

## COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

May 24, 2023

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/2023/>. 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 May 10, 11, and 17 official meeting minutes and facilitator's summaries.

### Operations Review

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

- **Hungry Horse:** midnight elevation was 3,541.5 feet; the project is releasing about 5.5 kcfs during the current freshet and will ramp down to 3,000 cfs by Sunday to be within 10-feet from full by May 31. The project will continue to target 3-4 feet from full by the end of June. Culvert repair and selective withdrawal service maintenance have been completed.
- **Grand Coulee:** midnight elevation was 1,273 feet, with inflows around 230 kcfs, and releases of 165 kcfs. The project has some drum gate spill due to the lack of turbine and lack of demand, and is targeting 1,280 feet by end of the month.

Regarding flow augmentation, releases out of Milner in the upper Snake River basin will likely start a week from tomorrow, to get over 3,000 cfs over 2-3 days, depending on ramping rates. The Boise and Payette systems still have a while to go.

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

- **Libby:** midnight elevation was 2,437.9 feet, average inflows of 41.7 kcfs, and outflows of 20 kcfs;
- **Albeni Falls:** midnight elevation was 2,057.7 feet, average inflows of 63.2 kcfs, and outflows of 64.6 kcfs;
- **Dworshak:** midnight elevation was 1,574.6 feet, average inflows of 18 kcfs, and outflows of 5 kcfs;
- **Lower Granite:** average outflows of 180 kcfs;
- **McNary:** average outflows of 405 kcfs; and
- **Bonneville:** average outflows of 422 kcfs.

In response to a query, Lisa noted that Chief Joseph Dam is spilling 24 kcfs consistently today.

*Water Quality* – Dan Turner, Corps, reported a significant amount of forced spill on the system over the last week, resulting in TDG exceedances. The Cascades Island gauge in the Bonneville tailwater is coming back into service and should be reporting real time data today (removed during high flows to avoid equipment damage). Dan pointed TMT Members to the daily spill and TDG overview tables (on the TMT website) as a resource for determining if projects are in forced spill (noted with an asterisk).

The Corps sent out a notice last Friday in regards to a GBT exceedance in native non-salmonids downstream of Bonneville that was collected on May 18. The gas cap did not change due to forced spill at the project; there is an exception in the water quality standards (WQS) for not using GBT data if in forced spill and TDG is above 125%. In response to a query from Erick Van Dyke, OR, regarding language clarification, Dan noted that "forced spill" is related to conditions at the project where there is either lack of turbine, or lack of load, and inflows are greater than the combined powerhouse capacity and the spill caps, resulting in a project being forced

to spill more than planned. This is sometimes related to the WQS, and sometimes not (e.g., at The Dalles Dam where forced spill is above 40%).

Trevor Conder, NOAA, asked if there was an operational change that has led to a recent dip in adult counts at Ice Harbor Dam. Tony Norris, BPA, reported that the dip was most likely a result of challenges upstream starting at Lower Granite on Monday with increased inflows leading to oversupply management and lack of market spill. He hoped these operational challenges have ended and that things will be smoother with the implementation of normal performance standard blocks upstream.

*Fish* – Trevor reported that spring Chinook adults at Bonneville have been ranging between 1,400-2,600 in the last week, tapering off to typical counts of between 1,000-2,500 which is standard for the end of spring run. Trevor doesn't expect that the run will reach predicted count numbers. He visited the project and inspected fish ladders yesterday: the fishways were all in criteria except for one due to an AWS issue; no issues at the powerhouse, and no pinnipeds were observed. Jack counts have been high, with 300-400 in the last week, and shad are trickling in. McNary shows similar trends, or a bit more, with the peak coming though. Ice Harbor counts dropped to 550 and 440, on May 22 and 23, respectively. McNary to Ice Harbor has previously seen good conversion, hence Trevor's previous question on possible operational changes.

Counts aren't surprising given the amount of flow, and things could be worse; fish are passing better than expected, given the conditions. Little Goose has been spilling over the 30% performance standard and is still managing 500-1,000 fish/day. Although fish are somewhat delayed, there is no cause for alarm and a recession of flows will be helpful. Chris Peery, Corps, noted there was a fishery at Little Goose yesterday. Charles Morrill, WA, provided updated run size estimates from TAC on May 22: 153,000 total upriver spring Chinook, and 10,200 Snake River natural origin Chinook, at the Columbia River mouth.

For juveniles, yearling Chinook have hit their peak and are slowly decreasing, with good numbers at all projects. Sub-yearlings are increasing through Lower Granite and the rest of the projects; Trevor noted more will be coming through (20,000 yesterday at Lower Granite, 36,000 at McNary). There are still some coho in the system, good numbers of steelhead (23,000 yesterday at Lower Granite), and sockeye numbers have been fluctuating at Lower Granite.

Dave Swank, USFWS, noted lamprey juveniles are still moving and have been decreasing upstream at Little Goose and McNary, with increases downstream at Bonneville over the last week. Adults are still early in their run, with a good start at Bonneville; currently 1,249 YTD, with 29 total last year on this date, and 500 for the 10-year average.

*Power System* – Tony noted spring conditions, and issues finding load on some hours which has been challenging; lots of oversupply management has been utilized.

**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 May 31, 2023, at 9:00 AM.

**Columbia River Regional Forum  
Technical Management Team  
OFFICIAL MINUTES  
Wednesday, May 24, 2023  
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 – May 10, May 11, May 17**

- May 10 – Summaries and Minutes – approved
- May 11 – Summaries and Minutes – approved
- May 17 – Summaries and Minutes – approved

**2. Operations Review**

a. Reservoirs

*Reclamation – Joel Fenolio*

- Hungry Horse Dam
  - Midnight elevation: 3541.5 ft.
  - Outflows: 5.5 kcfs
  - Ramping down to 3 kcfs by Sunday to be 10' from full on May 31, 2023
  - Continue to target 3 – 4' of full by end of June
  - On another note: They did get the culvert repaired and selective withdrawal service maintenance is done with the low stream flows that would have brought us down below those required elevations anyways so it was kind of an opportune year to get a bunch of work that needed to be done.

Brian Marotz, MT, said thank you for getting the selective withdrawal system up and running.

Fenolio said that it was all the guys at the project. It was coming up above 3525 and they were doing it in waders. They are the real heroes of that effort. Fenolio said that he will pass it on to them.

- Grand Coulee Dam
  - Midnight elevation: ~1273 ft.
  - Inflows: ~230 kcfs
  - Outflows: ~165 kcfs
  - They currently have some spill for Lack of Turbine/Lack of Demand.
  - Target ~1280 feet by end of month

Kirk Truscott, Colville, asked if that Grand Coulee spill is drum gate spill.

Fenolio said that it is all drum gate, they are all good to go. It is not coming out of the outlet tubes.

- Update on Flow Augmentation
  - Upper Snake Basin
    - Releases out of Milner starting a week from tomorrow (June 1, 2023)
    - Trying to get up to 3 kcfs over 2 – 3 days.
    - Depending on ramp rates and stuff like that.
    - Out of the realm of having either an operational spill to do all the local flooding on the lower part of the system or for FRM operations that probabilities going away.
    - They are feeling good about starting next week.
  - Boise and Payette still have a while to go.

*Corps – Lisa Wright*

- Libby Dam
  - Midnight elevation: 2437.9 ft.
  - Inflows: 41.7 kcfs
  - Outflows: 20 kcfs
- Albeni Falls
  - Midnight elevation: 2057.7 ft.
  - Inflows: 63.2 kcfs
  - Outflows: 64.6 kcfs
- Dworshak Dam
  - Midnight elevation: 1574.6 ft.
  - Inflows: 18 kcfs
  - Outflows: 5 kcfs
- Lower Granite average outflows: 180 kcfs
- McNary average outflows: 405 kcfs
- Bonneville average outflows: 422 kcfs

Truscott asked for an update on what is happening at Chief Joseph from a spill standpoint.

Wright said that Chief Joseph is spilling at 24 kcfs pretty consistently today.

b. Water Quality – Dan Turner, Corps

- There are a lot of exceedances (data shown in red) popping up, they have had a lot of forced spill in the system over the last week.
- Cascades Island (CCIW) Station should be coming back into service with real-time data being reported today (May 24, 2023). They take it out during high flows so that equipment does not get damaged.
- Reminder: *Daily Spill & TDG Report* is another way to look at the data. It also gives the asterisk which is the preliminary evaluation of whether we are in forced spill.
- GBT Exceedance Downstream of Bonneville
  - Notice was sent last Friday (May 19, 2023) by Baus.
  - Data was collected on May 18, 2018.
  - The Gas Cap did not change on the Lower Columbia because they were in forced spill.
  - There are exceptions in the Water Quality Standards to not use TDG data if you are in forced spill and TDG is about 125%.
  - On that day Warrendale was 125% and Bonneville was in forced spill, so there was no gas cap change based on that data.

Erick Van Dyke, OR, asked what the 7-day 10 value for these sites. He asked if Turner was using that value to make his asterisk. He said that Turner made a comment about the Water Quality Standards, and Van Dyke was not sure that he remembered the place where it said what Turner described. Van Dyke asked what the 7-day-10 value is.

Turner said that he can look up the 7Q/10 value. He said that it is available in the annual TDG report if they wanted to take the time right now for him to show Van Dyke where those numbers are.

Van Dyke said it is confusing when Turner says 125% TDG is the value you are searching for when you are making a determination on whether you are in forced spill. Van Dyke said that it would be helpful to understand that better because he does not think that that he is tracking it with his understanding of the water quality standard language.

Turner said that when he says “forced spill”, noted by the asterisk on the website, it is related to conditions at the project where they either have lack of turbine or lack of load and they have to spill. The inflows are greater than the combined powerhouse capacity and the spill caps. They are forced to spill more than they were planning to. It is sometimes related to the water quality standard and sometimes not because sometimes it is related to the spill cap level. Like The Dalles, that is spilling 40%, it might be in forced spill above 40% spill but still have less than 125% TDG.

Van Dyke said that the way that these are being described and why it is happening needs to be applied to what really is the mechanism. He said right now the mechanisms are that there is a lot of water and the dam is not able to put it through the turbine because they are full or the lack of market issues. He said that is why TDGs are above 125% which the modification specifies.

Trevor Conder, NOAA, asked about Ice Harbor operations. He noticed over the last two days of adult fish counts, at least in the PIT-tag conversions, that there have been lower counts at Ice Harbor. He said that he is not seeing a large change in the flows but asked if there was an operational change. The conversion rate from McNary to Ice Harbor was doing pretty well and then in the last couple days it has dipped and the counts have dipped. He asked if anyone can speak to the whether there were changes that may have led to that or if it is possibly still unknown.

Tony Norris, BPA, said that he can talk about Monday's operations which was challenging, otherwise Ice Harbor has been pretty stable. Norris said that Ice Harbor has to filter out everything that happens upstream of that project. The challenges began on Monday (May 22, 2023) with the increasing inflow to Lower Granite and attempting to achieve 40% PSS blocks. They had trouble finding load on Monday so there was quite a bit of oversupply management, as well as, lack of market spill as they were spilling for reserves across the system. They are managing Grand Coulee's forebay with fully loading those turbines requiring reserves to be held on the rest of the system. Performance Standard Spill (PSS) blocks were delayed at Lower Granite until about noon. They were only able to get ~7 hours at 40% but with rapidly increasing inflow and spilling for reserves during that period. The PSS block required a fill into the forebay above MOP and subsequently, they needed to draft that out to prepare for the next day. The changes in outflow from Lower Granite got translated downstream to Little Goose. Where it saw a reduction in turbine discharge for reserves and trying to achieve 40% for PSS blocks up to the 125% gas cap. It then has to pass the subsequent increase in outflow from Lower Granite as it is drafting to prepare for the next day, which gets translated down to Lower Monumental where it was able to achieve delayed PSS blocks starting at noon, similar to Lower Granite. During that performance block there was a fish barge that required a further reduction of discharge and subsequent fill into the forebay and draft across the other hours to prepare for the next day. Ice Harbor received all of the upstream flow changes resulting in the . the inflow during that period around ~200 kcfs and needed fill above MOP to spill out below the 130% TDG gas cap per the footnotes in the FOP. It was a hectic day that was during the peak of the runoff. The Snake is now starting to roll over and we are hopefully on the back side of the peak flows.

Conder said that it helped and thank you.

c. Fish – Trevor Conder, *NOAA Fisheries*

- Adults

- a. Bonneville

- Spring Chinook:

- Counts: Ranging between 1400 – 2600 over the last week.
      - Not really what we were hoping for in terms of sustained high numbers to meet the projections. It seems like they are tapering off to what is typical for this time of year.

- Typical Spring Return counts: 1000- 2500 standard for the tail end of the spring run moving into summer return.
- Conder does not expect that we are going to get to the number that were predicted.
- There are a few days more days and you never know.
- Conder looked at the fish ladders and inspected the dam:

Flows are high and there is some debris against trash racks

Fishways were all within criteria except one of the spillway fishways. It has a problem with being a little low because they had a problem blowing a lid off of AWS. The rest of the fishways looked really good.

No issues at either of the powerhouses.

Conder does not think it is a fishway issue or an attraction issue. There were no pinnipeds, not one pinniped was there. He thinks that is just the run.

- Jacks
  - Pretty high
  - Counts 300 – 400
- Shad
  - Starting to trickle in

b. McNary

- Spring Chinook:
  - Similar to Bonneville
  - A bit more coming up through McNary as expected with the peak coming through there still.
  - Nothing unusual

c. Ice Harbor

- Spring Chinook:
  - Counts dropped to 550 (May 22) and 540 (May 23)
  - Cause for Conder's last discussion point about Ice Harbor

He had gone on DART and previously there were good conversions from McNary to Ice Harbor and so he was interested in what factors contribute to delay at Ice Harbor. It is a new type of learning point for Conder. It is nothing shocking given that amount of flow that is in the system now, he thinks that things could be a lot worse in the Lower Snake than they are. Fish are surprisingly passing better than he would expect given the conditions. So he thinks that is good news.

d. Little Goose

- Little Goose is spilling over the 30% PSS
- Counts: 500 – 1000/day
- Not inherent of any massive type adult fish blockage.
- Still, adults are being delayed and still below 50% in a 3-day threshold on the DART trigger (black dots). It is nothing that is throwing a big alarm.
- Conder is hoping for a recession of the flows and get back in line to get the rest of the fish through.

Chris Peery, Corps, added that there was a fishery at Little Goose yesterday.

Conder said that was good to know. There are about 9-10K fish between Ice Harbor and Little Goose. There are still substantial numbers.

Charles Morrill, WA, said that TAC met on Monday May 22 and updated the Total Upriver Spring Chinook Estimated run size to 153,000 at the Columbia River mouth. They also updated the Snake River Natural Origin Chinook runs to 10,200 at the Columbia River mouth.

• Juveniles

- Nothing surprising in terms of juveniles.
- Yearlings have hit their peak and seem to be going down.
- They are still really good numbers at all the projects we are doing an index.
- Subyearlings are increasing – we are seeing an increasing push through Lower Granite and the rest of the projects. Expect more of a push as more subyearlings are coming through.
- Subyearling Count:
  - Lower Granite: 20,000
  - McNary: 36,000

d. Lamprey – *Dave Swank, USFWS*

• Juveniles

- Little Goose and McNary



- Decreasing numbers upstream
  - Bonneville
    - Increases for the downstream
  - Juveniles are still moving which is good to see.
- Adults
  - Very early in the run
  - Bonneville
    - Count: 1249
    - Last Year Count: 29
    - Ten-year Average: 500
- e. Power System – Tony Norris, *BPA*
  - It is spring, they have had issues finding load on some hours which has been challenging.
  - There has been quite a bit of oversupply management that has been utilized.

**3. Public Comments:**

None

**4. Set agenda for next meeting – May 31, 2023**

Today’s Attendees:

<b>Agency</b>	<b>TMT Representative(s)</b>
Army Corps of Engineers	Doug Baus (chair), Julie Ammann, Lisa Wright
Bonneville Power Administration	Tony Norris, Scott Bettin, Ben Hausmann
Bureau of Reclamation	Joel Fenolio
NOAA Fisheries	Trevor Conder, Kelsey Sweica
US Fish & Wildlife Service	Dave Swank
Washington	Charles Morrill
Oregon	Erick Van Dyke
Idaho	Jonathan Ebel
Montana	Brian Marotz
Nez Perce Tribe	Jay Hesse
Umatilla Tribe	
Colville Tribe	Kirk Truscott
Warm Springs Tribe	
Kootenai Tribe	
Spokane Tribe	

TMT – May 24, 2023

Other Attendees (non-TMT members):

Corps – Dan Turner, Chris Peery, Alexis Mills, Aaron Marshall

NOAA – Chris Magel

DS Consulting – Emily Stranz (Facilitator), Colby Mills

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

Oregon DEQ – David Gruen