

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

December 14, 2022

DRAFT Facilitator's Summary

Facilitation Team: Emily Stranz & Colby Mills, 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; it is not intended to be the "record" of the meeting. Official minutes can be found on the TMT website: <http://pweb.crohms.org/tmt/agendas/2022/>. Suggested edits for the summary are welcome and can be sent to Colby at colby@dsconsult.co.

Review Meeting Summaries & Minutes – TMT Members finalized official meeting minutes and facilitator's summaries from the November 2 and 16 meetings.

Chum Operation – Doug Baus, Corps, reported on the October 19 TMT coordinated chum operation, noting the upcoming transition from the spawning to incubation phase of the operation (the current spawning operation is posted to the TMT website).

The average project tailwater elevation at Bonneville Dam today is 12.7 feet. Total outflows have ranged from 138-142 kcfs, with an average of 141 kcfs.

The NWRFC inflow forecasts for the next 10-days range from a high of 144 kcfs on Dec 16 to a low of 131 kcfs on December 14. The 10-day forecast period shows cool temperatures and little precipitation through this week, with incoming precipitation and lower freezing levels on Saturday throughout the Columbia River Basin for the remainder of the 10-day period, which should result in snow accumulation.

The NWRFC climate forecast for the 6-10-day outlook shows a probability of below average temperatures throughout the basin, and near normal levels of precipitation in the Cascades and to the west, with a probability of above average precipitation east of the Cascades. The 8-14-day outlook shows a similar pattern of below average temperatures and above average precipitation throughout the basin.

Tony Norris, BPA, reported on data collected on December 2 by land surveyors, noting that Charles Morrill, WA, will accompany Tony on a December 23 land survey to help determine a desired water depth for redd protection. Based on the data collected December 2, Tony noted that an elevation of 11.8 is likely a good protection level target; this will be updated as needed based on continued weekly survey count data and pending elevation survey. Protection levels can be adjusted into the new year. Thousands of chum have been observed spawning in the Ives/Pierce area and Hamilton Creek and Springs this season.

Action Agencies offered December 23 as a tentative date to shift from the chum spawning operation to the incubation phase, pending more survey data; Tony noted pushing the date out further towards the end of the year is likely due to the number of chum present. Charles agreed and noted that with the abundance of chum this season, protection for emergence will likely be pushed out to the end of the year, if not January 1. Erick Van Dyke, OR, requested that the draft incubation operation description (on the TMT website) is edited to show a potential spawning operation end date of 12/31 instead of 12/23 to be consistent with the operating document, and that timing of the shift to the incubation phase is biologically-based.

TMT partners will continue to monitor chum spawning. Between now and the end of the month, WA, OR, NOAA, and BPA, will continue to coordinate the shift to the incubation operation (via calls and email). Charles noted that, should significant numbers of chum still be observed at the end of the year, a discussion would occur on when to transition the operation.

Operations Review – Reservoirs: Joel Fenolio, Reclamation, reported on Bureau of Reclamation projects:

- **Hungry Horse:** midnight elevation was 3,536 feet; the project has been operating to the Columbia Falls minimum; releases have been around 2,700 cfs, although they bumped up to 2,800 cfs with colder temperatures. Inflows into the reservoir are pretty low, 12-feet lower than last year this time, and several feet lower than average for this time of year. The project is drafting about ¼ foot per day. Joel noted that USFS plans to repair the Kneif Creek culvert, which requires project elevation down to 3,520 feet by March. This should be manageable based on current inflow trends.
- **Grand Coulee:** midnight elevation was 1,279.8 feet; inflows have been averaging around 99,000 cfs, with average releases yesterday about 104,000 cfs.

Lisa Wright, Corps, reported on Corps of Engineers projects:

- **Libby:** midnight elevation was 2,428.3 feet, with average inflows of 4.1 kcfs, and outflows of 18.3 kcfs;
- **Albeni Falls:** midnight elevation was 2,051.3 feet, with average inflows of 10.4 kcfs, and outflows of 10.0 kcfs;
- **Dworshak:** midnight elevation was 1,514.4 feet, with average inflows of 1.2 kcfs, and outflows of 1.7 kcfs;
- **Lower Granite:** average outflows of 21.8 kcfs;
- **McNary:** average outflows of 122.7 kcfs; and
- **Bonneville:** average outflows of 132.8 kcfs.

Water Quality: Dan Turner, Corps, reported multiple TDG exceedances at Lower Granite during the transformer maintenance testing (the daily high was averaging 139%), with about 8-12 hours/day of speed no load through unit 5 which caused high levels of TDG. On December 7 the Corps instructed the project to start spilling 3.5 kcfs concurrent with the speed no load operation, which was effective in reducing TDG back down to about 115%.

Fish: Trevor Conder, NOAA, reported minimal movement for juveniles and adults as expected for this time of year. Of note, at Lower Granite, adults are still under the few fish criteria with under 30 total steelhead/10 unclipped.

Power System: Tony noted recent cold temperatures, resulting in increased regional power use. The current high-pressure systems result in little wind generation, and BPA is meeting demand using market and power flexibility. BPA used zero generation operations for the first 8 days that it was available at the lower 3 projects (Lower Granite excluded due to transformer work).

Jay Hesse, Nez Perce Tribe, reiterated that the Tribe does not support consecutive days of using zero flow operations at Lower Snake River projects and that it is not consistent with their interpretation of what is permitted. Erick and Charlie both echoed Jay's perspective on behalf of Oregon and Washington respectively. Erick added that the operation is not a positive operation for the basin from Oregon's perspective.

Questions and Comments from Non-TMT Members: There were no questions or comments from members of the public.

The next scheduled TMT meeting is on January 4, 2023 at 9:00 AM.

**Columbia River Regional Forum
Technical Management Team
DRAFT OFFICIAL MINUTES
Wednesday, December 14, 2022**

Minutes: Andrea Ausmus, BPA (contractor, CorSource Technology Group)

Today's TMT meeting was held via conference call and webinar, chaired by Doug Baus, Corps, and facilitated by Emily Stranz, DS Consulting. A list of today's attendees is available at the end of these minutes.

1. Review Meeting Summaries & Minutes – Nov 2 and Nov 16

- Summaries and minutes were approved.

2. Chum Operation – *Doug Baus, Corps; Joel Fenolio, BOR; Kelsey Swieca, NOAA Fisheries; Tony Norris, BPA*

Baus shared that it is time to coordinate Phase 2 of the chum operation which transitions from a spawning to an incubation operation.

Phase 3 of the operation will be the coordination of the end of the Chum Operation, no later than April 10, 2023 (Concurrent to Spring Spill).

a. Bonneville Dam - Hourly Data

- Tailwater elevation average for December: 12.7 feet
 - Fits within the range of the spawning operation.
- Outflows: 138-142 kcfs; average today (Dec 14) of 141 kcfs

b. Bonneville Dam – Inflow Forecast – *Doug Baus, Corps*

- 10-day period
 - Inflow High: 144 kcfs (Dec 16)
 - Inflow Low: 131 kcfs (Dec 14)

c. NWRFC 10-Day Weather Forecast – *Doug Baus, Corps*

- Cool and dry for the first few days
- Precipitation coming in on Saturday to the Columbia Basin.
- Freezing levels dropping and possible snow accumulation.
- Precipitation and freezing temperatures hold through 10-day period

d. NWRFC Climate Forecast – *Doug Baus, Corps*

- Temperatures (6-10 day outlook)

- Higher probability of below average throughout Columbia Basin
- Variability in precipitation (6-10 day outlook)
 - Near Normal: Cascades and West of Cascades
 - Above Average: East of Cascades
- 8-14 day outlook
 - Higher probability of below average temperatures.
 - Higher probability of above average precipitation.
 - A good chance for snow building in the near term.

NWRFC - Hood - Stage/Discharge Forecast – Tony Norris, BPA

Norris looked at December 2 survey data. Charles Morrill, WA, will accompany Norris on December 23.

- Good year for chum spawning in Ives, Hamilton Creek and Springs.
- Protection level
 - Currently have a minimum tailwater of 11.5 feet for the spawning operation.
 - Norris believes that an incubation protection minimum tailwater of 11.8 would be better based on December 2 data.
- Norris will update based on December 23 trip with the survey crew.
- Update protection level after January 1, if needing adjustment.
- End date is tentative and will need updating based on surveyors findings and December 23 trip.

Morrill shared that there is an abundance of chum and he would not be surprised to see chum spawning to end of year. Deciding the protection level will likely be pushed back to the end of the year if not into January.

Norris clarified that the chum monitoring will occur out there every week. There may be more information before Friday (December 23) and as such will be able to revise the data based on that information.

Morrill explained that the surveys are conducted weekly. Hamilton Creek and Ives surveys are conducted on different days and so there will be coordination between them.

Norris added that there are two types of surveys; biologists and redd depth surveyors (gps to measure depths to determine submergence at Bonneville tailwater).

Coordination for TMT prior to next meeting. Norris explained that traditionally Washington, NOAA and BPA would get together to coordinate the interim protection via email.

Morrill said that Oregon should be included in the plans. Agreed that phone and email should be sufficient.

Erick Van Dyke, OR, appreciates that Washington included Oregon but he is frustrated that BPA management is moving further from focusing on the fish protection measures and moving towards removing dates from the details. He shared that he is not comfortable with the December 23 date shift. He would like to have the documentation returned to December 31 for the time being. Especially because there were over 600 fish observed in the last survey. He would like to have the decisions made based on the biological-based date.

Norris said that he plans to base decisions on current field data but the December 23 date is there for a placeholder. The December 31 is a 'no later than' date.

Morrill added that if there is are chum then there would be a discussion about the protection level; the date is negotiable.

Norris added a reminder that the change to incubation means that the protection level chosen will become the minimum. The transition to the incubation phase of the chum operation will continue to provide sufficient habitat for spawning if there are any chum still present. He is willing to change the date for the proposed operation but wants to add that if the field surveyors share that there are no fish between Christmas and New Year's then he expects that the adjustment be made depending on what is found in the field.

There will be ongoing coordination.

Baus added that real variables include weather and coordination availability. He wants to emphasize that there is a planning end date based on the two factors.

Tentative Chum Operation:

Transition on December 31 to the Chum Incubation Period minimum tailwater elevation of 11.8 during all hours unless told otherwise by Washington, Oregon, NOAA, or BPA.

Kelsey Swieca added that the plan works for NOAA and thanks all for the coordination.

3. Operations Review

e. Reservoirs

Reclamation – Joel Fenolio

- Hungry Horse Dam
 - Midnight elevation: 3536 ft.
 - Average Outflows: 2.7 – 2.8 kcfs (Columbia Falls minimums)
 - Average Inflows:
 - 12 ft. lower than last year
 - 7 ft. lower than average
 - ¼ ft. draft/day

- Forest Service moved forward with the Knieff Creek culvert repairs on the upstream side of the dam.
 - Requires elevation of 3520 ft. by March 1.
 - If the trend continues with inflows they should be lower by beginning of March.
- Grand Coulee Dam
 - Midnight elevation: 1279.8 ft.
 - Inflows: 99 kcfs
 - Outflows: 104 kcfs

Corps – Lisa Wright

- Libby Dam
 - Midnight elevation: 2428.3 ft.
 - Inflows: 4.1 kcfs
 - Outflows: 18.3 kcfs
 - Albeni Falls
 - Midnight elevation: 2051.3 ft.
 - Inflows: 10.4 kcfs
 - Outflows: 10.0 kcfs
 - Dworshak Dam
 - Midnight elevation: 1514.4 ft.
 - Inflows: 1.2 kcfs
 - Outflows: 1.7 kcfs
 - Lower Granite average outflows: 21.8 kcfs.
 - McNary average outflows: 122.7 kcfs.
 - Bonneville average outflows: 132.8 kcfs.
- f. Water Quality – Dan Turner, Corps
- Lower Granite
 - During transformer maintenance 8 – 12 hours of speed no load on Unit 5.

- This has been causing high TDG through December 6.
- On December 7, the Corps added 3.5 kefs spill concurrent with Speed no Load operation. This reduced TDG.
- Before December 7, the TDG was averaging 139%.
- With the concurrent spill, the average TDG reduced to 115%.
- Appears to be a successful operation.

g. Fish – Trevor Condor, NOAA Fisheries

Minimal movement for Juveniles and Adults.

- Adults
 - Lower Granite
 - Still under “few fish” criteria of less than 30 total steelhead and less than 10 wild.
 - Meeting these criteria on days of the Lower Granite outage for transformer maintenance and on days of normal operations.

h. Power Report – Tony Norris, *BPA*

- With the cold, there is a need for power.
- Meeting load.
- With the high-pressure systems, there is not a lot of wind.
- Using market to manage power system
- Zero generation power flexibility was used for the first 8 days available.
- Only used at lower three projects.
 - Lower Granite has been excluded for work on the transformer.

Jay Hesse, Nez Perce, reminded TMT that the consecutive days of using zero flow operation of Lower Snake projects is not supported by Nez Perce and not under their understanding of the operations. They do not desire to have the operation implemented on consecutive days moving forward.

Van Dyke added that Oregon also wants to be on the record with the same concern. In the past the concern was elevated and he feels that the concern was lost in the shuffle by the Action Agencies. It is important that it is known that Oregon does not support as a good operation for the basin.

Morrill understands the concern and Washington agrees with Oregon and Nez Perce.

Ebel asked for the end of December elevation for Libby.

Norris shared the elevation of 2419.3 ft.

Ebel said that for January TMT’s he will possibly request shifting the meeting dates to align with the water supply forecast schedule.

Norris shared that the data is posted on Corps’ FRM page.

4. Public Comments:

None

5. Set agenda for next meeting – January 4, 2023

- a. Update to Chum protection level

Today’s Attendees:

Agency	TMT Representative(s)
Army Corps of Engineers	Doug Baus (chair), Lisa Wright, Julie Ammann
Bonneville Power Administration	Tony Norris, Scott Bettin
Bureau of Reclamation	Joel Fenolio
NOAA Fisheries	Trevor Condor, Kelsey Sweica
US Fish & Wildlife Service	
Washington	Charles Morrill
Oregon	Erick VanDyke
Idaho	Jonathan Ebel
Montana	Brian Marotz
Nez Perce Tribe	Jay Hesse
Umatilla Tribe/CRITFC	Tom Lorz
Colville Tribe	
Warm Springs Tribe	
Kootenai Tribe	
Spokane Tribe	

Other Attendees (non-TMT members):

Corps – Aaron Marshall, Alexis Mills, Dan Turner, Scott St. John

DS Consulting – Emily Stranz (Facilitator), Colby Mills

BPA – Andrea Ausmus (note taker, Contractor with CorSource Technology Group)

Energy Keepers – Eve James

Oregon DEQ – Marilyn Fonseca, David Gruen

Portland General Electric – Ruth Burris