

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

November 1, 2017

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/2017/>

Chum Operations

Paul Wagner, NOAA, updated TMT on current chum passage and planned operations. As of October 5, no chum have been observed in the Ives/Pierce complex, however, as of today's counts, 4 have passed the Bonneville Dam. A site visit to Hamilton Creek last Friday revealed that the creek is wetted, however, no chum or Chinook were sighted in the creek. Scott Bettin, BPA, added that if they are in the area, the fish currently have access to the Hamilton Creek and Hamilton Springs spawning grounds. According to Paul, Salmon Managers coordinated at FPAC and agreed to start the chum operation on Tuesday, November 7th. This operation is expected to require a significant amount of water from Grand Coulee, as flows are currently low.

Doug Baus, Corps, described the chum operation as coordinated at TMT on October 25. It is posted on the TMT web site. It provides that beginning at 6:00AM on November 7, the Corps will operate the Bonneville tailwater discharge in a series of stepped ranges as project outflow increases. The operation calls for tailwater outflows to maintain a base elevation of 11.5-13.0 feet. If it is necessary to increase outflow, nighttime operations first increase, followed by combined day- and nighttime increases, to assure a daytime tailwater elevation of 13.0-16.5 feet. The specific steps are described below in greater detail.

Doug also noted that at the time of the meeting, hourly data at Bonneville showed 84.1 kcfs outflow, with an 8.7-foot tailwater elevation at the Tanner Creek gauge (last column on the hourly data chart, also posted on the web site). The current NWRFC water supply forecast for The Dalles Dam for April to August with 5 days QPF is (91 MAF). Both the 6-10 and 8-14 day NWRFC regional forecasts predict below average temperatures and above average precipitation.

- **ACTION:** The Action Agencies will coordinate to implement the chum operation beginning at 0600 hours on Tuesday, November 7th. The operation will be implemented as follows:
 - During all hours, operate project outflows to provide a tailwater elevation in the range of 11.5-13.0 ft.
 - Then, if necessary to increase project outflow, the tailwater may be operated up to 16.5ft during nighttime hours (1700-0600), with the highest elevations concentrated around 2400 hours.

- Then, if necessary to increase project outflow, the tailwater may be operated up to 18.5ft during nighttime hours (1700-0600)
- Then, if increasing river flow precludes the ability to manage tailwater within the steps above, operate to provide a tailwater in the range of 13.0-16.5ft during daytime hours (0600-1700) and up to the maximum within project 24 hours ramp rate limits during nighttime hours (1700-0600).

Dworshak Operations

TMT discussed the upcoming fall and winter season operations at Dworshak with respect to the ongoing outage of unit 3. Doug Baus noted there will only be a single unit in operation from January 8 until February 1, 2018, because unit 2 will be out of service for annual maintenance. Erick Van Dyke, OR, requested an update on the unit 3 milestones at the next TMT meeting.

Currently outflow at Dworshak is 1.7 kcfs, with a forebay elevation of 1518.7 feet. Paul relayed the Salmon Manager's request for the Corps to model low, medium, and high inflow scenarios to provide insight as to options for managing TDG in the coming months. Tom Lorz, Umatilla, noted that last year the project filled 12 feet in November and that this year they may want to be more cautious about filling this early, considering different operations for November. He reiterated the priorities for operations last year: refill, TDG management in the hatcheries, and flows for spring, noting that these are likely still the priorities for this coming year.

Russ Keifer, ID, told the group that he, Jay Hesse, Nez Perce, Dave Swank, USFWS, have been talking about priorities from their agencies perspectives. At this point they are working on a recommendation for the Corps that clarifies ranges of TDG that the hatcheries are comfortable with. They will connect with Steve Hall, Corps, regarding their thoughts and will circle back to TMT at the November 15th meeting. Additionally, they are looking at gas bubble trauma data from 2017 and hope to be able to have an analysis ready for the TMT Year End Review.

TMT will revisit the Dworshak operation at the November 15th TMT meeting.

- **ACTIONS:** For the November 15th TMT meeting, the Corps will provide modelling scenarios; Russ, Jay and Dave will connect regarding their joint priorities and recommendations for fall/winter operations, and the Corps will provide an update on the DWR unit 3 milestones.

The next regular TMT meeting will be face-to-face on November 15, at 9:00.

**Columbia River Regional Forum
TECHNICAL MANAGEMENT TEAM OFFICIAL MINUTES**

November 1, 2017

Minutes: Pat Vivian

1. Introduction

Representatives of Washington, Montana, USFWS, Warm Springs Tribe, BOR, CRITFC/Umatilla, BPA, NOAA, Oregon, BOR, Idaho, and others participated in today's TMT conference call chaired by Doug Baus, COE, and facilitated by Emily Stranz, DS Consulting.

2. Chum Operation

2a. Chum Salmon Spawning Ground Surveys. As of the last spawning survey on October 5, there were no chum in the Ives Island complex, Paul Wagner, NOAA, reported.

2b. Bonneville Adult Salmon Counts. Early last week, 4 chum were observed at Bonneville, so FPAC's recommendation is to proceed with the chum operation as previously planned. This means starting augmentation flows on November 7, assuming that precipitation will catch up with discharges. With that input from FPAC, the COE will instruct project staff to implement the chum operation beginning November 7 at 0600 hours.

2c. NWRFC Water Supply Forecast. The April-August inflow forecast for The Dalles is 107% of average, which is equivalent to 93 maf for the forecast period.

2d. NWRFC Climate Forecast. Both the 6-10 day and the 8-14 day forecasts indicate a 70-80% probability of below average temperatures and a 30-50% probability of above average precipitation in Washington, Oregon, Idaho and Western Montana.

2e. Bonneville Dam Current Hourly Data. Bonneville is currently discharging 84.1 kcfs total outflow, with a tailwater elevation of 8.7 ft, Baus reported. It will take an additional 20-32 kcfs of flow augmentation to achieve the target tailwater elevation range of 11.5-13 ft when the chum operation begins, Tony Norris, BPA, noted.

2f. TMT Coordinated 10/25 Chum Operation. Based on the 10/25 TMT coordination chum operation the Action Agencies will implement the following operation.

- Effective November 7, at 0600 hours operate the Bonneville Dam tailwater in the following order of operating ranges as project outflow increases.
- During all hours, operate project outflow to provide a tailwater elevation in the range of 11.5 to 13.0 feet.
- Then, if necessary to increase project outflow the tailwater may be operated up to 16.5 feet during nighttime hours (1700-0600). Concentrate the highest elevations around 2400 hours.
- Then, if necessary to increase project outflow, the tailwater may be operated up to 18.5 feet during nighttime hours (1700-0600).
- Then, if increasing river flows precludes the ability to manage tailwater elevations, within the steps above, operate to provide a tailwater range of 13.0-16.5 feet during daytime hours (0600-1700) and up to the maximum within project 24-hour ramp rate limits during nighttime hours (1700-0600).

3. Dworshak Operations

Dworshak is currently releasing 1.7 kcfs through a single unit. Forebay elevation is 1518.7 ft. With the unit 3 outage extending into the 2018 fish passage season, TMT began talking today about how to operate Dworshak this fall and winter so as to minimize the risk of exposing hatcheries to high levels of TDG downstream of the dam, as happened last year.

FPAC's phone conference yesterday revolved around asking the COE to begin analysis of how to support better planning for next year's operation under high, medium and low inflow scenarios, Paul Wagner reported. At what rates should the project draft under a range of conditions? The main concern is that only a single unit will be available in January, limiting project outflows to 2.5 kcfs. Are there steps that could be taken now to position the project so it won't have to spill to high TDG levels next spring?

Last year, DWR refilled 12 ft in November, which helped lead to TDG problems later, Tom Lorz recalled. This year, the COE should look cautiously at water storage vs. the need to retain spring augmentation volume. Lorz noted that the Nez Perce Tribe, a major stakeholder, was not represented today.

Russ Kiefer, Idaho, reported that Nez Perce and USFWS are working with IDFG on a plan that includes giving the COE some TDG ranges below the project that hatcheries can manage. The goal is to provide a first draft of their findings in 2 weeks and present a final report at the TMT year-end review.

Julie Ammann, COE, asked for confirmation that the Salmon Managers are interested in avoiding excessive refill, but not in pre-drafting. With the operational limitations in January and considering potential impacts to refill, TDG management and April 10, what is the most prudent operation now? Modeling will provide more guidance over the next two weeks, Wagner replied.

The Nez Perce have expressed concern that increasing discharges now could encourage fall Chinook to spawn at high elevations in the Clearwater River, putting them at risk of dewatering later, Dave Swank, USFWS, said. TMT will revisit this issue at its next meeting November 15. By then, fall Chinook spawning should be done. Erick Van Dyke, Oregon, requested an update on Dworshak rehabilitation at that meeting.

4. Next TMT Meeting

TMT will meet next in person on November 15.

Name	Affiliation
Charles Morrill	Washington
Jim Litchfield	Montana
Dave Swank	USFWS
Jen Graham	Warm Springs Tribe
John Roache	BOR
Tom Lorz	CRITFC/Umatilla
Scott Bettin	BPA
Doug Baus	COE
Julie Ammann	COE
Lisa Wright	COE
Tony Norris	BPA
Paul Wagner	NOAA
Michael Bryant	CBB
Shane Scott	PPC
Michelle Yuen	COE
Charles Wiggins	DSC
Jay XX	Chelan PUD
Erick Van Dyke	Oregon
Aaron Marshall	COE
Eric Chow	COE
Peter Cooper	BOR

Chris Runyan
Steve Burrell
Mike Shafley
Russ Kiefer

BOR
COE
Snohomish
Idaho