

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

July 11, 2018

Facilitator's Summary

Facilitator: Emily Stranz; Notes: 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/>

Treaty Fishing

Kyle Dittmer, CRITFC, reported to TMT about summer treaty fishing. CRITFC requested an extension to SOR 2018-C1 to continue treaty fishing from 6AM today, July 11, through 6PM Friday, July 13. This will probably be the last request for the summer treaty fishing season, as the fish run is diminishing. CRITFC will run another net flight on July 12 and Kyle will report results to the Corps and BPA. Doug Baus, Corps, confirmed that the SOR is being implemented as requested. Kyle thanked the Corps and BPA for their flexibility in accommodating the extension on short notice, noting that the extension request was based on recently updated fish counts.

- **ACTION:** The Corps and BPA will operate the BON, TDA, and JDA pools within a 1.5-ft band from 0600 July 11 through 1800 July 13.

Dworshak Dam Operations

Steve Hall, Corps, updated TMT on operations at Dworshak Dam. Several supporting materials are posted to the agenda for today's meeting on the TMT website. The pool is 5 feet below full, at elevation 1,595 feet. Inflows have been around 2-3 kcfs, with outflows of 12.8 kcfs (9.5 through the turbines and 3.3 as spill). TDG levels in the tailrace have ranged between 108-109%, with one hour last week when TDG reached 110%. The Corps is operating with the goal of keeping TDG below 110%.

Water temperature in the Lower Granite tailrace is currently 65.8 degrees F. A wind event yesterday (7/10) moderated water temperatures temporarily; however, temperatures are slowly increasing and expected to continue to rise due to hot weather. The 7- and 10-day NWS weather forecasts for Lewiston indicate continuing hot weather in the 95-100 degree range.

The Corps is using 2003 as the surrogate analog year and the model is predicting accurately so far. The model run from Monday (7/9) predicted a water temperature increase to 67 degrees F by tomorrow (7/12). In response, the Corps increased Dworshak discharge to 13 kcfs on Monday in order to stay below the 67 degree F threshold in the Lower Granite tailrace. Consistent with previous years, the Corps operates Dworshak Dam outflows to target modeled temperatures of 67 degrees F in the Lower Granite tailwater, which allows for a 1 degree F buffer below the BiOp requirement of 68 degrees F to account for uncertainty and variability in model forecasted conditions. Wind mixing, changes in flows coming from Hells Canyon Dam and model accuracy are some of the sources of uncertainty. Steve reminded the group that discharge from Dworshak takes about 3 days to get to the Lower Granite tailrace, thus the effects of the increase should start to be noticeable tomorrow (7/12). When Lower Granite tailwater temperature reaches 67 degrees F, the Corps will run the model daily, and will post results to the agenda for the next meeting on the TMT website.

The Corps will maintain Dworshak outflow at 13 kcfs to support adult Snake River sockeye migrating up the lower Snake River, while looking for opportunities to reduce flows later if possible. In response to a question from Jay Hesse, Nez Perce, Steve noted that in order to reach a pool level of 1,535 feet by the

end of August, starting from July 5th, and outflow must average 10.6 kcfs. Therefore, higher outflow now will require reduced outflow later in the season. Steve agreed to provide model runs at 10.6kcfs for comparison.

- **ACTION:** The Corps will conduct model runs with a Dworshak discharge of 10.6 kcfs for comparison and will share results at TMT.

Scott Bettin, BPA, asked about opportunities to close the RSW at Lower Granite, as the RSW moves warm surface water downstream. Steve noted that the current use of the RSW is important for juvenile passage. If in the future Dworshak releases are not enough to manage downstream water temperatures, TMT could discuss the option further.

Adult Sockeye Passage

Russ Kiefer, ID, and Paul Wagner, NOAA, presented on adult sockeye passage. Currently, fish are converting through the Columbia River to the Snake River at a good rate. As of July 9, 394 fish have been counted at Ice Harbor Dam, and on average 60-80% of the run will have passed at this time; 94 fish have been counted at Lower Granite Dam, and on average 25-35% of the run will have passed at this time. These numbers are slightly higher than predicted. A total of eight PIT tagged Snake River sockeye have been detected at BON, and appear to be converting well during their upstream migration. Russ noted that at this point, water temperatures are still supporting migration and they are not seeing a need for emergency trap-and-haul operations. Doug Baus, Corps, reported that the Little Goose adult ladder cooling pump is expected to return to service by the end of the week, and will be discussed at FPOM tomorrow.

Paul noted that Columbia River data show sockeye passage at 70-80% of the 10-year average. This figure is higher than previously forecast. The run is now at the end of the season, and numbers are dropping off.

Little Goose to MOP+1

Aaron Marshall, Corps, reported that the Little Goose forebay operating range was raised to MOP +1 (634-635 feet) on June 29 in order to maintain the required depth at the navigation lock entrance in the Lower Granite tailrace. He noted that at low flows (below approximately 50 kcfs), operating the Little Goose forebay in the MOP range of 633-634 feet results in the Lower Granite tailrace dropping below the minimum of 633 feet during some hours; therefore, the Little Goose pool must be operated higher to maintain navigation safety at Lower Granite. This operation is discussed in greater detail in the 2018 Fish Operations Plan (FOP) on page FOP-10 in section 4.6 Navigation Safety. The Corps expects this operation to continue through the fish passage season.

**The next TMT meeting is face-to-face on July 18, 2018 at 9:00 AM.
A process meeting will follow for TMT members.**

Columbia River Regional Forum

TECHNICAL MANAGEMENT TEAM OFFICIAL MINUTES

July 11, 2018

Minutes: Melissa Haskin, FLUX Resources

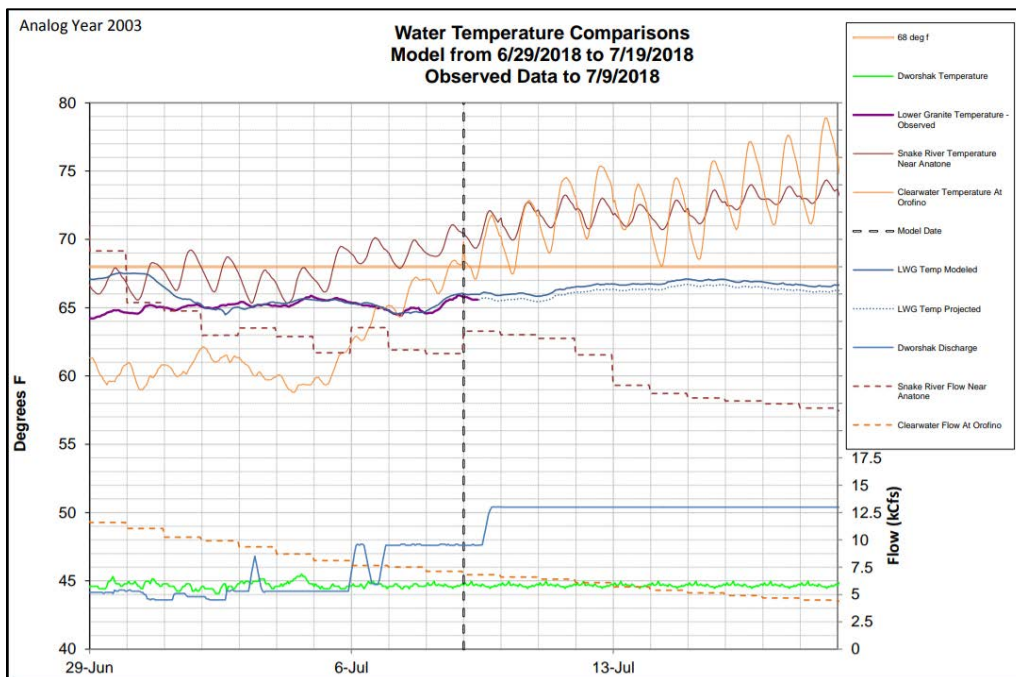
Representatives of BPA, NOAA, USFWS, Corps, Reclamation, MT, WA, ID, OR, Umatilla/CRITFC, Nez Perce Tribe, and others participated in today’s TMT conference call chaired by Doug Baus, Corps, and facilitated by Emily Stranz, DS Consulting.

1. Treaty Fishing - Kyle Dittmer, CRITFC

CRITFC has requested an extension of SOR 2018 C-1 for July 11, at 0600, through Friday, July 13, at 1800. The Corps will implement this request and maintain a 1.5-foot forebay operating range at John Day, The Dalles, and Bonneville for the extended period. Kyle reported that this year’s tribal fishery is expected to end July 13. In years past, treaty fishing has run as late as July 31; however, this year the fish are beginning to dwindle. A net flight will be completed on Thursday, July 12. Dittmer will report back to TMT with the results.

2. Dworshak Operations - Steve Hall, Corps

Dworshak is at elevation 1,595 feet with inflows of 2 kcfs and outflows of 12.8 kcfs. The Corps is targeting to maintain TDG in the Dworshak tailrace below 110%. Water temperatures in the Lower Granite tailrace are about 65.8°F and are expected to rise. The 7- and 10-day weather forecasts indicate temperatures at Lewiston, ID, in the range of 90-100°F. Steve Hall, Corps, shared the following temperature model with TMT:



Hall noted that as modeled, the Lower Granite tailwater temperature increased to about 66°F today. It will continue to rise over the next two days, leveling out around 67°F. Cold water released from Dworshak on Monday will likely begin arriving in the Lower Granite pool today, but will not start affecting the tailwater until tomorrow, Thursday, July 12.

Hall reminded TMT that the objective of the Corps is to hold model results no higher than 67°F. Extraneous factors such as wind mixing and power operations from Idaho dams can interfere with this. The Corps does its best to predict the Lower Granite tailwater temperatures and to operate to these conditions, he said.

Adult sockeye are showing up in the lower Snake River, meaning it is important to keep water at or below 67°F, said Hall.

The Corps is running a CE-QUAL-W2 model every other day and will switch to every day as temperatures near 67°F. Results will be posted to the TMT agenda for the next meeting.

Based on flow and temperature, 2003 is a good comparison for what is happening this year, so it is being used as the analog year for modeling, said Hall.

Jay Hesse, Nez Perce, requested that the Corps model a Dworshak outflow of 10.6 kcfs for the next TMT meeting. Hall said he would bring those results to the next meeting (July 18).

3. Adult Sockeye Passage – Russ Kiefer, ID

Russ Kiefer, ID, reported that PIT-tagged adult Snake River sockeye are converting through the Columbia at rates slightly better than forecasted. Temperatures are still slightly cooler than normal, but good for migration. At this time, Idaho does not think there is a need for trap and haul operations this year. Paul Wagner, NOAA, and Charles Morrill, WA, agreed. As of July 9, 394 fish had passed Ice Harbor, which is about 60-80% of this year's forecasted run.

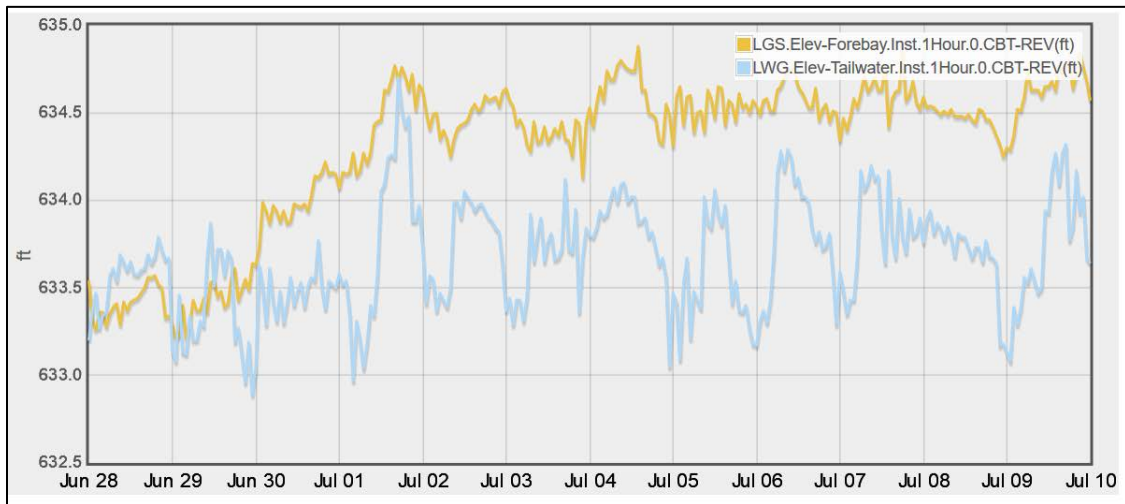
Doug Baus, Corps, reported that the Little Goose adult ladder cooling pump should return to service later this week.

4. Little Goose to MOP+1 - Aaron Marshall, Corps NWD

Aaron Marshall, Corps, followed up on an email notification to TMT on June 29 that the Corps raised the Little Goose Dam forebay operating range to 1 foot above MOP (MOP+1), which is 634–635 feet. The text of the email reads: “TMT Members and Alternates, Beginning today, June 29, the Corps raised the Little Goose Dam forebay operating range to 1 foot above the Minimum Operating Pool (MOP) for the purpose of navigation safety. This operational adjustment was made to maintain the minimum depth at the downstream entrance to the navigation lock at Lower Granite Dam. This operation is discussed in greater detail in the 2018 Fish Operations Plan on page FOP-10 in section 4.6 Navigation Safety. The Corps will provide

an update to the TMT on this operation at the next meeting which is scheduled for Wednesday, July 11.”

Marshall reported that the intent of the operation is to maintain the required depth at the Lower Granite downstream navigation lock entrance with a minimum tailwater elevation of 633 feet. As flows drop below 50 kcfs, operating the Little Goose forebay in the MOP range of 633-634 feet results in the Lower Granite tailrace dropping below 633 feet on some hours. Therefore, the Corps increased the Little Goose forebay operating range to 634-635 feet. Marshall reviewed the hourly average Little Goose forebay versus the Lower Granite tailrace from June 28 through July 10 that illustrates the operation:



5. Next TMT

The next TMT is a face-to-face meeting on July 18. Agenda items include reviewing the meeting minutes and summaries from 5/23, 5/25, 6/6, 6/13, 6/20, 6/27, and 7/11, update on adult sockeye passage, Dworshak, and an operations review. The meeting will be followed by a DS Consulting process meeting.

Today’s Attendees:

TMT Members:

Corps	Doug Baus (Chair)
BPA	Scott Bettin
Reclamation	Joel Fenolio
NOAA Fisheries	Paul Wagner
US Fish & Wildlife	David 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	N/A
Warm Springs Tribe	N/A
Kootenai Tribe	N/A
Spokane Tribe	N/A

Other Attendees:

Corps – Dan Turner, Aaron Marshall, Steve Hall, Alfredo Rodriguez, Amanda Morelos,
John Heitstuman, Laura Hamilton,

CRITFC – Kyle Dittmer

Snohomish PUD – Mike Shaply, Brian Zigler

DS Consulting – Emily Stranz (Facilitator), Charles Wiggins

FLUX Resources – Melissa Haskin (Notetaker)