

## COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

March 13, 2024

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: <https://pweb.crohms.org/tmt/agendas/2024/> Suggested edits for the summary are welcome and can be sent to Colby at [colby@dsconsult.co](mailto:colby@dsconsult.co).*

**Review Meeting Summaries & Minutes** – TMT Members approved the official meeting minutes and facilitator's summaries from the March 6 meeting.

**Chum Operation** – Doug Baus, Corps, reported that RFC inflow forecasts at Bonneville Dam over the next 10-day period show a low of 133 kcfs on March 17, and a high of 146 kcfs on March 22. Within the 10-day weather forecast, days 1-7 show a warming trend (forecasted snow levels reaching up to 8,000 feet in the Cascades) while the remainder of the 10-day shows cooling with a significant drop in freezing levels.

The 10-day precipitation forecast (QPF) shows predominantly well below average precipitation in the Columbia Basin, with the exception of normal to above average in the upper portion of the basin later in the forecast period. The 5-day QPF also shows well below average precipitation throughout the entire Columbia Basin.

Tony Norris, BPA, reported that BPA expects to maintain the chum tailwater minimum at Bonneville Dam and achieve the April 10 refill objective at Grand Coulee Dam. Charles Morrill, WA, noted that WDFW will continue to watch and monitor chum, and that he will provide an update next week with emergence/immigration data from Hamilton Springs. NOAA and Reclamation had nothing further to report regarding chum and there were no questions or comments from TMT.

### Operations Review

Reservoirs – Chris Runyan, Reclamation, reported on Bureau of Reclamation projects:

- **Hungry Horse:** Inflow yesterday was 1.4 kcfs, outflow was 1.75 kcfs, and midnight elevation was 3,533.4 feet. The project is 26.6 feet from full (filled 0.5 feet over the last week) and is currently operating to meet Columbia Falls minimums and to conserve water for spring refill. Snowpack in the basin has improved slightly since last month; Chris noted a unique (but not precedent setting) distribution of snow, near average by the dam and only 60-70% of average at the far southern end of the basin. The March through July forecast was 76% of average.
- **Grand Coulee:** Inflow yesterday was 67.1 kcfs, outflow was 65.1 kcfs, and midnight elevation was 1,286 feet. The project is 4 feet from full and refilled about 1-foot last week. Operations continue to support Bonneville minimum flows for chum. The April 10 elevation is 1,283.3 feet, April 30 is 1,282.7 feet. Chris noted that for the below average water supply this year, Coulee is well-positioned for meeting its April 10 elevation.

Brian Marotz, MT, asked if, based on the warming trend, Hungry Horse has begun to stratify thermally yet; Chris will contact the project and follow up with Brian offline.

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

- **Libby:** midnight elevation was 2,415.8 feet, average inflows of 2.5 kcfs, outflows of 4 kcfs;

- **Albeni Falls:** midnight elevation at the Hope gauge was 2,051.6 feet, average inflows of 19.6 kcfs, outflows of 17 kcfs;
- **Dworshak:** midnight elevation of 1,532.7 feet, average inflows of 4 kcfs, outflows of 1.7 kcfs;
- **Lower Granite:** average outflows of 31.7 kcfs
- **McNary:** average outflows of 113.9 kcfs; and
- **Bonneville:** average outflows of 134.7 kcfs.

*Water Quality* – Alexis Mills, Corps, provided an update on March surface spill; operations began on March 1 and are occurring daily at the 4 lower Snake River projects and McNary (in accordance with the FPP). She noted that Little Goose started a day later due to a malfunction of the ASW.

The State of OR granted an extension of their TDG water quality standard (WQS) modification, which applies to March spill. WA previously clarified that their WQS is 115% in the forebay and 120% in the tailrace during the surface spill period. The maximum observed TDG so far has occurred in the Lower Monumental tailrace, at 111%, which is well below the WQS. Forebay gauges are being installed; work should be completed within the next few weeks. In response to a clarification question regarding the TDG tracking table, Alexis noted that the table uses the daily maximum values; however, the TDG criteria applies to the average of the twelve highest hourly TDG measures in a calendar day.

*Fish* – Kelsey Swieca, NOAA, reported incoming juvenile passage index data from the Bonneville bypass and 4 of the larger traps throughout the basin. Yearly Chinook passage has ranged from 30-1,000 at Bonneville, with elevated index numbers attributed to an early release from the Klickitat Hatchery. A handful of yearlings have been observed at the traps; particularly the Imnaha and Grand Ronde locations. Sub-yearling Chinook have mostly been collected as fry at Bonneville, where index has ranged from about 1,200 earlier this month to around 500 in the past couple days. There wasn't much to report for Coho, steelhead, or sockeye juveniles. Kelsey noted that chum are now a Smolt Monitoring Program (SMP) target species, and passage will be tracked and monitored at Bonneville; a couple of chum have passed since last Friday.

For adults: Bonneville is averaging 17 steelhead per day, with a scattering of spring Chinook over the past week. Lower Granite is averaging 30 steelhead per day, with adult steelhead PIT-tags also detected at the RSW during the winter surface spill operation. There was a total of 42 this winter: 15 known-origin, 13 of which were overshoots from the Tucannon, Touchet, Lower Snake, and John Day rivers.

Dave Swank, USFWS, reported that very few juvenile lamprey are showing up in Bonneville samples, which is usual for this time of year.

*Power System* – Tony reported relatively mild temperatures; there is more than enough power to meet demands.

**Questions and Comments from Members of the Public** – There were no questions or comments from members of the public.

**The next scheduled TMT meeting is on March 20, 2024, in-person and online, at 9:00 AM.**  
*Meeting at The Corps' Lloyd offices; wait for security escort from main lobby to 4<sup>th</sup> floor check-in.*

**Columbia River Regional Forum  
Technical Management Team  
OFFICIAL MINUTES  
Wednesday, March 6, 2024  
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 Summaries and Minutes – March 6**

- Charles Morrill, WA, said that he looked at the summaries and minutes and they looked fine to him.
- Summaries and Minutes – Approved

**2. Chum Operations – Doug Baus, Corps; Tony Norris, BPA; Chris Runyan, BOR; Charles Morrill, Washington; and Kelsey Swieca, NOAA Fisheries**

a. NWRFC – Bonneville Dam Extended Inflow Forecast

- 10 – Day Forecast
  - Low 133 kcfs (March 17)
  - High 146 kcfs (March 22)

b. NWRFC – 10 Day Meteorological Forecasts

- Days 1 – 7
  - Warming trend.
  - Day one forecasted snow levels of elevations ~2 – 3k feet, by day six of the forecast warm up to the ~6-8k foot elevation in the Cascades.
- Day 8 – 10
  - Shows cooling with dropping of the freezing levels.

c. NWRFC – Forecast Precipitation Summary

- 10-day QPF (Percent of Climatology) -- as it relates to percent of average
  - Predominantly in the Columbia Basin well below average precipitation.
  - With an exception of the Upper Columbia average with normal to above average precipitation.
- 5-day QPF (Percent of Climatology)
  - Well below average precipitation.
  - The precipitation that will target the Upper Columbia Basin, is forecasted in days 6 – 10.
  - It will be very dry for the next 5 days.

d. Summary and Comments of Chum Operations

- Tony Norris, BPA, said that BPA expects to continue to support the chum tailwater minimum and achieve the April 10 refill objective at Grand Coulee.
- Charles Morrill, WA, said next week he should have an update on Hamilton Springs to share with TMT. He said that WDFW continues to watch and pay attention. He said that TMT has been able to maintain the tailwater for chum and that is appreciated.

Kelsey Swieca, NOAA, said that NMFS looks forward to the update from WDFW next week.

### 3. Operations Review

#### a. Reservoirs

##### *Reclamation – Chris Runyan*

- Hungry Horse Dam
  - Inflow: 1.4 kcfs
  - Outflow: 1.75 kcfs
  - Midnight elevation: 3533.4 feet
    - Feet from full: 26.6 feet
    - Drafted from last week: ~0.5 foot.
  - Outflows are being adjusted to meet Columbia Falls minimums and to conserve water in the reservoir to help with Spring refill.
  - Snowpack in the basin has improved slightly since last month. There is a unique distribution of snow.
    - Near average by the dam.
    - 60 – 70% at the far Southern edge.
    - Unique but not precedent setting.
  - Current March – July Forecast: 76% of average
- Grand Coulee Dam (at Roosevelt)
  - Inflows: 67.1 kcfs
  - Outflows: 65.1 kcfs
  - Midnight elevation: 1286.0 feet
    - Feet from full: 4 feet.
    - Drafted from last week: ~1.0 foot.
  - Continuing to support Bonneville minimums for Chum.
  - Lake Roosevelt elevations:
    - April 10: 1283.3 feet
    - April 30: 1282.7 feet
    - With the below average water supply we have this year GCL is positioned well for meeting its April 10 elevation.

Brian Marotz, MT, asked if Runyan knew offhand if Hungry Horse is beginning to stratify thermally yet.

Runyan said that he could call the dam to get the water temperature, but he does not know offhand.

Marotz said that he knows that was out of left field, but he thought Runyan might know.

Runyan asked if that was something that Marotz typically saw that at this time of year.

Marotz said that it would be early, but it would not surprise him because of the warming trend that we are seeing.

Runyan said that he will look into it and will send Marotz an email.

*Corps – Lisa Wright*

- Libby Dam
  - Midnight elevation: 2415.8 feet
  - Inflows: 2.5 kcfs
  - Minimum Outflows: 4 kcfs
- Albeni Falls
  - Midnight elevation: 2051.6 feet (at the Hope gauge)
  - Inflows: 19.6 kcfs
  - Average Outflows: 17 kcfs
- Dworshak Dam
  - Midnight elevation: 1532.7 feet
  - Inflows: 4 kcfs
  - Outflows: 1.7 kcfs
- Lower Granite average outflows: 31.7 kcfs
- McNary average outflows: 113.9 kcfs
- Bonneville average outflows: 134.7 kcfs

b. Water Quality – *Alexis Mills, Corps*

- March Surface Spill
  - Began March 1.
    - Occurring daily at the four Lower Snake River project dams and McNary in accordance with the Fish Passage Plan (FPP).
    - With the exception of the first day at Little Goose which was shifted to the following day because of the malfunction of the Adjustable Spillway Weir (ASW).
- Oregon Water Quality Standard Modification
  - Following a request from the Corps, Oregon DEQ granted an extension of the Water Quality Standard Modification which applies during the month of March.

- Washington had previously clarified that their Water Quality Standard is 115% in the forebay and 120% in the tailrace.
- As of March 13, 2024, the maximum observed TDG has been in the Lower Monumental tailrace and was ~111% TDG. Well below the water quality standard.
- Forebay gages are being installed and are expected to be in within the next couple days.

Erick Van Dyke, OR, asked if the table used the highest hour or if it uses the highest of the 12 highest hours.

Mills said that was a great question. She said that the table uses the max hourly which is not necessarily the appropriate averaging. She said that she would confirm that for Van Dyke because they are looking at the 12-hour averages because that is the appropriate value during March. She would get back next week.

Van Dyke said that would be fine, his question was just to find out which one it was and that was answered.

c. Fish

*Salmon – Swieca, NOAA*

- Juveniles
  - Now tracking juvenile passage index data from the Bonneville Bypass and four of the larger traps throughout the Basin.
  - Yearling Chinook
    - Index Range of from 1000 – 30 individuals at Bonneville (BON).
      - Release from the Klickitat Hatchery
    - At Imnaha and Grand Ronde traps, a handful of yearlings have been counted.
  - Subyearling Chinook
    - Collected as fry at BON where index ranged from 1200 earlier in the season to 500 in the last couple of days.
  - Coho/Sockeye
    - Not a lot to report.
  - Chum
    - Now part of the Smolt Monitoring Program.
    - Will be tracking juvenile chum passage at BON.
    - Index has a couple of chum passing since last Friday and will continue to be monitored now that it is included in the SMP protocol.
- Adults
  - Bonneville
    - Steelhead: Average of 17 per day.
    - Spring Chinook scattered here and there over the last week.

- Lower Granite
  - Steelhead: Average of 30 per day
  - PIT tag data detected from the RSW during the March surface spill operation.
  - Steelhead: 42 detected
  - In PTAGIS 15 of the detections are of known origin.
  - Of those of known origin:
    - Majority originated from below the project.
    - 13 of 15 were overshoots.
    - Most were from Tucannon, a couple were from Touchet, and the remaining were from the Lower Snake River and the John Day.

*Lamprey – Dave Swank, USFWS*

- There is not much happening other than just a very few juvenile lamprey showing up in Bonneville samples.
- Not unusual for this time of year.

d. Power System – *Tony Norris, BPA*

- Temperatures are mild and we have more than enough power to meet our power demand.

**4. Public Comments:**

**5. Set agenda for next meeting – **March 20, 2024****

- Meeting will be in-person for those who can join.

**Today's Attendees:**

<b>Agency</b>	<b>TMT Representative(s)</b>
NOAA Fisheries	Kelsey Swieca, Trevor Conder
Oregon	Erick Van Dyke
Washington	Charles Morrill
Kootenai Tribe	
Colville Tribe	
Umatilla Tribe	
Yakama Nation	Keely Murdoch
Bonneville Power Administration	Tony Norris, Scott Bettin
US Fish & Wildlife Service	Dave Swank
Idaho	
Montana	Brian Marotz
Spokane Tribe	
Nez Perce Tribe	
Warm Springs Tribe	
Bureau of Reclamation	Chris Runyon
Army Corps of Engineers	Doug Baus, Julie Ammann, Lisa Wright

Other Attendees (non-TMT members):

COE – Alexis Mills, Chris Peery

Oregon DEQ – David Gruen

DS Consulting – Emily Stranz (Facilitator), Colby Mills

CorSource – Andrea Ausmus (BPA note taker, Contractor)

Energy Keepers – Eve James

Snohomish PUD – Scott Richards, Mike Shapley

Grant PUD – Peter Graf