

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

December 4, 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.

Review Meeting Summaries & Minutes – TMT Members approved the official meeting minutes and facilitator's summary from November 20 pending a minor word removal from page 3 of the minutes.

Chum Operation – Doug Baus, Corps, provided an overview of the current conditions and forecasts for chum spawning operations. He reminded the TMT that the transition from chum spawning to incubation operations will be coordinated at the December 18 meeting. Details on the current chum operation are posted to the TMT website.

BON at 0700 hours had a project tailwater elevation of 11.4 feet with a total outflow of 134 kcfs. Tony Norris, BPA, noted that a significant amount of water is needed to achieve an elevation of 11.4 feet due to current strong east winds.

The RFC inflow forecast over the next 10-day period shows a high of 130 kcfs on December 4 and a low of 123 kcfs on December 5. Tony added that the current eastern winds should diminish later this week; BPA continues to follow the chum spawning operation. He will participate in a site visit next week to measure this year's locations of chum redds. Reclamation noted that conditions at Grand Coulee were good to continue supporting the chum operation.

Kelsey Swieca, NOAA, reported recent spawning survey data in the Ives/Pierce area counted 714 live chum and 256 redds. So far this year there have been 1,135 chum over BON, which is the highest number passing since 1954. Passage has slowed, but there are still a few chum trickling over daily. WDFW has conducted surveys in the tributaries above BON, Charles Morrill, WA, is expected to report this information at a future TMT meeting. Dave Swank, USFWS, added that he observed spawning fall Chinook, and possibly coho, in the lower Wind and White Salmon rivers via kayak, but did not see any chum spawning above BON.

Zero Generation/Flow Operations – Tony reported that the abundance trigger has not yet been met but is expected soon. Kelsey is monitoring the running 3-day steelhead average at Lower Granite (LWG); total steelhead is currently 56, with unclipped steelhead at 17.5. Kelsey reminded the TMT that the triggers are 50 and 10, respectively. She will notify the TMT via email when the abundance trigger is met.

Operations Review – *Reservoirs*: Chris Runyan, Reclamation, reported on Reclamation projects:

- **Hungry Horse (HGH)**: conditions have been dry at the project, a small weather system could potentially bring precipitation this weekend. Snowpack is trending above average, although it is still very early in the season. The 3-day average inflow was 0.6 kcfs yesterday; last week inflows were 57% of average. Outflows yesterday were 2.75 kcfs, with a midnight elevation of 3,529.9 feet (30.1 feet from full). The reservoir continues to draft (1.3 feet since last week) and is at 99% of average for storage. The project continues to operate to meet minimum flows at Columbia Falls (3.48 kcfs yesterday); minimums will be revised in January with the first water supply forecast.

- **Grand Coulee (GCL):** inflows yesterday were 83.4 kcfs, averaging last week at 92% of average. Yesterday's outflows were 96 kcfs and midnight elevation was 1,282.9 feet (7.1 feet from full); storage is 103% of average for this time of year. GCL is operating to assist chum tailwater requirements at BON, while also conserving water.

Aaron Marshall, Corps, provided an update on public outreach for Columbia River Treaty FRM operations. Two [virtual public meetings](#) are scheduled for December 4 and 5. More information and details on the public meetings can be found via the Corps' [Press Release](#).

Aaron reported on Corps of Engineers projects:

- **Libby (LIB):** midnight elevation was 2,435.6 feet, with inflows of 3.5 kcfs and outflows of 6.5 kcfs. The official December water supply forecast will be available later today or tomorrow, which will set the end of December FRM draft requirement. Aaron expects close to 5.8 MAF, with an end of December elevation around 2,414 feet.
- **Albeni Falls (ALF):** midnight elevation was 2,051.2 feet, with inflows of 15 kcfs and outflows of 15 kcfs. ALF continues to operate within the normal 0.5-foot range through the end of Kokanee spawn season (typically end of December).
- **Dworshak (DWR):** midnight elevation was 1,515.96 feet, with inflows of 1.2 kcfs and outflows of 1.8 of kcfs. DWR continues to operate on minimums until the January water supply forecast is released.
- **LWG:** inflows yesterday were 17 kcfs with current outflows of 26 kcfs; the project is generally passing inflow.
- **McNary (MCN):** midnight elevation was 338.5 feet, with inflows of 119 kcfs and outflows of 135 kcfs.
- **BON:** midnight elevation was 11.6 feet, with inflows yesterday of 125 kcfs and current outflows of 136 kcfs; the project is operating to maintain the minimum tailwater elevation for chum.

Water Quality: Dan Turner, Corps, reported that all projects are below the 110% TDG criteria.

Fish: Kelsey reminded the TMT that the smolt monitoring program ended on November 1; this time of year, only adult passage is reported. At BON, low numbers of fall Chinook, coho, steelhead, and chum are still being detected; all species are at or above their 10-year YTD averages. At LWG, total steelhead passage ranged from 30-100 over the past week; unclipped ranged from 8-30. Kelsey emphasized that TMT will likely be notified of the abundance trigger at LWG in the next couple of days with the cold weather.

Dave Swank, USFWS, had nothing new to report for Lamprey; final indices at BON are pending.

Power System: Tony reported that the power system is meeting loads; hopefully incoming December precipitation will bring more water into the river.

Questions or Comments from Non-TMT Members – there were no questions or comments from non-TMT Members.

**The next scheduled TMT meeting is on December 18, 2024, at 9:00 AM.
A DS Consulting Process Meeting will follow the TMT Business Meeting.**

**Columbia River Regional Forum
Technical Management Team
OFFICIAL MINUTES
Wednesday, December 4, 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 Summary and Minutes

a. November 20 Summary and Minutes

- Kelsey Swieca had a correction on the Survival Estimate.
- Sentence within the Minutes “She said that she would note that there have been some updates to the methodology including the incorporation of avian tags to increase the confidence bands in the survival estimates.”
 - Removed word “bands”.
- Notes to be finalized following the requested change.

2. Chum Operations - Tony Norris, BPA; Chris Runyan, BOR; Kelsey Swieca, NOAA; Charles Morrill, WA; Doug Baus, Corps-NWD

Remember December 18 meeting will cover the transition from the spawning operation to the incubation operation.

- TMT coordinated the Start Date of the Chum Operation at the October 23 meeting.
- Start Date: November 1

a. Bonneville Dam (BON) – Hourly Data as of 0700 – *Baus*

- Tailwater Elevation: 11.4 feet
- Total Outflow: 134.0 kcfs

Norris noted how much water it took to achieve an 11.4 feet. This is due to the incredibly strong east winds. It pushes water down the river.

b. NWRFC – BON Inflow Forecast - *Baus*

- BON Inflow Forecasted:
 - High: 130 kcfs (December 4)
 - Low: 123 kcfs (December 5)

c. BPA Update – *Norris*

- With the East winds expected to die off later this week, hopefully it will not take quite as much water to support the tailwater.
- BPA is continuing to follow the operation.
- Next week Norris will head out to the field with WDFW (Rick Heitz) to measure the location of Chum redds.

d. NOAA Chum Update – *Swieca*

- BON Count: 1135 Chum
- Historically the highest number of Chum to pass BON since 1954.
- Chum run is slowing down quite a bit but there should be a couple Chum that will trickle through over the next week or so.

e. Ives/Pierce Region Spawning Surveys - *Swieca*

- November 26 Survey:
 - Live Count: 714 Chum
 - Redd Count: 256 Redds

f. TMT Coordinated Chum Operation – *October 23, 2024*

1. Effective Friday, November 1, at 0600 hours, and until further notice, operate the Bonneville Dam tailwater in the following order of operating ranges as project outflow increases.
2. During all hours, operate project outflow to provide a tailwater elevation in the range of 11.3 - 13.0 feet.
3. 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.
4. Then, if necessary to increase project outflow, the tailwater may be operated up to 18.5 feet during nighttime hours (1700-0600).
5. Then, if increasing river flow precludes the ability to manage the 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).

Dave Swank, USFWS, said, following up on Swieca's note of numbers of Chum above BON being a modern-day record, he got permission to go out and take a day, a week and a half ago, and explored some of the Lower Wind River and Lower White Salmon River via kayak up from the mouth and found lots of spawning Fall Chinook, possibly a couple Cohos. It was hard to tell given the conditions. He said that he did not find any chum,

though we know that they are spawning somewhere upstream of BON, they have not nailed down where. The search continues.

Tom Lorz, Umatilla/CRITFC, said Swank did not see any Chum, but asked if Swank saw a bunch of Chinook.

Swank said yes, in both rivers, especially the Lower White Salmon, all the gravel that has come down since they removed the dam and the lower stretch of the river, all kinds of spawning habitat. Lots of Chinook looked like they had been there for a while. He said that the Chinook pretty much all had white tails but nothing that was obviously a Chum.

Lorz said or a chum could have spawned there and there could be superimposition, where Chum and Chinook are spawning over on top of each other.

Swank said that with the conditions, he tried to get some GoPro video, but it did not work very well. It was mostly just visual ID, but as far as he could tell, there were not any Chum in there. It might have been too early, or he might have missed them.

Swieca said that they had heard from Charles Morrill, WA, at the last TMT meeting that WDFW was doing some surveys in those regions and some of those tributaries above BON. Those surveys were for Fall Chinook, but they were also counting Chum. She said that Morrill was going to look into that for TMT and see if they had any idea where they might be seeing the Chum. Morrill was not at the meeting today and Swieca had not heard anything from him offline either about whether or not he was able to access that data, but she said that she was hopeful that WDFW might be able to add some more information about that.

Swank said that reminded him that on the Lower Wind River, he had run into the WDFW carcass survey crew. They were in a motorboat looking for carcasses, so hopefully, if they did see a chum carcass WDFW would note that. Swank said that he did not have the opportunity to talk to WDFW, but that crew was out there that day.

3. Snake River Zero Generation – *Tony Norris, BPA; Kelsey Swieca, NOAA Fisheries; and Doug Baus, Corps-NWD*

a. Trigger Update - *Norris*

- We have not hit the trigger, but water temperatures have been dropping into the zone where we typically get close to the trigger.
- Yesterday's one-day adult steelhead count indicated that we are getting close.
- Swieca had previously coordinated that she would update TMT via the email list.

b. Running Three-day Average Count (December 4) - *Swieca*

- Total Steelhead: 56
- Unclipped Steelhead: 17.5

c. Criteria

- Total Steelhead: less than 50
- Unclipped Steelhead: less than 10
- Outlined in the [WMP](#) – Table 12 (page 39 & 40) and [SOR #2005-22](#)

Run to date > #	Run to date ≤ #	Few criteria < #
0	30,000	10
30,000	60,000	20
60,000	100,000	35
100,000	150,000	50
150,000	200,000	65
200,000	250,000	80
250,000		100

Table 1: SOR 2005-22 Snake River Zero Nighttime and Weekend Flow

4. Operations Review

a. Reservoirs

Reclamation – Chris Runyan

- Hungry Horse Dam
 - Current Conditions: Dry at HGH, did not receive precipitation
 - Future Conditions: A small system is coming in potentially this weekend.
 - Snowpack Conditions: Early but snowpack is trending above average
 - Inflows (3-day average): 0.6 kcfs
 - Percent of Normal: 57% of average
 - Still in the low baseflow condition.
 - Outflows (November 5): 2.75 kcfs
 - Midnight elevation: 3529.9 feet
 - Feet from Full: 30.1 feet
 - Continues to draft.
 - Drafted: 1.3 feet since last week.
 - Storage: 99% of average

- Operations: Continues to operate to minimum flows at Columbia Falls.
 - Columbia Falls (12/3): 3.48 kcfs
 - Minimum: 3.39 kcfs
 - Minimums will be revised in January with the first Water Supply Forecast (WSF).
- Grand Coulee Dam
 - Inflows (12/3): 83.4 kcfs
 - Percent of Normal: 92% of average
 - Outflows (12/3): 96 kcfs
 - Midnight elevation: 1282.9 feet
 - Feet from Full: 7.1 feet
 - Drafted: 0.6 feet since last week.
 - Lake Roosevelt Storage: 103% of Average
 - Operations: GCL is helping to meet the chum requirements and conserve water.

Corps – Aaron Marshall, Corps

- FRM Press Release – November 22, 2024
 - “Treaty negotiation milestone and 2025 operating plan gives more certainty for Columbia River Basin flood risk management, agencies announce public info sessions”¹
 - YouTube - CRT Real Time Flood Risk Management public information session²
 - Meeting Information:
 - Wednesday, December 4: 10 to 11 a.m. PST
 - Thursday, December 5: 4 to 5 p.m. PST
 - Marshall provided an update on outreach to the public about the Treaty FRM information.

Lorz said that Marshall sent out an email yesterday alluding to this, in the email Marshall said that the Corps had announced an agreement. But in the email Marshall said that if they had not had the agreement, they would have had to draft even more for FRM at the U.S. storage projects. Lorz asked if Marshall meant even more under the existing FRM, or even more than that. Lorz said that he wanted clarity on what he meant in that email.

Marshall said that would be if there was not an agreement in place.

¹ <https://www.nwd.usace.army.mil/media/news-releases/article/3974952/treaty-negotiation-milestone-and-2025-operating-plan-gives-more-certainty-for-c/>

² https://www.youtube.com/watch?v=u1C27CP_SDU

Lorz asked if they would have had to draft even more, even beyond what the new normal of drafting is going to be.

Marshall said that was correct. Now that there is an agreement in place for the 3.6 maf of storage space at Arrow, that will decrease the burden on some of the US Projects.

Lorz said that they could talk about the extent of the new agreement's causing the US to have more input because we have lost some of our thing. He said that is a whole other can of worms, which will be talked about in future meetings.

- Libby Dam (Lake Koocanusa)
 - Current Outflows: 6.5 kcfs
 - Avg. Inflows (12/3): 3.5 kcfs
 - Current elevation: 2435.6 feet
 - Official December WSF is not available yet.
 - Official WSF should be available December 4 or 5.
 - Will set the End of December FRM Draft requirement.
 - Projected WSF Estimate: 5.8 maf
 - End of December FRM Elevation estimate: 2414 feet
- Albeni Falls (Lake Pend Oreille)
 - Avg. Inflows (12/3): 15 kcfs
 - Avg. Outflows: 15 kcfs
 - Current elevation: 2051.2 feet
 - Operations: Continuing to operate in the normal half-foot range through end of Kokanee spawning.
 - Range: 2051 – 2051.5 feet
 - Typically ends in late December.
- Dworshak Dam
 - Avg. Inflows (12/3): 9.12 kcfs
 - Current Outflows: 1.8 kcfs
 - Current elevation: 1515.96 feet
 - Operations: Continue to operate on minimums until January WSF is released.
- Lower Granite Dam
 - Current Outflows: 26 kcfs
 - Avg. Inflows (12/3): 17 kcfs
 - Operations: Continuing to pass inflow.
- McNary Dam
 - Current Outflows: 135 kcfs

- Avg. Inflows (12/3): 119 kcfs
- Current elevation: 338.5 feet
- Bonneville Dam
 - Avg. Inflows (12/3): 125 kcfs
 - Current Outflows: 136 kcfs
 - Current elevation: 11.6 feet
 - Operations: Operating to maintain a minimum tail water elevation for chum.
 - Target range: 11.3 – 13.0 feet

b. Water Quality – *Dan Turner, Corps*

- TDG
 - TDG is low and below the criteria

c. Fish

Salmon – Kelsey Swieca, NOAA

- Juveniles
 - Smolt monitoring ended on November 1.
- Adult Salmon Counts
 - Bonneville (Lower Columbia):
 - Low numbers of Fall Chinook, Coho, Steelhead and Chum still being detected at the Project, with all the species being at or above their Ten-Year YTD averages.
 - Lower Granite (Snake):
 - Steelhead passage over the last week:
 - Total Passage range: 30 – 100 Steelhead
 - Unclipped range: 8 – 30 Unclipped
 - Waiting to hit the trigger, expectation is for it to hit in the next couple of days as the temperatures continue to drop.

Lamprey – Dave Swank, USFWS

- Adult Lamprey
 - Still waiting on final end of season numbers from BON.

d. Power System – *Tony Norris, BPA*

- Meeting load and hoping to get more water in the river with the precipitation coming in December.

5. Set agenda for next meeting – December 18, 2024

a. Chum Incubation Operations

Today’s Attendees:

Agency	TMT Representative(s)
NOAA Fisheries	Kelsey Swieca (NMFS, FPAC Chair),
Oregon	
Washington	
Kootenai Tribe	
Confederated Tribes of Colville Reservation	
Umatilla Tribe (CRITFC)	Tom Lorz
Yakama Nation	Keely Murdoch
Bureau of Reclamation	Chris Runyan
Army Corps of Engineers	Doug Baus (Chair), Lisa Wright, Aaron Marshall
US Fish & Wildlife Service	Dave Swank
Idaho	
Montana	Brian Marotz
Spokane Tribe	
Nez Perce Tribe	
Warm Springs Tribe	
Confederated Salish and Kootenai Tribes	
Bonneville Power Administration	Tony Norris

Other Attendees (non-TMT members):

COE – Tiffany Stoeckig-Dixon, Chris Peery, Dan Turner,

BPA – Carolina Andes

DS Consulting – Emily Stranz (Facilitator), Colby Mills

CorSource – Andrea Ausmus (BPA note taker, Contractor)

NPPC – Kate Self

Washington Ecology – Thomas Starkey

Columbia Basin Bulletin – Mike O’Bryant

Chelan PUD – Jay Fintz, Lance Beyer

Snohomish PUD – Scott Richards

Vitol – Ryan Russell

EKI – Eve James