

## **COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM**

May 27, 2020

DRAFT Facilitator's Summary

Facilitator: Donna Silverberg; Notes: 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. These notes are not intended to be the "record" of the meeting, only a reminder for TMT members. Official minutes can be found on the TMT website: <https://pweb.crohms.org/tmt/agendas/2020/>*

### **Review Meeting Minutes**

TMT Members approved the official meeting minutes and facilitator's summaries for the May 6 and May 13 meetings.

### **TDG & Flex Spill Update**

Dan Turner, Corps, reviewed the system spill data and reported that, on the Columbia River, the McNary Dam tailwater had some TDG exceedances (up to 126%), and the Corps is actively adjusting the spill cap in response. The Bonneville tailwater gauge (at Cascades Island) is known to lose service for periods of time when flows are high, so the real time telemeter gauge has been replaced with a logging gauge in anticipation of forecasted high flows. The gauge was replaced yesterday afternoon and data values will continue to be monitored. There was no news of note for John Day and The Dalles dams.

On the Snake River, Lower Granite had a few TDG level exceedances this last week, with the Corps reacting accordingly with changes in the spill cap. Lower Monumental and Ice Harbor Dams are operating at minimum generation.

Dan clarified that the Corps uses more than one data set when making the decision to adjust spill caps, noting that deeper tailwater elevations generate higher TDG levels. He also noted that although the Lower Monumental forebay gauge showed a TDG exceedance of 127% on May 25, it was not necessary to adjust spill caps because the Little Goose tailwater was still at 125% (state standards are 125% TDG as measured in the *tailrace*). Dan encouraged TMT members to revisit the 2018 TMT YER summary and minutes for a reminder of environmental conditions that affect TDG. NOAA appreciated the Corps' good communications and early notifications.

Tony Norris, BPA, reported that on May 23, Lower Granite spilled at performance standard levels for 2 blocks of 4 hours, and 1 4-hour block the previous day. He noted that this was likely due to difficulty finding loads with high water levels. Little Goose is operating on the daily 8-hour block, Lower Monumental is operating primarily on 8-hour blocks, and on May 22, Ice Harbor only used 1 2-hour block, which was due to similar load issues or managing reserves on the system. McNary Dam didn't flex on some hours for similar issues. John Day reached its spill cap for a period of time, and didn't use all performance standard spill hours while managing river flow and loads. The Dalles is operating to 40% and Bonneville is limiting spill to 150 kcfs (spill cap limit) and no flex blocks of 100 kcfs.

### **Spring Chinook Passage**

Claire McGrath, NOAA, reported that DART data from last week reflected increased travel times for PIT-tagged adult spring Chinook in the Snake River starting on May 16-17, specifically from the Lower Monumental to Little Goose reach, and system-wide to Ice Harbor and Lower Granite triple reach. However, due to a complication in receiving incoming automated data from Lower Monumental, there was uncertainty about the extent of the decline in adult fish passage and travel time. After analyzing data collected manually, results for travel time and passage are higher, which is encouraging. Overall, travel times seem to be slower, but are not yet dire.

Salmon Managers at FPAC had productive discussions on the issue and reached consensus on the decision to remain in a “wait-and-see” mode, until reliable passage data are available. It was noted that ladder counts at Little Goose Dam do not indicate that fish passage is blocked, only slower travel times. Salmon Managers will continue monitoring the manual data over the next few days and will notify the TMT at a tentatively scheduled meeting (Friday, May 29) if operational changes are recommended.

- **ACTION:** If data show adult fish passage in the Snake River continuing to slow, FPAC will hold a meeting on Friday morning to discuss management recommendations to bring to the TMT at a tentative 11:00 AM meeting. Salmon Managers will notify the TMT in either case.

In response to a question from the Corps regarding the predicted cause of extended travel times and what can be learned for future operations, Claire reported that despite a history of slower travel times resulting from increasing flows, this episode looks like higher percent spill may be affecting fish travel times. She will look into it further and hopes to bring clearer conclusions to the next TMT meeting.

- **ACTION:** Claire will look into the recent cause of slower fish travel times in the Snake River and report her findings at the next TMT meeting in an effort to inform future operations.

The DART tool will be fixed with data back online by the end of today, and the data stream from Lower Monumental Dam is expected to be collected manually until automated data becomes available again. The Fish Passage Center’s (FPC) tool continues to reflect reliable ladder count data that indicate fish are converting at a lower rate than expected based on historical distribution. Claire confirmed that all the tools are showing the same data results, and that Salmon Managers are ready to take action if needed.

## Operations Review

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

- **Hungry Horse:** inflows peaked at about 29 kcfs on May 21, and are currently at about 15 kcfs. Temperatures have started warming in western Montana, and another peak of inflows over 20 kcfs is expected Monday or Tuesday of next week. Midnight elevation was 3,536.9 feet, and is expected to be around 3,541-3,542 feet by the end of the month. The project has been releasing at limited powerhouse capacity of 9.6 kcfs for the whole month of May to control refill.

The project lost one of the 3 units available temporarily yesterday afternoon through this morning, so made up the loss of flow through the powerhouse, which resulted in TDG levels above the 110% gas cap. A scheduled unit outage is expected through early next week, or possibly longer, to minimize spill levels. Releases for next month are expected to be between 7-11 kcfs. Joel expects TDG levels to get close to 110% again with projected spill, and recognized concerns from Salmon Managers to remain under 110% TDG. The project is expected to refill by June 30.

- **Grand Coulee:** Midnight elevation was 1,263.6 feet, with inflows of 220 kcfs, and releasing 160 kcfs. The project is in refill mode at the moment.

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

- **Libby:** midnight elevation was 2,414.9 feet, with average inflows of 35.8 kcfs, and outflows of 20.0 kcfs;
- **Albeni Falls:** midnight elevation was 2,059.2 feet, with average inflows and outflows of 78.8 kcfs;
- **Dworshak:** midnight elevation was 1,579.2 feet, with average inflows of 15.1 kcfs, and outflows of 8.9 kcfs;
- **Lower Granite:** average outflows of 101.2 kcfs;

- **McNary:** average outflows of 303.5 kcfs; and
- **Bonneville:** average outflows of 323.6 kcfs.

*Fish:* Claire, presented a new format for fish data to be shared at TMT meetings moving forward. She noted that thus far, numbers for adults and juveniles are low compared to 10-year averages, but are online with last year. At Lower Granite, yearling Chinook and Steelhead are at the tail end of out-migration. Sub-yearling Chinook, coho, and Sockeye have seen a large increase in numbers, especially after recent hatchery releases. Projects are seeing good numbers of fish, while trap sampling is largely done for the year. At Bonneville, yearling Chinook, steelhead, and coho are also tapering down, while Sockeye and sub-yearling Chinook have been increasing over the past week.

At Bonneville, Chinook adult passage is 48,500 YTD, or 36% of the 10-year average. Jacks YTD passage is 4,239, or 25% of the 10-year average; steelhead YTD is 3,163, or 67% of 10-year average; and unclipped steelhead YTD is 1,429, or 88% of the 10-year average. A few sockeye and lamprey have passed while the project continues to see large numbers of shad at 116% of the 10-year average.

At Lower Granite, Chinook YTD passage is 11,850, or 29% of the 10-year average; jacks YTD passage is 912, or 21% of the 10-year average; steelhead YTD passage is 2,165, or 28% of the 10-year average; and unclipped steelhead YTD passage is 1,138, or 33% of the 10-year average.

At Priest Rapids, Chinook adult YTD passage is 2,940, or 24% of the 10-year average, with a few jacks and steelhead.

→ **ACTION:** Charles Morrill, WA, noted it would be of interest to compare current passage data with the FPCs cumulative passage numbers from the past 5-6 years, to provide perspective and context. This will be added to the agenda for the next TMT meeting.

*Power System:* Tony reported quite a bit of hydro-generation, periods of low wind, and nuclear generation below typical levels. This is usual during periods of peak flow to manage water on the river.

**Questions and comments from members of the public:** There were no questions or comments from members of the public.

**The next TMT meeting is a tentative “emergency” conference call on May 29th at 11:00 AM.  
The next scheduled TMT meeting is a conference call on June 3rd at 9:00 AM.**

*This summary is respectfully submitted by the DS Consulting Facilitation Team. Suggested edits are welcome and can be sent to Colby at [colby@dsconsult.co](mailto:colby@dsconsult.co)*

## **Columbia River Regional Forum**

### **Technical Management Team DRAFT OFFICIAL MINUTES**

**May 27, 2020**

**Minutes: Melissa Haskin, BPA (contractor, FLUX Resources)**

Today's TMT meeting was chaired by Doug Baus, Corps, and facilitated by Donna Silverberg, DS Consulting, and was conducted via conference call and webinar. See the end of these minutes for a list of attendees.

#### **1. Review of Meeting Minutes and Summaries**

The minutes and summaries for 5/6/20 and 5/13/20 were approved by TMT members with no additional edits.

#### **2. TDG and Flex Spill Update - Dan Turner, Corps, and Tony Norris, BPA**

Dan Turner, Corps, reported on spill operations for the Corps. At McNary, there have been four exceedances of the spill cap criteria of 125%. The Corps has been actively adjusting spill caps at that project and TDG reached 126% in the tailwater.

The Bonneville Dam tailrace gauge at Cascades Island was replaced with a logging gage in anticipation of flows exceeding 400 kcfs. Data from the new gage will lag. There is a 150 kcfs spill cap at Bonneville for erosion.

At Lower Granite, there were few TDG exceedances last week. Lower Monumental and Ice Harbor are operating at minimum generation.

Turner reminded TMT that it can be hard to get a complete picture when looking at just the daily values. He directed TMT to additional data including the TDG 3-day report, available on the TMT website. Yesterday, in the Lower Granite tailwater, the 12-hour average TDG level was 124%, but more recently the hourly values have been ~125.2%. Turner noted that this year there seems to be a focus on how tailwater elevation is playing into TDG generation.

The Lower Monumental forebay gauge, LMNA, hit 127% TDG, however, the Corps is not operating to that gage as there are no state standards for the forebays and Little Goose is within the 125% criteria. Turner reported this aligns with what has been observed historically: there can be an increase in TDG downstream due to environmental factors like rising temperatures, dropping barometric pressure, and low wind. For additional information, consult the 2018 TMT YER notes and presentations.

Tony Norris, BPA, reported on flex spill hours. At Lower Granite, BPA is mainly utilizing two four-hour blocks of flex spill, though on May 22, it utilized one four-hour block, likely due to lack of load. At Little Goose, BPA is utilizing the daily 8-hour block. At Lower Monumental, BPA is using two blocks each day. At Ice Harbor, BPA used one 2-hour block on May 22, likely due to lack of load or managing reserves on the system. At McNary, there was 330 kcfs in the river so BPA did not flex some of its hours, likely for lack of load and reserves. At John Day,

BPA has not been using all of its available blocks. Lastly, at Bonneville spill has been limited to 150 kcfs, thus no spill blocks were available.

### **3. Spring Chinook Passage - Claire McGrath, NOAA**

Claire McGrath, NOAA, reported on adult Chinook passage. On May 17, the DART and FPC tools began to show that travel times between Lower Monumental and Little Goose were lagging for PIT-tagged fish. Likewise, the tools started to indicate longer travel times between Ice Harbor and Lower Granite starting May 16. McGrath noted that prior to last week, conversion rates were within normal variation levels. To complicate things, the PIT-tag data reporting system broke down at Lower Monumental last week. The issue has not been fixed. The decline in travel time prompted a discussion at FPAC. For now, FPAC members feel it is best to wait for more information.

This morning, there was a manual data push to DART. McGrath took TMT through the graphs and data, which are available on today's agenda. Unfortunately, the manual data push conflicted with the automated processes in DART and the tool is down again. If it is not fixed today, there will be another manual data push. The DART data show an increase in conversion rates on May 21-23 between Lower Monumental and Little Goose. This is encouraging.

Dave Swank, USFWS, added that the visual count between Lower Monumental and Little Goose over the last seven days have been over 1,000. More fish are passing at Little Goose than Lower Monumental, which would suggest that travel times are "catching up." Looking at ladder counts, fish are moving.

Doug Baus, Corps, wondered what the cause of the slowdown could be so that it could be prevented in the future.

McGrath noted that she is still looking through the data. The recent episode of low flow and higher percent spill at Little Goose may have been a contributing factor.

The FPC tool indicates that fish are not converting at expected rates.

### **4. Operations Review**

#### ***4a. Reservoirs – Joel Fenolio, Reclamation; Lisa Wright, Corps***

**Hungry Horse** – Midnight elevation was 3,536.9 ft. Inflows peaked at ~29 kcfs on May 21 and are currently ~15 kcfs. As temperatures rise in western Montana, there will likely be another peak around 20 kcfs (likely around Monday or Tuesday of next week). The project will likely be at 3,541 to 3,542 feet by the end of the month and has been releasing at powerhouse capacity (9.6 kcfs) through the month of May to control refill. The project lost a unit yesterday afternoon. It came back online this morning. TDG rose to 112%. Unit 1 will be out Monday of next week for a scheduled outage. The ESP forecast shows releases of 7-11 kcfs next month. Jim Litchfield, MT, asked if TDG will increase past 110% during the outage. Fenolio said he thinks it will be close and that the project will have to spill. It depends on the precipitation. Litchfield commented it would be Montana's desire to stay under 110% TDG.

**Grand Coulee** – Midnight elevation 1,263.6 ft., inflows ~220 kcfs, releases ~160 kcfs. Refilling.

**Libby Dam** – Midnight elevation 2,414.9 ft., yesterday's average inflows 35.8 kcfs and outflows were 20 kcfs.

**Albeni Falls** – Midnight elevation 2,059.2 ft., inflows 78.8 kcfs and outflows 78.8 kcfs.

**Dworshak Dam** – Midnight elevation 1,579.2 ft., yesterday's average inflows 15.1 kcfs and outflows were 8.9 kcfs.

**Lower Granite** – Yesterday's average outflows were 101.2 kcfs.

**McNary Dam** – Yesterday's average outflows were 303.5 kcfs.

**Bonneville Dam** – Yesterday's average outflows were 323.6 kcfs.

#### ***4b. Fish – Claire McGrath, NOAA***

McGrath took TMT through fish counts. She provided a document with graphs and counts, available on the TMT website. Yearling Chinook and steelhead are still present but tapering off at Lower Granite. After the hatchery release of sockeye, numbers have dropped off. Traps are largely done sampling for the years.

At Bonneville, yearling Chinook are tapering off as are steelhead and coho. There was an increase in sockeye last week. For adults, Chinook YTD is 48,500, which is 94% of last year, and 36% of the 10-year average. YTD jacks are 4,239 (25% of average). Steelhead have come in at 3,163 thus far, which is 151% of last year and 67% of the 10-year average. Wild steelhead are at 1,429 or 88% of the 10-year average. Shad started out overwhelmingly strong but dropped down some and are now at 116% of the 10-year.

At Lower Granite, thus far there have been 11,850 yearling Chinook, which is 120% of last year and 29% of average. For jacks, there have been 912 (21% of average). Steelhead YTD is 2,165 (28% of average). Wild steelhead are at 1,138 (33% of average).

McGrath also mentioned that there have been 2,940 Chinook (24% of average) at Priest Rapids.

#### ***4c. Power – Tony Norris, BPA***

Tony Norris, BPA, reported on the power system. There has been significant hydro generation and there were a few periods where wind was low. Nuclear generation was below typical, when BPA dispatched the Columbia Generating Station to manage the water on the river.

### **5. Next TMT**

The next TMT meeting is an emergency TMT call on Friday May 29 at 11 a.m. following the FPAC meeting.

**Today's Attendees:**

<b>Agency</b>	<b>TMT Representative</b>
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	Claire McGrath
US Fish & Wildlife Service	Dave Swank
Washington	Charles Morrill
Oregon	Erick Van Dyke
Idaho	Jonathan Ebel
Montana	Jim Litchfield
Nez Perce Tribe	Jay Hesse
Umatilla Tribe/CRITFC	N/A
Colville Tribe	Sheri Sears
Warm Springs Tribe	N/A
Kootenai Tribe	N/A
Spokane Tribe	N/A

**Other Attendees (non-TMT members):**

Army Corps of Engineers – Dan Turner, Aaron Marshall, Laura Hamilton, Chris Peery

BPA – Melissa Haskin (CONTR, FLUX Resources, Note taker)

Clearing Up – K.C. Mehaffey

Columbia Basin Bulletin – Mike O'Bryant

DS Consulting – Donna Silverberg (Facilitator), Colby Mills

Portland General Electric – Ruth Burris

Snohomish PUD – Mike Shapley

Yakama Nation Fisheries – Tom Iverson