

Columbia River Technical Management Team

August 31, 2016

Facilitator's Summary

Facilitator: Emily Plummer, 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. This summary is not intended to be the "record" of the meeting, only a reminder for TMT members.

Meeting Minutes and Facilitator's Summary - TMT members present approved the August 17th meeting minutes and facilitator's summaries.

Dworshak Dam Operations - Steve Hall, COE-NWW, updated TMT on Dworshak. He noted that the project touched the end of August target elevation (1,535ft) at 2300 hours on August 30th. Current water temperatures in the Snake and Clearwater Rivers systems are fairly cool, with Lower Granite tailwater temperatures around 65 degrees Fahrenheit. Steve noted that model results show temperature hovering around 65-66 degrees for the foreseeable future, as night and day temperatures are dropping for the season. Given this situation, there is no expectation that temperature will be an issue.

Steve also reported on the 2016 Dworshak Board Operation. Per the operation, the project will:

- Discharge 6.7kcfs through August 31st.
- On September 1st at 0400 hours, Unit 3 will be taken off-line for an overhaul, at which point, discharge will be reduced to 6.0kcfs (2 small units, plus spill up to ~110% TDG). All units will be operated in undershot mode to maintain temperatures around 45 degrees.
- On about September 13/14, discharge will be reduced to 4.6kcfs (2 small units, without spill).
- On about September 17/18, discharge will be reduced to 2.5kcfs (1 small unit).
- When the pool elevation reaches 1,520, the discharge will be reduced to 1.5kcfs.

The above stated operation is dependent on inflows into Dworshak. Lately, inflows have been lower than forecasted. The current STP forecasts approximately 900cfs.

Erick Van Dyke, OR, asked for clarification as to who makes up the Dworshak Board. Steve and Doug Baus, COE, noted that the Board is made up of the Nez Perce, State of Idaho, NMFS, USACE and BPA.

Dave Swank, USFWS, asked for clarification on what 'undershot mode' is. Steve explained that the powerhouse intakes have temperature selectors that allow the project to modify temperatures by lowering or raising the gates. He explained that at the request of Dworshak National Hatchery, for the last several years the project has operated in undershot mode in order to supply the coldest water possible downstream.

- **ACTION:** The Corps will continue to operate Dworshak Dam as outlined in the Dworshak Board agreement stated above and available in more detail on the TMT website (http://www.nwd-uc.usace.army.mil/tmt/agendas/2016/0831_Dworshak_Board_2016_Operational_Plan_NWD.pdf).

Russ Kiefer, ID, reported to TMT that ID has finalized their recommendations for the Dworshak operation priorities during the Unit 3 overhaul. He is prepared to present them for TMT conversation at the next TMT meeting on September 7th.

- **ACTION:** Russ will present the ID recommendations at the September 7th TMT meeting.

Treaty Fishing SOR 2016 C-2 - Kyle Dittmer, CRITFC, reported that it is treaty fishing time and shared the details of SOR 2016 C-2, part of which the Corps has already implemented. The fishing seasons are from 6:00am to 6:00pm on the following dates:

- August 22-August 26
- August 29-September 2
- September 5-September 9
- September 12-September 16.

The SOR requests a 1.5ft forebay operating range as a soft constraint for the Bonneville, The Dalles, and John Day pools during those times.

- **ACTION:** The Corps will continue to implement SOR 2016 C-2. If any issues arise, they will coordinate with CRITFC. If the tribes would like to request additional dates for the summer season, they will coordinate with the Action Agencies.

Additionally, Kyle reported the most recent net-flight counts: there are currently 454 nets in the three pools (34% in BON, 17% in TDA, and 49% in JDA).

Dave Swank inquired as to how long the treaty fishing season lasts. Kyle noted that the gillnet fishery is what is currently being coordinated through TMT. This may be expanded later into the season depending on fish counts. However, by treaty, the platform fishing season is open all year long.

For details on where you can buy fish, please visit: <http://www.critfc.org/harvest/>.

Operations Review

Reservoirs: Mary Mellema, BOR, reported on Reclamation projects:

- Hungry Horse midnight elevation was 3,554.1ft, with 2.1kcfs outflow and drafting for the end of September target of 3,550ft.
- Grand Coulee elevation was 1,278.0ft, they are planning to be at 1,277.6ft tonight.
- Mary also noted that Banks Lake is currently at 1,564.9ft.

Lisa Wright, COE-NWD, reported on Corps projects:

- Libby midnight elevation was 2,446.7ft, with 4.3kcfs inflow and 7.0kcfs outflow.
- Albeni Falls midnight elevation was 2,062.4ft, with 9.0kcfs inflow and 7.1kcfs outflow.
- Dworshak midnight elevation was 1,534.9ft, with 0.1kcfs inflow and 6.7kcfs outflow.
- Lower Granite average inflow was 21.3kcfs.
- McNary average inflow was 127.1kcfs.
- Bonneville average inflow was 124.2kcfs

Fish: Paul Wagner, NOAA, reported on fish. For adults: At Bonneville, fall Chinook numbers are strong, ranging from 2,700-12,000 per day, and 105,000 total so far this season which is 124% of the 10-year average. Current steelhead numbers are low with a total of 111,796 so far, which is 44% of the 10-year average. At Lower Granite, fall Chinook numbers are doing well, at 264% of the 10-year (3,242). And steelhead are at 55% of the 10-year. The group looked at the DART adult passage index, noting that steelhead and wild steelhead numbers are low and below the 10-year. However Chinook are above the 10-year; jacks are doing relatively okay; Sockeye did well this year; coho are still early, however, looking good so far. Lamprey are doing great compared to the 10-year, with over 50,000 at Bonneville and 97 at Lower Granite.

Russ Kiefer, ID, reported on Sockeye trapped in the Sawtooth Valley. He noted that as of August 28th, a total of 429 have been collected. Numbers appear to be slowing at this point. The group noted that

conversion between Lower Granite and Redfish Lake was good this year, with 812 Sockeye estimated to have passed Lower Granite. Russ reminded TMT that the Lower Granite counts are an index, are extrapolated, and are thought to be high due to fall back and expansion. He will report back to TMT with the average conversion rate once they have had a chance to review the data.

For juveniles: The two week passage index for fall Chinook is decreasing with 100's at Lower Granite and less than 100 at Lower Monumental. Juvenile passage is winding down for the year.

Water Quality: Laura Hamilton, COE-NWD, reported that the end of spill season is nearing and they will shift to winter arrangement for TDG gauges within the next few weeks. There are no exceedences to report for August and all gauges are operational. The Corps is experiencing some issues with the website and is currently working to fix them.

Power System: Nothing to report.

The next TMT meeting will be a conference call on September 7th at 9:00am.

Agenda: Dworshak Update, Idaho Dworshak priorities

Columbia River Regional Forum
TECHNICAL MANAGEMENT TEAM MEETING

August 31, 2016

Minutes: Pat Vivian

Representatives of USFWS, NOAA, BPA, COE, CRITFC, Washington, Idaho, Oregon, Montana, BOR, Yakama Tribe, Warm Springs Tribe and others participated in today's TMT meeting. Doug Baus, COE, served as chair and Emily Plummer, DS Consulting, facilitated the conversation.

2. Review Meeting Minutes – August 17

The facilitator's summary and meeting minutes were approved as final.

3. Dworshak Dam Operations

Late last night, Dworshak reservoir reached its elevation target, satisfying the requirement to draft to 1535 ft on or close to August 31, Steve Hall, COE, reported. Current hourly elevation data for Dworshak are shown in attachment 3a linked to today's agenda.

Lower Granite tailrace water temperatures are around 65-65.5 degrees F, as shown in attachment 3b. Lower Granite tailwater is expected to remain around 65-66 degrees F for the foreseeable future, based on modeling of observed data using 2014 as an analog year (see attachment 3c). No temperature issues at Lower Granite are anticipated.

The Dworshak Board Operational Plan is summarized in attachment 3d. Current outflows are about 6.7 kcfs which will continue until Dworshak unit 3 goes off line at 0400 hours on September 1 for an extended period of repairs and maintenance. On September 1, Dworshak will transition to 6.2 kcfs using the two small units, plus spill, producing about 110% TDG in the tailrace. Water temperatures will probably be around 44-46 degrees F until September 13-14. At that point, subject to inflows, the operation will shift to 4.6 kcfs using two small units with no spill for about two days. Then the project ramps down to 2.5 kcfs using one small unit to draft the pool to 1520 ft on approximately September 20, at which point Dworshak will reduce to minimums of 1.5 kcfs through the fall season.

The latest STP traces forecast Dworshak inflows around 900 cfs, but observed inflows have been only 400-500 cfs. The Dworshak plan will be adapted to actual inflows as the season progresses, with a goal of gradually drafting the reservoir to 1520 ft by around September 20.

In response to questions from TMT, Hall said the Dworshak Board includes representation from the Nez Perce Tribe, Idaho, NOAA, the COE and BPA. For the past few years, Dworshak has operated exclusively in undershot mode, which means water enters the dam from approximately 1400 ft deep and passes through the gates at the lowest—and coolest—elevation possible. Operating in undershot mode conserves water and stretches temperature augmentation in the hot months, but it is dependent on acceptance of 43-47 degrees F water at the Dworshak National Hatchery.

At the next TMT meeting September 7, Russ Kiefer will present Idaho's recommendations for operational priorities at Dworshak this winter/spring while unit 3 is out of service.

4. Treaty Fishing

Kyle Dittmer reported. On August 17, CRITFC submitted SOR 2016-C2 to the Action Agencies, initiating fall treaty fishing. The SOR calls for the typical 1.5 ft forebay elevation bands at Bonneville, The Dalles and John Day dams from 6 am to 6 pm on August 22-26 (already finished), August 29-September 2 (in progress), September 5-9, and September 12-16

The Action Agencies completed the August 22-26 operation and are currently implementing the operation for the dates of August 29-September 2. Treaty fishing after mid-September will depend on catch data and might extend into early October. In response to questions, Dittmer explained that treaty fishing requests are now made in batches, one SOR per fishing season, rather than submitting separate SORs to the Action Agencies for each week of fishing. The treaty SORs apply to gillnet operations only; the tribes have the right year-round to fish from platforms along the Columbia.

Yesterday's CRITFC-sponsored net flight tallied 454 nets in all three lower river pools, with 34% of them at Bonneville, 17% at The Dalles, and 49% at John Day. Anyone interested in buying fresh salmon from the lower Columbia River tribes should harvest CRITFC's website at <http://www.critfc.org/harvest/>.

5. Operations Review

5a. Reservoirs. Hungry Horse is at elevation 3554.1 ft, currently discharging 2.1 kcfs, and will continue drafting to 3515 ft by end September. Grand Coulee is at elevation 1278 ft, drafting to 1277.6 ft. Banks Lake is at 1564.9 ft, having completed the required 5 ft draft at end August.

Libby is at elevation 2446.7 ft with inflows of 4.3 kcfs, discharging 7 kcfs minimum flows. Albeni Falls is at elevation 2062.4 ft with inflows of 9 kcfs, discharging 7.1 kcfs. Dworshak is at elevation 1534.9 ft with average inflows of

0.1 kcfs, discharging 6.7 kcfs. Lower Granite average releases are 21.3 kcfs, McNary average releases are 127.1 kcfs, and Bonneville average releases are 124.2 kcfs.

5b. Fish. Paul Wagner, NOAA, reported. Adults: Fall chinook returns at Bonneville are substantial, ranging from 2,700-12,000 fish daily. Total return to date is 105,061 fish, which is 124% of the 10 year average. Steelhead aren't doing so well, with 11,796 adult returns to Bonneville as of yesterday, 44% of the 10 year average. Fall chinook are having a good year, with returns well above the 10 year average at Bonneville, McNary and Lower Granite. Jack chinook returns are good as well. At Lower Granite, 3,242 adult fall chinook have arrived to date, 264% of the 10 year average, although it's still early in fall chinook season.

Like Bonneville, Lower Granite saw weak steelhead returns (55% of the 10 year average). DART data confirm that steelhead returns to Bonneville, McNary and the Snake River projects are far below what is typical for this time of year. Wild steelhead and coho returns are likewise below average. Perhaps the best news is that adult sockeye returns are well above the 10 year average at all projects, and adult lamprey returns are also excellent—50,000 lamprey at Bonneville, 97 as far up as Lower Granite.

Sockeye passage at Redfish trap slowed to 429 fish on August 26, Russ Kiefer, Idaho, reported. Conversion rates this year have been good. IDFG is documenting 2016 conversion rates in an official memo which Kiefer will present at an upcoming TMT meeting.

Juvenile passage is winding down for the year. Fewer than a thousand fall chinook per day are passing Lower Granite and Little Goose, with less than a hundred per day at Lower Monumental.

5c. Water Quality. Laura Hamilton, COE, reported. The hydro system is nearing the end of spill season and will transition to winter operations for TDG management over the next several weeks. All gauges are working well, but there have been problems with the data reporting system which should be resolved soon. There were no TDG exceedances in August.

5d. Power. There was nothing to report today.

6. Next TMT Meeting

TMT will meet next in a September 7 conference call.

Name	Affiliation
Dave Swank	USFWS
Paul Wagner	NOAA

Tony Norris	BPA
Lisa Wright	COE
Doug Baus	COE
Scott Bettin	BPA
Laura Hamilton	COE
Julie Ammann	COE
Charles Wiggins	DSC
Kyle Dittmer	CRITFC
Michelle Yuen	COE

Phone:

Charles Morrill	Washington
Russ Kiefer	Idaho
Erick Van Dyke	Oregon
Jim Litchfield	Montana
Tom Lorz	CRITFC
Mary Mellema	BOR
Steve Hall	COE Walla Walla
Tom Iverson	Yakama Tribe
Mike Shafley	Snohomish PUD
Shane Scott	PPC
Jen Graham	Warm Springs Tribe
Michael Bryant	CBB