

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

March 2, 2016

DRAFT Facilitator's Summary

Facilitator: Charles Wiggins; 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.

Chum Operation

Doug Baus, COE-NWD, provided an update on the current chum operation. He noted that as of 0700 hours, Bonneville is operating at a tailwater elevation of 18ft, which is above the 12.2ft tailwater minimum. The Corps will continue operating Bonneville with a tailwater minimum of 12.2ft unless coordinated otherwise. Tony Norris, BPA, discussed the graphs found in the seasonal update and available as a link on the TMT agenda (http://www.nwd-wc.usace.army.mil/tmt/agendas/2016/0302_Agenda.html). He noted that there is a lot of water in the system due to drafting for drumgate maintenance. The seasonal update will be revised following the final flood control forecast. The first graph provided shows the Grand Coulee forebay steadily dropping to the drumgate maintenance elevation of 1,255ft. Bonneville tailwater has also risen as a result of drafting at Grand Coulee (black line). The second graph shows average outflows at Bonneville (bright blue line), Priest Rapids (red line), Willamette (black line) and Ice Harbor (green line). The blue line near the x-axis illustrates Priest Rapids outflow combined with Ice Harbor outflows subtracted from Bonneville outflows. The result depicts what incremental inflows are between Ice Harbor, Priest Rapids and Bonneville. Charles Morrill, WA, extended appreciation to BPA and Tony for providing the update.

- **ACTION:** The AA's will continue operating Bonneville with a tailwater minimum of 12.2ft.

Update Water Supply Forecast

Doug Baus, COE-NWD, provided an update on the March water supply forecast which is posted on the TMT website. He noted that The Dalles April-August forecast is 85.2 maf (97% of average). Tony noted that the March final forecast will be available early next week. Doug stated that the 10 day forecast shows continued precipitation, which will likely result in an increased water supply volume. Doug also recommended TMT members participate in an upcoming webinar found on the NWRFC website on March 3rd at 10:00AM. Charles noted that the Hamilton Springs trap will be at peak emergence in the next month. Scott Bettin, BPA, asked how many adults spawned in the channel this year. Charles will follow up with Scott once the information is available.

Operations Review:

Reservoirs:

Mary Mellema, BOR, reported on Reclamation projects:

- Hungry Horse midnight elevation was 3,516.9ft, with 1.8kcfs outflow.
- Grand Coulee elevation was 1,263.2ft and the pool is drafting to meet 1,255ft by March 14th for drumgate maintenance.

Lisa Wright, COE, reported on Corps projects:

- Libby midnight elevation was 2,410ft, with 4.1kcfs inflow and 4.1kcfs outflow.
 - Doug Baus noted Libby February 29 elevation (2410 feet) was 3 feet above the end of month elevation (2407 feet) specified in the Final February Runoff Forecast due to risk associated with a decreasing water supply forecast.
- Albeni Falls midnight elevation was 2,053ft, with 23.7kcfs inflow and 21.9kcfs outflow.
- Dworshak midnight elevation was 1,552.4ft, with 7.4kcfs inflow and 1.5kcfs outflow.
- Lower Granite average inflow was 36.6kcfs.
- McNary average inflow was 179.0kcfs.
- Bonneville average inflow was 216.0kcfs

Fish: Paul Wagner, NOAA, reported on fish. He noted that 1,141 winter Steelhead have passed Bonneville. The March 2nd ten year average for winter Steelhead at Bonneville Dam is around 1,000. Current winter Steelhead passage counts are slightly above normal. The Lower Granite ladder is still out of service and the Snake River ladders remain closed.

Water Quality: Laura Hamilton, COE-NWD, noted that the Little Goose tailwater gauge hit 140% TDG as a result of debris spill. She noted that when exceedances go above 132%, the chart will note the exceedance with a black cell. The exceedance at Little Goose occurred for one hour, yet the 12 hour average was 108%. Russ Kiefer, ID, asked if 140% is an accurate reporting from the Little Goose gauge. Laura stated that TDG levels can get as high as 148% during a debris spill. All gauges are working properly and there are no involuntary spills in the system to note.

Power System: Nothing to report.

The next TMT meeting will be a face to face meeting on March 16th at 9:00am.

Columbia River Regional Forum
TECHNICAL MANAGEMENT TEAM OFFICIAL MINUTES

March 2, 2016
Minutes: Pat Vivian

1. Introduction

Representatives of NOAA, BPA, the Colville Tribe, Washington, BOR, BPA, COE, Idaho, Oregon and others participated in today's TMT conference call chaired by Doug Baus, COE, and facilitated by Charles Wiggins, DS Consulting. This summary is an official record, not a verbatim transcript.

2. Chum Operation Update

2a. Chum Operation. Current Bonneville tailwater elevation is 18 ft, Baus reported. The minimum tailwater elevation for chum remains 12.2 ft. Peak emergence is expected to occur in about a month, according to WDFW sampling at the Hamilton Springs trap, Charles Morrill, Washington, said. Chum emergence is already underway, Paul Wagner, NOAA, added. Morrill will follow up with sampling crews to estimate how many chum spawners visited the Ives Island complex this season.

2b. Graphs. Tony Norris, BPA, presented two graphs depicting current conditions. With Grand Coulee drafting down to a 1255 ft forebay elevation for drum gate maintenance, the river is full and the BON tailwater elevation is correspondingly high, as the first graph shows. The second graph compares daily average discharges for Bonneville, Priest Rapids and Ice Harbor dams. It also indicates incremental inflow. Willamette River discharges are in the 40-50 kcfs range.

2c. Current Water Supply Forecast. The current RFC inflow volume forecast for April through August as measured at The Dalles is 85.2 maf, which is 97% of average, Baus reported. Precipitation is expected to continue over the next 10 days. The final March RFC forecast will be released March 7 and will be available for discussion at the next TMT meeting March 16.

3. Operations Review

3a. Reservoirs. Baus noted Libby February 29 elevation (2410 feet) was 3 feet above the end of month elevation (2407 feet) specified in the Final February Runoff Forecast. The COE deviated from the final February runoff forecast end of month elevation due to risk associated with a decreasing water supply forecast.

Mary Mellema and Lisa Wright reported on individual BOR and COE project operations. Grand Coulee is at elevation 1263.2 ft, drafting to 1255 ft by March 14 for drum gate maintenance. Hungry Horse is at elevation 3515.9 ft, discharging 1.8 kcfs. Libby is at elevation 2410 ft, with inflows of 4.1 kcfs, discharging 4.1 kcfs. Albeni Falls is at elevation 2053 ft, with inflows of 23.7 kcfs, discharging 21.9 kcfs. Dworshak is at elevation 1552.4 ft, with inflows of 7.4 kcfs and passing minimum flows of 1.5 kcfs. Lower Granite average outflows are 36.6 kcfs. McNary average outflows are 179 kcfs. Bonneville average outflows are 216.0 kcfs.

3b. Fish. Steelhead are the only species active at present. The arrival of 1141 adult winter steelhead at BON is slightly above the 10 year average of 1000 fish by today's date, Paul Wagner, NOAA, reported. Snake River fish ladders will be opening soon for fish passage season.

3c. Water Quality. All gauges are working, and there is no involuntary spill on the system. Laura Hamilton, COE, showed TMT how the water quality page now flags TDG saturation levels of 132% or higher by printing them black, in response to a TMT request that very high gas levels be identified. TDG readings at Little Goose recently peaked at 140% for less than an hour, a typical result of debris spill. Opening the gates completely to clear the forebay of debris can briefly generate TDG levels of up to 150%.

4. Next TMT Meeting

TMT will meet next in person March 16. A water supply forecast update, chum operations, and the spill priority list for fish passage season are on the agenda.

Name	Affiliation
Paul Wagner	NOAA
Tony Norris	BPA
Sheri Sears	Colville
Charles Morrill	Washington
Mary Mellema	BOR
Scott Bettin	BPA
Doug Baus	COE
Russ Kiefer	Idaho
Joel Fenolio	COE Seattle
Laura Burns	Clearing Up
Lisa Wright	COE
Laura Hamilton	COE
Michelle Yuen	COE
Erick Van Dyke	Oregon