

## COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

May 6, 2020

DRAFT Facilitator's Summary

Facilitator: Emily Stranz; 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: <http://www.nwdwc.usace.army.mil/tmt/agendas/2020/>.*

### Review Meeting Minutes

TMT Members approved the official meeting minutes and facilitator's summary from the April 29 meeting.

### Official May Water Supply Forecasts

Joel Fenolio, BOR, reported the official water supply forecast for Hungry Horse Dam. The project saw inflow increases throughout the month of April, with a residual runoff forecast for May through July of 1,850 kaf, or 117% of average. The May through September forecast is 1,970 kaf, or 116% of average.

Doug Baus, Corps, reported official water supply forecasts for Corps projects:

- **The Dalles:** NWRFC April to August volume forecast is 87 maf, or 100% of average;
- **Lower Granite:** NWRFC April to July volume forecast is 17 maf, or 86% of average;
- **Libby:** Corps NWS runoff forecast April to August is 5,759 kaf, or 98% of average; and
- **Dworshak:** Corps NWS runoff forecast April to July is 1,960 kaf, or 80% of average.

### TDG & Flex Spill Update

Dan Turner, Corps, reported that spill caps have been increased at John Day Dam, with enough inflow now to spill to 120% TDG. The project started the season with a spill cap at 150 kcfs and has been increasing up to 184 kcfs to keep TDG around 120%. The Dalles is spilling at 40%, and Bonneville is spilling about 150 kcfs, which is producing about 120% TDG.

Over the past week, all Snake River projects were spilling to the spill caps for 125% TDG. Spill caps were raised at Lower Granite, Little Goose, and Lower Monumental dams. Ice Harbor spill cap decreased from 119 kcfs down to 110 kcfs after the project exceeded the 2-hour average 126% TDG criteria (the maximum average TDG for 2 hours was 127%). Charles Morrill, WA, noted that increasing flows is good for the flex spill program and for fish. He also noted that typically, peak passage in the Snake River occurs in April-May.

Tony Norris, BPA, reported that there is enough water in the system to operate flexible spill at all projects.

### Adult Passage Tools

David Swank, USFWS, reported that while it is still early on in the run, the PIT-tag adult fish passage indicator tools are up and running. He noted that the Fish Passage Center (FPC) adult passage indicator might relay an error unless the date range is set to start on April 22, which is when the first PIT-tagged fish was detected at Ice Harbor Dam. This should be fixed by the end of the day. The simulation shows the observed value for passage from Ice Harbor to Lower Granite, with the run progressing fine, and decent passage conditions at the moment.

The DART passage tool is showing increasing numbers over the last few days, with up to 22 departure events at Lower Monumental this year and quite a few fish still in transit above Little Goose Dam. The table will continue to give results in the coming weeks as more PIT-tagged fish pass.

The group revisited the information provided from the two tools and discussed how to utilize the information for in season management. It was noted that there is not a “bright line” that can be drawn to declare a passage concern. Instead there are a number of variables to consider and a range of passage timing. Claire McGrath, NOAA, cautioned the group from concluding a fish is “delayed” after a certain number of days indicated on the tools. She suggested looking at fish travel time in comparison to previous year’s passage timing to get a sense of whether passage is slower than normal.

## Operations Review

*Reservoirs:* Joel reported on Bureau of Reclamation projects:

- **Hungry Horse:** is releasing close to powerhouse capacity (about 8,600 cfs) in an effort to control refill. Midnight elevation was 3,528.4 feet, with inflows averaging 15,000 cfs, and Columbia Falls has been around 26,000 cfs. The project is targeting an elevation of 3,540-3,545 feet by the end of May, which is dependent on snowpack runoff within the next month.
- **Grand Coulee:** midnight elevation was 1,251.5 feet, with inflows of 145,000 cfs, and the project is releasing to maintain Bonneville downstream flow of 270,000 cfs. The project will slowly start to refill over the next month, and releases have averaged 123,000 cfs over the last 5 days.

Joel updated the group that maintenance operations for selective withdrawal at the project have been pushed to next year due to COVID19 cuts in personnel capacity.

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

- **Libby:** midnight elevation was 2,405.9 feet, with average inflows of 18.2 kcfs, and outflows of 17 kcfs;
- **Albeni Falls:** midnight elevation was 2,056.1 feet, with average inflows of 54.3 kcfs, and outflows of 45.2 kcfs;
- **Dworshak:** midnight elevation was 1,554.5 feet, with average inflows of 14.9 kcfs, and outflows of 4.6 kcfs;
- **Lower Granite:** average outflows of 93.8 kcfs;
- **McNary:** average outflows of 271.5 kcfs; and
- **Bonneville:** average outflows of 270.2 kcfs.

Lisa notified the group that the Little Goose spillway weir went to low crest on May 1, allowing it to pass more water during the current high flows (Fish Passage Plan trigger is a day average flow above 85 kcfs). The weir will move back to high crest once flows drop back below the 85 kcfs threshold. Little Goose Dam operations shifted to the 30% spill for 8 continuous hours, from 0400 hours to 1200 hours starting on April 21. This will continue for the remainder of spring spill.

Aaron Marshall, Corps, provided updates on reservoir elevations. On April 30, the John Day forebay gauge was reading incorrectly high (1.8 feet higher than actual elevation), meaning the elevation was below the minimum requirement for irrigation. The project operators reset the gauge, and were able to refill back up to the minimum irrigation pool elevation of 262.5 feet by 1800 hours that evening and it has been operating correctly since. The issue was caught quickly enough to avoid causing significant issues.

Aaron also reminded the group that on April 4 and April 7 respectively, the Lower Monumental and Little Goose forebays were raised to a ½ foot raised MOP range to maintain navigation safety depth requirements in the Little Goose Dam tailrace and Lower Granite tailrace, respectively. At the time, the adjustments were made to mitigate low flows and tailrace hydraulics at Lower Granite and Little Goose

dams. While flows have increased, Little Goose encountered issues with telemetry system of the forebay and tailwater gauges, so both projects continue to remain at a ½ foot raised MOP range, maintaining the minimum depth requirements for navigation safety. The project is aware of the telemetry system issues and has ordered new equipment; COVID19 restrictions have significantly limited project staff so timeline estimates on repairs are unknown at this time and may take several weeks.

Salmon Managers voiced concerns regarding operating at ½ foot raised MOP while at an important time for fish passage and spill. There was interest in seeing if the Corps could limit the extended operating range or tighten up the range to support fish passage conditions. Aaron explained that full 1.5 foot operating range is needed to effectively operate for navigation and flexible spill. The Corps will keep TMT members updated on the gauge repair schedule.

*Water Quality:* Dan had nothing further to report.

*Fish:* Claire reported increases in yearling Chinook, steelhead and Coho numbers at the traps and projects, while there are very low numbers of sub-yearlings. Lower Granite is expecting a peak within the next 1-2 weeks, and has also seen increasing numbers of lamprey. Yearling Chinook, steelhead, and Coho are increasing at Bonneville, with some sockeye, although no lamprey.

The FPC Smolt Monitoring Program is reporting issues with debris at the Salmon and Snake River traps and they have been pulled for various amounts of time. The Grande Ronde trap is also sampling although data is delayed. Overall, there should be good increases for juveniles in the next couple of weeks.

At Bonneville, Chinook adult passage is 18,177 YTD, or 22% of the 10-year average. Jacks YTD passage is 462, or 14% of the 10-year average; steelhead YTD is 3,010, or 79% of the 10-year average; and unclipped steelhead YTD is 1,344, or 95% of the 10-year average. Shad have also been detected, which is earlier than usual.

At Lower Granite, Chinook YTD passage is 660 and steelhead YTD is at 2,133, with 1,113 of those unclipped. Shad have not made it to the project yet. Claire noted that moving forward there is still more to learn about the detection efficiency over the spillway under various flow and spill levels. Summarizing bypass numbers for this YTD relative to previous years could be helpful.

In response to question, Jay Hesse, Nez Perce, offered to bring kelt collection numbers to the next TMT meeting.

Claire provided passage graphs that were added as links to the TMT website.

*Power System:* Tony reported fronts coming through with a little bit of wind and lots of variability. The upcoming warm weather should produce afternoon peaks similar to what are seen in the summer.

**The next TMT meeting is a conference call on May 13th 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.*

## **Columbia River Regional Forum**

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

**May 6, 2020**

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

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

#### **1. Meeting Minutes**

The facilitator's summary and official minutes for 4/29 were approved.

#### **2. Water Supply Forecasts – Doug Baus, Corps, and Joel Fenolio, Reclamation**

The official May water supply forecasts as released on Tuesday, May 5 are as follows:

- Hungry Horse Dam: The forecast has increased slightly since the April 3 official forecast. May–July runoff 2,200 kaf (117% of average); May–September 1,970 kaf (116% of average).
- The Dalles Dam: April–August runoff 87 maf (100% of average)
- Lower Granite Dam: April–July runoff 17 maf (86% of average)
- Libby Dam: April–August runoff: 5,759 kaf (98% of average)
- Dworshak Dam: April–July runoff 1,960 kaf (80% of average)

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

Dan Turner, Corps, reported on spill operations. Higher system inflow has resulted in more spill up to the gas caps. Daily spill review has resulted in several spill cap changes over the past week. At John Day, the Corps has increased the spill cap for 120% TDG from 156 kcfs at the start of spring spill to 184 kcfs. The Dalles is spilling at 40%; Bonneville is at 150 kcfs, which is producing about 120% TDG in the tailrace.

On the Snake River, projects are spilling at spill caps for 125% TDG. Lower Granite started the season with a 72 kcfs spill cap, which was increased to 84 kcfs; at Little Goose the spill cap was increased from 79 kcfs to 81 kcfs, and at Lower Monumental, the spill cap is now at 108 kcfs, up from a season start of 98 kcfs. There was one decrease in the system at Ice Harbor, which started the season at 119 kcfs and is now down to 110 kcfs. It was lowered yesterday after it exceeded the maximum TDG criteria for two hours. Charles Morrill, WA, commented that with peak passage on the Snake typically occurring in the last week of April or the first two weeks of May, hitting 125% TDG is good.

Tony Norris, BPA, reported on flex spill hours. BPA is utilizing flexible spill at all projects since there is adequate water in the system to do so.

#### **4. Adult Passage Tools - David Swank, USFWS**

Dave Swank, USFWS, took TMT through adult passage tools provided by FPC and DART. It is early in the run and PIT-tag detections are still low so both of the tools should be taken with a grain of salt, he said. However, neither tool is reporting a delay at this time. Fish are still in transit between Lower Monumental and Little Goose.

Baus asked for clarification on what will be considered a delay this season and what the benchmarks are for deciding what is and what is not a delay. Claire McGrath, NOAA, cautioned that it is too early in the season to be using the word “delay” and that the term should be used carefully. She also mentioned that as presented at the TMT YER, there are different opinions and research on travel time and how long it can take to pass before there is harm to spawning success. She would like to wait a week or two for more data.

Morrill added that last year travel times were 2.5-2.7 days, which is higher than the 2-day metric that has sometimes been used to indicate delay. Travel times vary by season, he noted.

#### **5. Operations Review**

##### ***5a. Reservoirs – Joel Fenolio, Reclamation; Lisa Wright, Corps***

**Hungry Horse** – Midnight elevation was 3,528.4 ft. Releasing close to powerhouse capacity at 8.6 kcfs. Inflows are at 15 kcfs. Columbia Falls is at 26 kcfs. Reclamation is targeting 3,540-3,545 feet by the end of May, depending on snowpack melt over next month. Jim Litchfield, MT, inquired about maintenance for selective withdrawal. Fenolio reported the maintenance was canceled due to COVID-19 restrictions for on-site personnel. About 1/3 of the maintenance staff is currently working on-site so the maintenance was pushed to next year. With May’s 3,525 ft. on the horizon, it would be a “tall” task to try to complete the maintenance, even if restrictions were relaxed enough to allow for maintenance.

**Grand Coulee** – Midnight elevation 1,251.5 ft., inflows 145 kcfs, releases averaging 123 kcfs over last 5 days to maintain a Bonneville flow of about 270 kcfs and slowly start refill.

**Libby Dam** – Midnight elevation 2,405.9 ft., yesterday’s average inflows 18.2 kcfs and outflows were 17 kcfs.

**Albeni Falls** – Midnight elevation 2,056.1 ft., inflows 54.3 kcfs and outflows 45.2 kcfs.

**Dworshak Dam** – Midnight elevation 1,554.5 ft., yesterday’s average inflows 14.9 kcfs and outflows were 4.6 kcfs.

**Lower Granite** – Yesterday’s average outflows were 93.8 kcfs.

**McNary Dam** – Yesterday’s average outflows were 271.5 kcfs.

**Bonneville Dam** – Yesterday’s average outflows were 270.2 kcfs.

Wright and Aaron Marshall, Corps, provided a few additional notifications:

- At Little Goose, the spillway weir was moved to low crest at Friday, May 1, at about 2 pm, as triggered by the Fish Passage Plan flow criteria above 85 kcfs to allow the weir to pass more water during high flows. The weir will stay in low crest until flows drop below the 85 kcfs trigger.
- Little Goose transitioned to 30% spill for 8 continuous hours each day from 0400 to 1200 starting on April 21.
- At John Day, there was an excursion below the minimum irrigation pool requirement due to a gage error. On April 30, the forebay gage at John Day was reading incorrectly high by 1.8 ft. The gage was reset at 10 am that day and reported the actual forebay elevation was 261.9 feet, which is 0.6 ft below what is required for irrigation. Operators filled the project back to the required minimum elevation of 262.5 feet by 6 pm that evening and the gage is operating correctly now.
- Little Goose and Lower Monumental are continuing to operate in a 0.5-ft. raised MOP range for navigation safety, which began at Little Goose on April 7 and Lower Monumental on April 3. Typically, when flows increase, the Corps is able to return to MOP; however there is a problem with the gage data reporting telemetry system at Little Goose, so the half-foot raised MOP is still necessary to provide a buffer to ensure minimum tailwater depth requirements are maintained for navigation safety. The project is trying to implement repairs as soon as possible and has ordered new equipment. There are some staff issues with COVID restrictions but there is currently no estimated timeline for repairs. Tom Lorz, Umatilla Tribe/CRITFC, mentioned that the Corps should really try to tighten up the operation to a 1 ft. MOP range since spring flows are at peak and juvenile passage is expected to peak in the next week or two. Marshall reported that the 1.5-foot range is necessary in order to implement the flex spill operation. Erick Van Dyke, OR, added that he feels that MOP issues have been a pattern over the past few years and that it is concerning and a divergence from the FOP. He expressed that it is important to return to what is in the FOP for fish protection. Julie Ammann, Corps, noted that the FOP has provisions to adjust MOP for navigation safety so the Corps is operating according to the FOP and operating within the lowest 1.5-foot range that meets all requirements.

***5b. Water Quality – Dan Turner, Corps***

No additional report.

***5c. Fish – Claire McGrath, NOAA***

Claire McGrath, NOAA, took TMT through some fish passage graphs, available on the TMT agenda. There have been increases in yearling Chinook and steelhead at traps and projects. The peak should be in the next week or two. Juvenile coho and lamprey have been increasing as well.

There have been some issues with debris in the Snake River and Salmon River traps and both traps have been pulled for varying amounts of time. The Salmon River trap was pulled May 1.

For adults, at Bonneville, adult YTD passage is 18,177 (89% of last year and 22% of the 10-year average). YTD Jacks are 462, or 14% of the 10-year average. YTD steelhead counts are 3,010, which is more than last year at this time (1,819) and is 79% of the 10-year average. Wild steelhead are at 1,344 for the season (95% of the 10-year average). Shad are being detected earlier than normal. At Lower Granite, adult Chinook are at 660 thus far and steelhead are at 2,133 (1,113 wild). Shad have not been observed at Granite.

Baus inquired whether there was any status update on juvenile run-timing this year with the higher spill rates. McGrath is not aware of any juvenile run timing issues this year but will look into it. Morrill noted that spring Chinook escapement to the upper watershed has been really poor the past couple years so the juvenile outmigration this year might be lower compared to years following better escapement. Swank pointed to the new PIT-tag detection data for the Lower Granite removable spillway weir (RSW) and said it will be helpful to compare that with bypass detections. He added to keep in mind that it only accounts for a portion of the PIT-tagged fish passing via the spillway. Morrill mentioned that it may be helpful to compare bypass detections in previous years to this year. McGrath said she would pull the data.

Swank noted adult steelhead are also being detected passing through the Lower Granite RSW – whether they are kelt moving downstream or overshoots falling back hasn’t been determined. There have always been adults detected in the bypass, but this year quite a few more are being detected in the RSW. Jay Hesse, Nez Perce, will provide an update on kelt collection at the next TMT.

Morrill shared a table that he showed at FPAC. Adult spring Chinook cumulative counts through May 3 were 588 at Ice Harbor, 614 at Lower Monumental, and 602 at Little Goose, which is significantly higher compared to last year at this time (33, 48, and 32, respectively).

**5d. Power – Tony Norris, BPA**

Tony Norris, BPA, reported on the power system. Fronts have been moving through the region, bringing some wind and variability. Warm weather will bring afternoon peaks similar to what is seen in summer.

**6. Next TMT**

The next TMT meeting is call on May 13 at 9 a.m.

**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

<b>Agency</b>	<b>TMT Representative</b>
Nez Perce Tribe	Jay Hesse
Umatilla Tribe/CRITFC	Tom Lorz
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, Alexis Mills, Alfredo Rodriguez, Catherine Dudgeon  
BPA – Melissa Haskin (CONTR, FLUX Resources, Note taker)  
Clearing Up – K.C. Mehaffey  
Columbia Basin Bulletin – Bill Crampton  
DS Consulting – Emily Stranz (Facilitator), Colby Mills  
Snohomish PUD – Mike Shapley  
Yakama Nation Fisheries – Tom Iverson