

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

October 19, 2016

Facilitator's Summary

Facilitator: Emily Plummer, Notes: Tory Hines, 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.

Review Meeting Minutes

The September 21st and October 5th meeting minutes and facilitator's summaries were approved.

Chum Operation

Paul Wagner, NOAA, shared an update on chum operations. He noted that spawning ground surveys below Bonneville Dam are underway. Presently, no chum have been observed on the spawning ground, however, two have been counted at Bonneville Dam. Crews will continue to survey throughout the season, redd locations will be marked electronically and information on the elevation of the redd and the depth of the water will be provided once available. Additionally, BPA will conduct electronic marking of the redds, 1-2 times throughout the season.

The group looked at the April-September official water supply forecast for The Dalles. It was noted that the rains have come and it is looking like a La Niña year with above average temperatures and precipitation. NOAA predicts a 70% possibility that La Niña will occur in the fall and 55% possibility in the winter. For the 30-day forecast, NWRFC is predicting above normal precipitation. At Bonneville Dam, outflows were 102kcf/s and tailwater elevation was 11.8ft, above the average so far this year.

Tony Norris, BPA, pointed to the *2016 Water Management Plan Seasonal Update*, noting that it provides a look back at last year's operations. TMT was encouraged to review the operation to inform upcoming conversations on the chum operation. Chum operations typically begin the first week of November and TMT will have a conference call next week to discuss operations.

- **ACTION:** TMT members will review 2016 chum operations in preparation for a conference call on October 26th at 9:00.

2017 Water Management Plan

Karl Kanbergs, COE, reminded TMT members that suggested edits to the 2017 Water Management Plan should be provided by October 31st. The second draft will be posted on November 16th and additional edits are due by November 20th. Suggested edits should be emailed to Doug Baus, Scott Bettin, Mary Mellema, and Tony Norris.

- **ACTION:** TMT members should provide suggested edits to Doug, Mary, Scott, and Tony by October 31st.

Dworshak Dam Update

Steve Hall, COE, provided an update on the oil spill that occurred at Dworshak Dam on September 19th. A total of 10 gallons were accidentally released in to the river and the Corps reports that all of it has been cleaned up to the best of their ability.

Steve reported on the Unit 3 overhaul. He noted that the rotor has been removed and the next steps are to dismantle the rotor, coils and stator to prepare the unit for replacement parts. The overhaul is a day or so behind schedule, but is still on track to be finished on schedule due to increase in contractor staff and hours.

Steve also reported on the results of the Dworshak Water Quality Study which occurred in April 2016; a memo summarizing the spill test results can be found on the agenda for today's TMT meeting.

Briefly, for the 115% TDG test, the hatchery and Big Canyon saw TDG levels downstream at 102%, while TDG levels at Cherry Lane were 104%. For the 120% TDG test, hatchery TDG levels were at 103.5%, 104% at Burrows Pond, 102% at Big Canyon and 105.5% at Cherry Lane. The percentages provided in the table were peak values measured in 15 minute intervals.

Operations Review

Reservoirs: Karl reported on Corps projects:

- Libby midnight elevation was 2,448.7ft, with 13kcfs inflow and 4kcfs outflow. The project will remain at minimum throughout the month for habitat restoration.
- Albeni Falls midnight elevation was 2,056.9ft, with 22kcfs inflow and 32kcfs outflow. Albeni Falls is working towards hitting winter elevation in mid-November.
- Dworshak midnight elevation was 1,521.1ft, with 4.6kcfs inflow and 1.6kcfs outflow.
- Lower Granite average inflow was 25.5kcfs.
- McNary midnight elevation was 339.0ft and average outflow was 107.9kcfs.
- Bonneville average outflow was 119.2kcfs

Mary Mellema, BOR, reported on Reclamation projects:

- Hungry Horse midnight elevation was 3,550.8ft, with 5kcfs inflow and 2kcfs outflow. Mary reported that there has been a lot of rain in the area of late.
- Grand Coulee elevation was 1,284.5ft.

Dave Swank, USFWS, asked for clarification for the delta between total outflow and what is reported going through the project. The Action Agencies explained that there are miscellaneous outflows at each project that differ from project to project, and season to season. These flows are attributed to factors such as sluiceways, corner collectors, navigation locks, and fish ladders, and are not captured in either spill or generation values, however, are included in the total outflow reported.

Fish: Paul reported on fish. At Bonneville, adult fall Chinook counts were 435,673 (88% of the 10-year average), jack counts were 53,626 (65% of the 10-year average). For steelhead, counts were 155,230 (54%) and wild steelhead were 51,324 (46%). Steelhead numbers were well below average; however numbers picked up towards the end of the run. Coho counts were 38,297 (35%) and lamprey counts yesterday were -9, meaning there were more observed moving downstream than upstream. At Lower Granite, fall Chinook counts were 33,631 (106%), jack counts were 11,345 (68%), steelhead counts were 83,812 (57%), and wild steelhead were 19,123 (50%). Jack Chinook were below the 10-year average as were Coho at all of the projects. Overall, lamprey had a strong year compared to the 10-year average, but still below the 30-year average.

Water Quality: Laura Hamilton, COE-NWD, noted that all TDG gauges are functioning and are set to winter arrangement, which means that only tailrace gauges are operating. At The Dalles, involuntary spill occurred on October 13th due to a full powerhouse outage.

Power System: Tony Norris, BPA, noted that there was nothing to report.

The next TMT meeting will be a conference call on October 26th at 9:00am.

Columbia River Regional Forum
TECHNICAL MANAGEMENT TEAM OFFICIAL MINUTES

October 19, 2016

Minutes: Pat Vivian

1. Introduction

Representatives of the COE, BOR, USFWS, BPA, Washington, NOAA, Idaho, Umatilla Tribe, Nez Perce Tribe, Montana and others participated in today's TMT meeting chaired by Lisa Wright, COE, and facilitated by Emily Plummer, DS Consulting.

2. Review Meeting Minutes – Sept. 21 and Oct. 5

The meeting minutes and facilitator's summaries for both of these meetings were approved as final.

3. Chum Operation

Paul Wagner, NOAA, led a discussion of several topics pertaining to the upcoming chum spawning operation at Bonneville Dam which typically begins in early November. Although two chum have been counted passing Bonneville Dam to date, no spawners have yet been observed.

3a. Chum spawning ground surveys 2016-17. Washington Department of Fish and Wildlife has begun its annual chum surveys in the Bonneville tailwater area. WDFW surveyors track the number of fish spawning as well as dead spawners, and will mark spawning locations and elevation of the redds. This year's marking of redds will be done electronically which provides more precise information on location and water depth. In addition to the WDFW surveys, BPA will survey the redds electronically once, possibly twice if deemed appropriate.

3b. Bonneville Dam adult counts. The latest counts are linked to today's agenda. More returns can be expected as the season progresses.

3c. Summary of 2015-16 chum operation. This summary of last year's chum operation is included in the seasonal update to the Water Management Plan every year. It is linked to today's agenda for ease of reference in planning this year's chum operation. Wagner asked if this year's operation will include an end of December elevation of 12.5 ft like last year. Probably not, Tony Norris, BPA, said, because last year's water supply was so limited compared to this year. TMT members were encouraged to review last year's operation in preparation for planning the chum operation this year.

3d. NWRFC current water supply forecast at The Dalles. According to the latest April-September NWRFC forecast, the water supply looks plentiful, Wagner said. There's a 70% chance this fall that NOAA will declare 2016-17 to be a La Niña season, and a 55% chance of a La Niña declaration this winter.

3e. NWRFC climate forecast. Both the 30-day and 90-day NOAA forecasts show above normal precipitation in the Northwest.

3f. Bonneville current hourly forecast. Current Bonneville Dam outflows are 102 kcfs and a tailwater elevation of 11.8 ft, which is slightly higher than the typical 11.5 ft elevation minimum designated for the chum operation. TMT planned a phone conference on October 26 in preparation for the chum operation.

4. 2017 Water Management Plan

Comments on the draft Water Management Plan are due October 31. The next draft will be posted for comments on November 16.

5. Dworshak Dam Oil Spill Update

The 10 gallons of oil that were spilled into the river have been cleaned up to the best of the COE's ability, Steve Hall reported. The Unit 3 overhaul is now in progress. At this point the contractor is only about a day behind the original schedule, which is no problem.

A memo summarizing the findings from the Dworshak spill test that was conducted in late April in preparation for the unit 3 outage is attached to today's agenda. On the first day of the test, spill to 115% TDG in the Dworshak tailrace produced peak instantaneous TDG levels of less than 102% at the Dworshak National Hatchery, with similar values downstream. On the second day, spill to 120% TDG in the tailrace produced peak instantaneous levels of 103.5% TDG in the hatchery.

A photo of the rotor being removed from the turbine is shown in attachment 5b. The next step is to dismantle the generator and remove the stator. The contractor's original schedule was based on using one crew only, and they're making up for time lost to the oil spill by adding crews around the clock.

7. Operations Review

7a. Reservoirs. Grand Coulee is at elevation 1284.5 ft. Hungry Horse is at elevation 3550.8 ft with 5 kcfs inflows and 2 kcfs releases. Libby is at elevation 2448.71 ft, releasing 4 kcfs minimums to accommodate habitat restoration work through the end of October. Albeni Falls is releasing 30 kcfs

with a goal of maintaining its winter elevation range of 2051-2051.5 ft by mid-November; inflows are 22 kcfs. Dworshak elevation is 1521.1 ft with inflows of 4.6 kcfs, releasing minimum flows of 1.6 kcfs. McNary is at elevation 339.02 ft with releases of 107.9 kcfs. Lower Granite releases are 25.5 kcfs, and Bonneville releases are 119.2 kcfs.

6b. Fish. Paul Wagner reported. Adult Chinook passage season is drawing to a close, with a total of 435,673 fall Chinook returning to Bonneville to date, which is 88% of the 10-year average. Jack Chinook returns to Bonneville are 53,626 to date, which is 65% of the 10-year average. Steelhead returns are 185,230 which is 54% of the 10-year average. Wild steelhead returns are 51,342 which is 46% of the 10-year average. Sockeye returns are 342,497, 120% of the 10-year average. Lamprey returns yesterday were -9 which indicates that more adult lamprey are moving downstream instead of upstream.

Fall Chinook returns to Lower Granite are 33,631 to date, 106% of the 10-year average. Jack Chinook returns to Lower Granite are 11,345 to date, 68% of the 10-year average. Steelhead returns to Lower Granite are 83,092 to date, 57% of the 10-year average. Wild steelhead returns are 19,123 to date, 50% of the 10-year average. Steelhead (both hatchery and wild) returns were running well below their 10-year average until they rallied at the end of passage season. Chinook returns were early this year, with jack chinook returns weaker than those for adults. Coho returns were well below the 10-year average at all projects. Lamprey did well this year in relation to the 10-year average, but not as well in relation to the past 30 years.

6c. Water Quality. Laura Hamilton reported that all water quality stations are operating on their winter schedule of tailrace gauges only. A full powerhouse outage at The Dalles on October 13 caused involuntary spill of 24.1 kcfs, which temporarily elevated TDG levels.

6d. Power. There was nothing to report.

7. Next TMT Meeting

There will be a conference call on October 26 and a meeting in person on November 2.

Name	Affiliation
Aaron Marshall	COE
Mary Mellema	BOR
Dave Swank	USFWS
Tony Norris	BPA
Charles Morrill	Washington
Paul Wagner	NOAA

Karl Kanbergs	COE
Laura Hamilton	COE
Lisa Wright	COE
Tory Hines	DSC
Charles Wiggins	DSC

Phone:

Russ Kiefer	Idaho
Tom Lorz	CRITFC/Umatilla
Dave Johnson	Nez Perce
Chris Runyon	BOR
Peter Cooper	BOR
Brian Zeigler	Snohomish PUD
Michael Bryant	CBB
Steve Hall	COE
Margaret Filardo	FPC
Jim Litchfield	Montana