

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

November 2, 2016

Facilitator's Summary

Facilitator & Notes: Emily Stranz; Support: 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.

Chum Operation

Paul Wagner, NOAA, shared an update on chum operations. Presently, no chum have been observed on the spawning grounds downstream of Bonneville Dam, however, seven have been counted at Bonneville Dam. There are nearly 1,000 Chinook utilizing the spawning grounds at this point. Doug Baus, Corps, recounted the current operation which started on November 1 and will continue until further notice:

1. At all hours, operate project tailwater to provide an elevation between 11.5 and 13.0ft.
2. Then, if necessary to increase project outflow, the tailwater may be operated up to 16.5 feet during nighttime hours (1700 □ 0600). Concentrate highest elevations around 2400 hours.
3. Then, if necessary to increase project outflow, the tailwater may be operated up to 18.5 feet during nighttime hours (1700 □ 0600).
4. Then, if increasing river flow precluded the ability to manage tailwater within the steps above, operate to provide a tailwater in the 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).

Doug noted that on November 1st the project tailwater elevation at 0700 was 12.8ft and at 0800 it was 12.6. Last night, the project ramped up to 16.3ft at midnight. Hourly data is available on the TMT website.

Charlie Morrill, WA, asked TMT members for input, noting that Washington would prefer that the project maintain 16.5 for 24 hours if needed instead of bumping up to 18ft. He noted that the 18ft tailwater is likely to push fish off active redds and out of preferred spawning areas. According to last year's surveys, Chum did not utilize spawning grounds made available at the higher elevations. Thus, Charlie is not as concerned about the risk of chum establishing new redds at higher elevations and more concerned with the potential of moving chum off active redds and preferred spawning areas, which flows above 16.5ft are more likely to do. Paul cautioned that holding 16.5ft would risk placing the Chum at a high elevation. He noted that the water supply thus far has been manageable and looks to be drying out in the near future. Scott Bettin, BPA, suggested that TMT members think on this and discuss at the next TMT meeting.

Doug shared that due to maintenance there is limited hydraulic capacity at Bonneville and thus the project will likely have to spill at times. There was spill at 1900 on November 1st. Looking ahead the 6-10 day temperature forecast is expected to be above average, whereas precipitation is expected to be below average. Looking further out at the 30 day forecast, the forecasts show both above and below average precipitation. The April-August 5-day QFC water supply forecast volume for The Dalles is 92 maf (105% of the 10-year average).

- **ACTION:** The Corps will continue to implement the chum operation as coordinated through TMT. TMT members will revisit the chum operation at the next TMT meeting, which will be a conference call on November 9th.

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

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

November 2, 2016

Minutes: Pat Vivian

1. Introduction

Representatives of the BOR, COE, BPA, NOAA, Montana, Idaho, Washington, Oregon and others participated in today's TMT call chaired by Doug Baus, COE, and facilitated by Emily Stranz, DS Consulting. The main purpose of this conversation was to review updated forecast information and coordinate the chum operation at Bonneville Dam.

2. Chum Operation

2a. Bonneville Dam Adult Salmon Counts. Surveyors have observed a total of 7 chum spawners at Bonneville so far this season, 5 of them within the past week. One spawner died, Paul Wagner, NOAA, reported.

2b. Chum Salmon Spawning Ground Surveys 2016-17. As of October 28, no chum spawners have been sighted in the Ives/Pierce Island Complex, Wagner reported. There were, however, close to a thousand live chinook salmon and 270 redds. These are much higher counts than usual.

2c. Current Chum Operation. The 2016 chum operation began at 0600 hours on November 1, Baus reported. This operation will continue until further notice with regular coordination at TMT. Baus outlined the steps of the operation for chum:

Effective Tuesday, November 1, at 0600 hours until further notice, operate the Bonneville Dam tailwater in the following order of elevation ranges as project outflows increase:

1. During all hours, operate project outflow to provide a tailwater elevation in the range of 11.5 to 13.0 feet. That's what's happening at present, with the Bonneville tailwater hovering around 12.6-12.8 feet this morning.
2. 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.
3. If necessary to increase project outflow, the tailwater may be operated up to 18.5 feet during nighttime hours (1700-0600).
4. If increasing river flow precludes the ability to manage the tailwater elevation within the steps above, operate to provide a tailwater in the 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).

To date, the project tailwater elevation has stayed below 16.5 ft (step 2), Baus said.

Charles Morrill, Washington, said yesterday's FPAC discussion led him to believe that after step 2, another step would take the project to a 15.15-16.15 ft elevation range over a 24-hour period before allowing the tailwater to rise to 18.5 ft as described in step 3. Morrill noted that last year's chum surveys didn't find spawning in areas where flows had raised tailwater elevations above 16 ft. Allowing the tailwater to rise above 18 ft could dislocate chinook as well as chum. If there is a lot of water to release, **Washington** would prefer that flows be spread out over a period of time rather than allowing the tailwater elevation to reach 18.5 ft.

The forecast over the next 10 days shows a drying trend, Wagner said. With all the chinook that are present in the area, **NOAA** would not advise putting their spawning at risk by raising the tailwater elevation limit to 18.5 ft. Chinook spawning is valuable even if they aren't a listed species, and 18.5 ft could drive them away. Wagner noted that the strategy of previous chum operations has been to increase the tailwater elevation and associated risk gradually as spawning season progresses. Given that river flows seem to be manageable in the near future, a high level of risk this early in the operation seems unwarranted.

If the Bonneville tailwater elevation does touch 18 ft, it probably will be within the next few days and not for long, Scott Bettin, BPA, said. TMT will revisit the chum operation in a conference call next week.

As of 1900 hours on November 1, Bonneville began spilling due to limited hydraulic capacity while dam repairs and maintenance are in progress, Baus said. He invited TMT members to contact him if they have any questions about spill levels at Bonneville.

2d. Bonneville Dam Hourly Data. Current project tailwater elevation is 12.6 ft with total outflows of 121.2 kcfs.

2e. NWRFC Climate Forecast. The NWRFC predicts that precipitation will be below average over the next 6-10 days. The pattern looks similar 14 days out, with temperatures above average and precipitation below average. The 30-day forecast shows an equal chance of either above or below average temperatures and above average precipitation. The 90-day forecast shows equal chances of temperatures and precipitation being above average in Oregon and Washington.

2f. NWRFC Water Supply Forecast at The Dalles Dam. The latest water supply volume forecast for April-August is 92 maf at The Dalles, which is 105% of average.

3. Next TMT Meeting

TMT decided to meet again by phone next week (November 9) to review the chum operation in addition to meeting on November 16 in person. Meanwhile the COE will continue to implement the chum operation as coordinated at TMT.

<i>Name</i>	<i>Affiliation</i>
Mary Mellema	BOR
Doug Baus	COE
Scott Bettin	BPA
Paul Wagner	NOAA
Laura Hamilton	COE
Aaron Marshall	COE
Michael Bryant	CBB
Laura Berg	Clearing Up
XX	NPCC
Jim Litchfield	Montana
Russ Kiefer	Idaho
Charles Morrill	Washington
Erick Van Dyke	Oregon
Sarah Wilson	COE
Steve Burrell	COE