshall, Eric Chow, Alfredo Rodriguez, Jonathan Roberts, Amanda Morelos

Yakama Nation – Tom Iverson

Columbia Basin Bulletin – Mike O’Bryant

DS Consulting – Emily Stranz (Facilitator), Charles Wiggins

FLUX Resources – Melissa Haskin (Notetaker)