

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

November 18, 2015

Facilitator's Summary

Facilitator: Emily Plummer, Notes: Tory Hines, DS Consulting

The following notes are a summary of issues that are intended to 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, reported that the chum operation commenced on November 7th at 0600 hours. Chum were observed in the area, but flows were not sufficient to create spawning at Hamilton Creek. Throughout the operation thus far, tailwater elevations have ranged from 11.5-12ft, however, rose to 16ft on November 17th due to large amounts of rainfall. Chum counts observed at Woods Landing were around 160 and at Bonneville numbers were near 140. Charles Morrill, WA, extended his appreciation to the Action Agencies for implementing the operation. He also confirmed that Chum counts were abundant in most areas. Charles also noted that the last time Chum counts were over 100 at Bonneville Dam was in 2010 and the current count of 146 is the highest number observed in the last 10 years. Doug Baus, COE-NWD, reviewed the Chum operation (see 11/4 TMT Summary for details).

Zero Nighttime Generation on the Lower Snake River Projects – Paul Wagner, NOAA, shared the 2015 criteria for fish passage at Lower Granite, which will trigger the implementation of zero nighttime generation at the Snake River projects. The zero nighttime generation operation, outlined in SOR 2005-22, allows for zero nighttime generation on a limited basis on the Snake River, when there are "few" adult fish passing Lower Granite Dam. In previous years this operation may occur during the months of December through February. A criterion was established to define the term "few" as it relates to migrating Steelhead. For 2015, the number of returning Steelhead counted at Lower Granite Dam since June 1 through yesterday (November 17) has been 33,000 wild, and 127,000 cumulative (wild and hatchery). Using these run-to date numbers, the criteria this year for "few" fish is defined as less than 20 wild steelhead, and less than 50 combined wild and hatchery steelhead. Lisa Wright, COE-NWD, noted that only one count (wild or cumulative) needs to be higher than the criterion to show more than a "few" adults migrating. In other words, both wild and cumulative counts need to be below the "few" criteria in order to trigger the zero generation operation.

Doug Baus noted once the criteria (wild<20 and combined<50) have been achieved as a 3-day rolling average, then the Action Agencies will implement the operation. If the criteria of wild and combined is not achieved by December 30 when Lower Granite Dam adult ladder counts end the operation will be implemented starting on December 31st and continue through February.

→ **ACTION:** The Corps and NOAA will continue to track Steelhead counts, when/if the criteria are met, Paul Wagner will email the AAs to begin implementation of the zero night-time generation on the Snake River projects.

Operations Review

Reservoirs

Mary Mellema, BOR, reported the Reclamation projects:

- Hungry Horse midnight elevation was at 3,527.01ft with 1.4kcfs outflows and inflows picking up; the project is drafting to meet the Columbia Falls minimum flows.
- Grand Coulee midnight elevation was at 1,288.0ft.

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

- Libby was at elevation 2,440.7ft, with 6.8kcfs inflow and 13.7kcfs outflow.
- Albeni Falls was at elevation 2,051.4ft, with 15.9kcfs inflow and 18.5kcfs outflow. The project is being operated within the .5ft operating range for the Kokanee operation.
- Dworshak was at elevation 1,516.5ft, with 2.1kcfs inflow and 1.6kcfs outflow.
- Lower Granite average outflow was 15.0kcfs.
- McNary average outflow was 116.3kcfs.
- Bonneville average outflow was 125.3kcfs.

Fish

Paul Wagner, NOAA, reported on fish. Juvenile collection and monitoring sites are closed for the year. For adults, a few hundred fall Chinook are still passing at Bonneville. Steelhead numbers are less than a hundred per day at Bonneville. Fall Chinook numbers are 212% of the 10 year average, combined Steelhead numbers are 76% of the 10 year average and wild Steelhead numbers are 86% of the 10 year average. At Lower Granite, fall Chinook daily counts are less than 50 per day. The total count of fall Chinook at Lower Granite is 59,225 (202% of the 10 year average). For Steelhead, a few hundred are still passing Lower Granite. The total number of combined Steelhead is 136,863 (81% of the 10 year average) and 38,140 (88% of the 10 year average) for wild Steelhead. Sockeye also had a below average year while spring Chinook performed very well at Lower Granite and Bonneville. Coho numbers were low in 2015, at Bonneville 36,692 passed, well below the average of 129,000 (20% of the 10 year average). Jack counts for spring Chinook were also on the low side, 13,314 for 2015 compared to 26,000 in 2014. This year's migrants will likely face limiting ocean conditions. Overall though, this was a good year for adult passage.

Water Quality

Laura Hamilton, COE, stated that all gauges are functioning well.

Power Systems

Nothing to report.

The next TMT meeting will be the Year End Review at 9:00am on December 2nd at the Ambridge Event Center.

Columbia River Regional Forum
TECHNICAL MANAGEMENT TEAM—OFFICIAL MINUTES

November 18, 2015

Minutes: Pat Vivian

1. Introduction and Review of Meeting Minutes – October 21 and November 4

Representatives of the BOR, BPA, USFWS, NOAA, COE, Oregon, Washington, Idaho, CRITFC/Umatilla, NOAA, Colville Tribe and others participated in today's TMT meeting chaired by Doug Baus, COE, and facilitated by Emily Plummer, DS Consulting. This summary is an official record of the conversation, not a verbatim transcript.

Paul Wagner, NOAA, revised some numbers quoted in the October 21 meeting minutes re: NOAA's memo on 2015 survival rates for listed fish. Charles Morrill, Washington, edited the wording of his question in the October 21 facilitator's notes. With these changes, the October 21 and November 4 minutes and facilitator's notes will be considered final.

2. Chum Spawning Operation

On November 6, NOAA and WDFW biologists went to the Hamilton Creek area to observe chum activity and note whether flows were sufficient to provide access to spawning areas. While the current elevation allowed access to Hamilton Creek, it wasn't sufficient to stimulate spawning, Wagner reported. On November 6, BON was operating to a 10.5 ft minimum tailwater elevation with a goal of maintaining 11 ft or higher.

The most recent WDFW tally was 80 chum in the Hamilton Creek area and 146 to date passing Bonneville Dam.

On Saturday, November 7, at 6am the Action Agencies initiated the chum operation to maintain the Bonneville Dam tailwater in the following order of operating ranges as project outflow increases. The goal of this operation is to improve chum spawning conditions in the Ives/Pierce Island complex.

1. During all hours, operate project outflow to provide a tailwater elevation in the range of 11.5-12.5 feet.
2. If necessary to increase project outflow, the tailwater may be operated up to 13.0 feet at any time. Bonneville Dam will return to a tailwater range of 11.5 to 12.5 feet whenever possible.
3. Then if necessary to increase project outflow, the tailwater may be operated up to 16.5 feet during nighttime hours (1700 to 0600 hours). The highest tailwater elevations will be concentrated around 2400 hours.

4. Then if necessary to increase project outflow, the tailwater may be operated up to 18.5 feet during nighttime hours (1700 to 0600 hours).

5. If increasing river flow precludes the project's ability to manage tailwater in accordance with the steps above, operate to provide a tailwater in the range of 13.0-16.5 feet during daytime hours (0600–1700 hours) and up to the maximum within project 24-hour ramp rate limits during nighttime hours (1700-0600).

Since the chum operation began on November 7, heavy rain has sent the tailwater up as high as 16 ft elevation at night. Another round of precipitation might arrive in the next few days, Tony Norris, BPA, said. This year's count of 146 chum to date passing Bonneville is the highest since 2005, Charles Morrill, Washington, said. Last year's chum count as of this date was only a little more than 100. TMT will revisit the operation at our next meeting on December 16.

3. Snake River Zero Nighttime Generation

The trigger for zero nighttime generation is based on the cumulative run-to-date of adult steelhead counted at Lower Granite Dam since June 1. This year, the run-to-date is 33,000 wild steelhead and 127,000 combined (hatchery + wild), which results in a "few" criteria definition of less than 50 combined and less than 20 wild as a rolling 3-day average to trigger the zero generation operation.

Wagner gave some history on how the trigger is indexed every year to cumulative steelhead counts. The process was identified in 2005 as a way to determine when few if any steelhead are still passing. Separate thresholds for wild and hatchery steelhead were established. Both thresholds (in 2015, less than 20 wild and less than 50 wild and hatchery steelhead combined) must be achieved prior to implementing the zero nighttime generation operation.

The trigger will apply at Lower Granite beginning December 1 and end when fish counts end on December 30. If steelhead passage doesn't meet both thresholds by December 30, zero nighttime generation may begin by default on December 31, 2015. Wagner will notify the Action Agencies when the criteria have been met for zero nighttime generation to begin.

5. Operations Review

5a. Reservoirs. Mary Mellema, BOR, and Lisa Wright, COE, reported. Hungry Horse is at elevation 3527.01 ft, discharging 1.4 kcfs with sufficient inflows to continue meeting Columbia Falls minimum. Grand Coulee is at elevation 1288 ft. Libby is at elevation 2440.7 ft with average inflows of 6.8 kcfs and releases of 13.7 kcfs. Albeni Falls is at elevation 2051.4 ft with average inflows of 15.9 kcfs and releases of 18.5 kcfs. ALF is operating within a half-foot range of full until the end of December or when kokanee spawning ends, whichever comes first. Dworshak is at elevation 1516.5 ft, with average inflows of 2.1 kcfs and releases of 1.6 kcfs. Lower Granite average outflows

are 15 kcfs, McNary average outflows are 116.3 kcfs, and Bonneville average outflows are 125.3 kcfs.

5b. Fish. All juvenile monitoring sites are closed down for the year, Wagner said. A few hundred fall Chinook adults are still passing Bonneville per day, with a recent daily count of 129 adults. At Lower Granite, daily counts have been in the range of less than 50. It's been a stellar year for fall Chinook, with total adult returns at 59,326 to date, which is 202% of the 10-year average.

Steelhead haven't fared as well, with a few hundred per day still passing Lower Granite and a seasonal count of 136,863 wild and hatchery steelhead, which is 81% of the 10-year average. Wild steelhead are passing Granite at the rate of 100 or more per day with a seasonal count of 38,140, which is 88% of the 10-year average. The sockeye run had a great start in 2015 but ended poorly. Coho also fared poorly in 2015. The estimated count of 36,692 coho is only about 20% of the 10-year average of 129,000.

Nevertheless, this has been a good year for adult passage overall. Spring Chinook fared well, although spring Chinook jack counts are low at 13,314 compared to the 10-year average of 23,000 jacks. This indicates next year's spring Chinook run might not be as robust. With a strong El Nino and positive PDO readings, ocean conditions don't look promising for this year's outmigrants.

5c. Water Quality. All water quality gages are functioning well, Laura Hamilton, COE, reported.

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

6. Next TMT Meeting

TMT will meet next at the year-end review on December 2. The next regular TMT meeting will be December 16.

Name	Affiliation
Mary Mellema	BOR
Tony Norris	BPA
Eve James	BPA
Scott Bettin	BPA
Joe Skalicky	USFWS
Paul Wagner	NOAA
Doug Baus	COE
Laura Hamilton	COE
Tory Hines	DSC
Erick Van Dyke	Oregon
Lisa Wright	COE
Karl Kanbergs	COE

Phone:

Charles Morrill

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Don Tinker

Ryan Zigler

Dave Benner

Margaret Filardo

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CRITFC/Umatilla

NOAA

Colville Tribe

COE Walla Walla

SCL

Snohomish PUD

FPC

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Idaho