

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

March 18, 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/>.

Water Supply Forecasts

Joel Fenolio, BOR, reported the official March water supply forecast for Hungry Horse Dam. April to August inflow volume is 107 % of average. The May through September volume is 108% of average. Snowpack in the Flat Head Basin is 117% of average.

Lisa Wright, Corps, reported official March water supply forecasts for Corps projects (which were generated on March 4):

- The Dalles: April to September runoff forecast is 100% of average;
- Lower Granite: April to July runoff forecast is 85% of average;
- Libby: April to August runoff forecast is 108% of average; and
- Dworshak: April to July runoff forecast is 97% of average.

The current water supply forecast for The Dalles, April to July volume forecast is 97% of average, and Lower Granite April to July forecast is 89% of average.

Monthly precipitation for March is well below normal throughout the system. The Snake River basin above Ice Harbor Dam is 72% of normal, and the Columbia River mainstem above The Dalles is 66% of normal.

The 6-10 and 14-day climate forecasts show a probability of below average temperatures and an equal chance to a probability of slightly above average precipitation. The 3-4 week outlook shows an equal chance of above or below average temperatures and precipitation. The current 30-day (as of February 29) forecast shows a probability of below average temperatures and an equal chance of below or above average precipitation.

Dworshak Outflow Request for Hatchery Release

Jay Hesse, Nez Perce, provided an update on the Dworshak outflow request to aid hatchery releases of juvenile Chinook and steelhead into the Clearwater basin, which can be viewed on the TMT website. Jon Roberts, Corps Walla Walla, shared modelling results that predicted no significant risk for refill with the operation of 7kfs outflow for the requested time period. He also noted that given the snowpack in the basin, there should be water available for a mid-April pulse of water if needed for additional hatchery releases.

- ACTION: Dworshak Dam will release 7 kcfs starting at 1200 hours on March 25, through 1200 hours on March 29. No objections were voiced from TMT members present.

Chum Incubation Operation

Lisa reported that the TMT coordinated chum operation is still being implemented (hold Bonneville Dam at a minimum tailwater elevation of 11.3 feet at all hours); the operation is posted to the TMT website. The current Bonneville tailwater elevation is fluctuating between 11.5-11.8 feet, averaging at 11.6 feet. The 10-day RFC inflow forecast is steady between 124-135 kcfs. Tony Norris, BPA, noted that until other natural stream flows increase in the lower river, Grand Coulee will be managed to meet the Bonneville tailwater minimum throughout the duration of the chum protection operation. The incubation operation is scheduled to end with the start of spill on April 10.

Spill Priority List

Dan Turner, Corps, reported the March 23-31 Spill Priority List (SPL) for managing TDG system-wide, as posted on the TMT website. After hearing concerns from Salmon Managers, the Corps amended the list to prioritize kelt collection and steelhead passage by placing Lower Granite and Little Goose dams before McNary Dam.

The SPL effective March 23-31 will change order to reflect: Lower Monumental, Ice Harbor, John Day, The Dalles, Bonneville, Lower Granite, Little Goose, McNary, Dworshak, Chief Joseph and Grand Coulee. The same order will remain for April 1-2 (new state water quality standards will be in effect). On April 3, the SPL will begin at Lower Granite moving downstream for the duration of spring spill.

Operations Review

Reservoirs: Joel reported on Bureau of Reclamation projects:

- **Grand Coulee:** midnight elevation was 1,253.9 feet, passing inflow for drumgate maintenance (maintenance is underway and is expected to be complete May 8). April 10 elevation will be 1,253 feet and FRM is 1,246 feet for the end of April.
- **Hungry Horse:** midnight elevation was 3,526 feet, with inflows of 1,000 cfs and releases of 2,500 cfs. The project is currently operating to the Columbia Falls minimum, which will draw down to 3,525 feet by the end of April for selective withdrawal inspection and maintenance scheduled for April 7-17.

Lisa reported on Corps of Engineers projects:

- **Libby:** midnight elevation was 2,404.9 feet, with average inflows of 3 kcfs and outflows of 4 kcfs, operating to the bull trout minimum;
- **Albeni Falls:** midnight elevation was 2,051.5 feet, with average inflows of 17.5 kcfs, and outflows of 14 kcfs;
- **Dworshak:** midnight elevation was 1,525.9 feet, with average inflows of 2.4 kcfs, and outflows of 1.6 kcfs;
- **Lower Granite:** average outflows of 30.3 kcfs;
- **McNary:** average outflows of 117.2 kcfs; and
- **Bonneville:** average outflows of 129.7 kcfs.

Water Quality: Dan reported that water quality was good with low TDG. The Cascade Island gauge picked up a localized TDG exceedance of 110%, which is likely due to the fish ladder and where the gauge is located. This happens yearly prior to spill season.

Fish: Claire McGrath, NOAA, reported that fish monitoring is just getting started, with juvenile traps operating at the Salmon, Snake, and Grand Ronde sites. Collection numbers have been low to zero, and increases are expected in the next few days and next week. Early general sampling is occurring at Lower Granite, McNary and Bonneville Dams; averaging about 500 sub-yearlings per day at Bonneville, and with lamprey juveniles at all three projects. This early monitoring sampling will continue through the month, with other juvenile sampling sites beginning on April 1.

Adult passage at Bonneville YTD includes 1,754 steelhead and 22 spring Chinook. Lower Granite YTD steelhead passage is 869.

Power System: Tony Norris, BPA, reported low wind in the balancing authority.

The next TMT meeting is a conference call on March 26th 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
March 18, 2020
Minutes: Melissa Haskin, Bonneville (contractor, FLUX Resources)

Today's TMT meeting was chaired by Lisa Wright, Corps, and facilitated by Emily Stranz, DS Consulting. See the end of these minutes for a list of attendees.

1. Water Supply Forecasts – Lisa Wright, Corps, and Joel Fenolio, Reclamation

The official March water supply forecasts as released on March 4 are as follows:

- Hungry Horse Dam: April–August runoff 2,070 kaf (107% of average); May–September 1,830 kaf (108% of average). Joel commented that snowpack in the Flathead Basin is 117% of average.
- The Dalles Dam: April–September runoff 92.3 maf (100% of average)
- Lower Granite Dam: April–July runoff 16.8 maf (85%)
- Libby Dam: April–August runoff: 6,349 kaf (108%)
- Dworshak Dam: April–July runoff 2,355 kaf (97% of average)

Wright also provided the latest water supply forecast for The Dalles April-September runoff is 77.2 maf (down slightly from the official forecast). The latest unofficial forecast for Lower Granite Dam April-July runoff 17.7 maf (89% of average).

Lisa also took TMT through the precipitation summary tables. On the Snake River above Ice Harbor Dam, there has been less than an inch of precipitation thus far this month (72% of average). On the Columbia River Basin above The Dalles, things have been tracking at 66% of normal. Overall, it does not look like spring runoff is increasing.

NOAA's 6 to 10-day weather forecast calls for a probability of below average temperature and equal to slightly above average precipitation. The 8 to 14-day forecast calls for below average temperatures and an equal chance to above average chance of precipitation. The 3 to 4 week forecast shows an equal chance of above or below average conditions. The 30-day forecast (made on February 29) shows a probability of below average temperature and equal chance of above or below average precipitation. This will likely result in the water supply forecast either dropping or remaining the same, commented Wright.

2. Dworshak Outflow Request for Hatchery Release – Jay Hesse, Nez Perce, Jonathan Ebel, IDFG, and Jon Roberts, Corps NWW

Jay Hesse, Nez Perce, provided TMT with a schedule of hatchery releases into the Clearwater Basin that start March 25 and continue daily through March 28. Per the Water Management Plan, operations typically call for increasing flows out of Dworshak Dam to benefit the hatchery released Chinook and steelhead and flush juveniles out of the North Fork and deliver them downstream in a timely fashion. Right now, flows in the Upper Clearwater Basin are ~5,000 cfs. Hesse requested that discharge from Dworshak Dam be increased from minimum flows to 5 kcfs starting at 1200 on March 25 and continuing through 1200 on March 29. Hesse said he was open

to flows of up to 8 kcfs but that the preference was for 5 kcfs to minimize risk of not refilling. He said there is some flexibility on the start and end time, as well.

Jonathan Ebel, ID, noted that ID concurs with the Nez Perce and that the state's preference is to move the fish out of the North Fork. He also noted if the forecast dries out that there might need to be refill prioritization talks.

Jon Roberts, Corps NWW, ran a model of refill probabilities, available on the TMT agenda. The model showed ESP traces from 1984-2019. He used the current 10-day forecast to measure the impact of the request and reported that based on the current snow levels and Basin conditions as of yesterday morning, the proposed action would pose no risk to refill. He said that water would need to be moved in the first week of April anyway to meet the flood risk management target for April 15. Roberts ran the model with 7 kcfs so any flow from 5 kcfs to 7 kcfs would be fine, he said, and still leave water for a second hatchery release in late April.

If there is low risk, then more discharge would be amenable, said Ebel. He said ID would be supportive of 7 kcfs. Hesse concurred. Hesse also noted that there is a steelhead release planned for mid-April and that there will likely be a request for a short-term pulse for that.

Claire McGrath, NOAA, voiced that her agency would be supportive of both 5 kcfs and 7 kcfs. She asked if current dry conditions persist and releases were 7 kcfs, if there could be a trigger to switch to 5 kcfs. Roberts said it could be looked into but that snow is 100% and that rain is not being relied on for refill. After hearing that, McGrath said 7 kcfs seemed sufficient.

Charles Morrill, WA, asked if there was a need to reserve water for the mid-April steelhead release. Hesse said that pulse and the corresponding request would rely on environmental conditions. He referred back to what Roberts said about there being enough water for 7 kcfs now and for water later in the month as well.

Erick Van Dyke, OR, asked if the operation would require spill. Roberts said at Dworshak Dam it would be through the powerhouse so it would drop TDG marginally.

No other TMT representatives on the call voiced objections.

Therefore, as requested, the Corps will increase Dworshak outflows to 7 kcfs from 1200 on March 25 through 1200 on March 29.

3. Chum Incubation Operation – Lisa Wright, Corps, and Tony Norris, BPA

In December, TMT coordinated an 11.3 ft. minimum tailwater at Bonneville Dam at all hours for chum incubation protection. Looking at the hourly data for today, the tailwater has ranged from 11.5 ft. to 11.8 ft. with an average of 11.6 ft. The 10-day inflow forecast calls for steady flows between 124 kcfs and 135 kcfs, which should help maintain that minimum tailwater elevation.

Tony Norris, BPA, noted that the draft for drum gate maintenance at Grand Coulee Dam was achieved, so releases from Grand Coulee are being managed to meet the chum minimum and April 10 objective. So last week the tailwater at Bonneville Dam has dropped to a range close to the chum incubation minimum (11.3 ft.). Drum gate maintenance at Grand Coulee is currently

under way and is scheduled to be completed by May 8. Until natural stream flows increase in the lower river, the Action Agencies will continue to manage Grand Coulee's discharge to meet the chum tailwater minimum at Bonneville Dam through the end of chum protection, typically the first day of spill at Bonneville Dam, which is April 10.

4. Spill Priority List. Dan Turner - Corps

Dan Turner, Corps, showed TMT the draft spill priority list for the 2020 spring spill season, attached to today's agenda. The proposed lists (one for March 23-31 and one for April 1-June 21) define project priority order for lack of load spill for management of TDG system-wide. The spring list will go into effect on March 23 when the winter spill priority list ends. On April 1, adjusted state water quality standards go into effect and are included in the spill priority list in Level 1.

Tom Lorz, Umatilla/CRITFC noted that FPAC was not able to discuss the list at their meeting. He was concerned that putting Lower Granite first limits the ability to collect kelt for the reconditioning program. This is also the same for Little Goose.

Hesse said he would also prefer they be moved down the list because of kelt collection efforts prior to the planned spill period.

Lorz noted that McNary is also important to move down the list because of the overshoot study. Van Dyke noted steelhead in the basin and voiced support for moving McNary to the end of the list.

In response to these concerns, TMT recommended modifying the spill priority list to move Lower Granite, Little Goose, and McNary to the bottom of the fish passage projects in each level. Then when spring spill starts on April 3, resume the default priority order with Lower Granite at the top and going in order downstream.

The Corps and BPA supported this recommendation and will modify the spill priority list for March 23 – April 2 as follows:

1. Lower Monumental
2. Ice Harbor
3. John Day
4. The Dalles
5. Bonneville
6. Lower Granite
7. Little Goose
8. McNary
9. Dworshak
10. Chief Joseph
11. Grand Coulee

5. Operations Review

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

Grand Coulee – Midnight elevation 1,253.9 ft. Drum gate maintenance was triggered by the February water supply forecast. The goal is to be below 1,253 ft. by April 10. The FRM is 1,246 ft. for the end of April. Mike Shapley, Snohomish PUD, asked if the FRM elevation will come up due to the current water supply forecast that is lower. Norris said generally yes. The Corps concurred that if the water supply forecast changes dramatically then FRM objectives are adjusted.

Hungry Horse – Midnight elevation 3,526 ft. Inflows have been ~1,000 cfs and outflows are ~25,000 cfs. Operating at Columbia Falls minimums, which should get the reservoir to 3,525 ft. by the end of April for selective withdrawal maintenance and inspection.

Libby Dam – Midnight elevation 2,404.9 ft., yesterday's average inflows 3 kcfs and outflows 4 kcfs (bull trout minimum).

Albeni Falls – midnight elevation 2051.5 ft., inflows 17.5 kcfs and outflows 14 kcfs.

Dworshak Dam – Midnight elevation 1,525.9 ft., yesterday's average inflows 2.4 kcfs and outflows 1.6 kcfs.

Lower Granite – Yesterday's average outflows were 30.3 kcfs.

McNary Dam – Yesterday's average outflows were 117.2 kcfs.

Bonneville Dam – Yesterday's average outflows were 129.7 kcfs.

5b. Water Quality – Dan Turner, Corps

Seasonal gages are starting to go in and water quality is fine. There is a localized TDG exceedance in the Bonneville Dam tailwater at Cascades Island due to the fish ladders and where the gage is located.

5c. Fish – Claire McGrath, NOAA Fisheries

Smolt monitoring is beginning. Juvenile traps are being operated. Collection numbers have been low to 0. Salmon River traps have seen yearling Chinook earlier this week. Things should increase in the next week. There have been about 500 subyearling per day at Bonneville.

As far as adults, there are two sites counting. At Bonneville, there have been about 15 to 44 steelhead per day with a year-to-date total of 1,754. Thus far there are 22 spring Chinook. At Lower Granite, steelhead are about 27 to 64 per day with a year-to-date total of 869.

5d. Power – Tony Norris, BPA

There has not been much wind.

6. Next TMT

The next TMT meeting is a conference call on March 25 at 9 a.m.

Today's Attendees:

Agency	TMT Representative
Army Corps of Engineers	Lisa Wright (Chair), Julie Ammann
Bonneville Power Administration	Tony Norris, Scott Bettin
Bureau of Reclamation	Joel Fenolio
NOAA Fisheries	Paul Wagner, Claire McGrath
US Fish & Wildlife Service	Dave Swank
Washington	Charles Morrill
Oregon	Erick Van Dyke
Idaho	Jonathan Ebel
Montana	N/A
Nez Perce Tribe	Jay Hesse
Umatilla Tribe/CRITFC	Tom Lorz
Colville Tribe	N/A
Warm Springs Tribe	Jen Graham
Kootenai Tribe	N/A
Spokane Tribe	N/A

Other Attendees (non-TMT members):

Army Corps of Engineers – Jon Roberts, Dan Turner, Ann Setter, Laura Hamilton, Alfredo Rodriguez, Erin Kovalchuk
DS Consulting – Emily Stranz (Facilitator), Colby Mills
FLUX Resources – Melissa Haskin (Note taker)
Columbia Basin Bulletin – Mike O’Bryant
Portland General Electric – Ruth Burris