

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

June 29, 2022

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/2022/>. Suggested edits for the summary are welcome and can be sent to Colby at colby@dsconsult.co.

Review Meeting Summaries & Minutes - TMT Members finalized the official meeting minutes from June 8, and the facilitator's summaries from the June 10 and 22 meetings. Minutes from June 10, 15, and 22 will be reviewed at the next TMT meeting.

Spill Priority List – Alexis Mills, Corps, provided an update on the Spill Priority List (SPL). She noted that the list posted reflects the Fish Manager's request to use the order from the first SPL coordinated last summer. The example spill caps have been updated to reflect current conditions and will continue to be evaluated daily. Also, Ice Harbor Level 1 spill cap was changed from the temporary 45 kcfs cap coordinated last week and is now estimated to meet but not exceed 120% TDG in the tailrace and 115% TDG in the downstream forebay.

Jonathan Ebel, ID, noted appreciation for reverting back to what was coordinated last year. He added that the SPL is a constantly changing document, and Idaho is committed monitoring it closely. Trevor Conder, NOAA, noted that the SPL is good for now, and NOAA is also interested in considering potential improvements from an adult fish passage perspective. He suggested that TMT reconsider the SPL in the off-season.

Operations Review – Reservoirs: Joel reported on Bureau of Reclamation projects:

- **Hungry Horse:** midnight elevation was 3,558.42 feet, with releases of about 11,000 cfs and inflows of 13,000 cfs. The project is operating for refill as flood control operations cease. Columbia Falls was down below the flood stage over the weekend, and Flathead Lake is coming out of surcharge today.
- **Grand Coulee:** midnight elevation was 1,285.2 feet, with releases and inflows over the last 5 days around 260,000 cfs. The project is aiming for 1,285 feet by the end of the month and is filling 0.5 feet through the July 4 weekend. It will top off refill at 0.4 feet from full with incremental storage adjustment by July 15.

Upper Snake Flow Augmentations: The upper Snake River Palisades Powerhead release of 53 kaf has concluded, and the Boise and Payette systems are transitioning to releases. Estimated total flow augmentation volume is 365 kaf (an 85,000 cfs increase from last update): about 179 kaf from the Payette system, 56 kaf from the Boise, and 14 kaf from the Anderson Ranch powerhead (83 kaf from rentals).

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

- **Libby:** midnight elevation was 2,430.7 feet, with average inflows of 42.8 kcfs, and outflows of 12.4 kcfs;

- **Albeni Falls:** midnight elevation was 2,061.6 feet, with average inflows of 80.5 kcfs, and outflows of 78.6 kcfs;
- **Dworshak:** midnight elevation was 1,599.9 feet, with average inflows and outflows of 9.5 kcfs;
- **Lower Granite:** average outflows of 86.1 kcfs;
- **McNary:** average outflows of 375.5 kcfs; and
- **Bonneville:** average outflows of 395.4 kcfs.

In response to a question from Kirk Truscott, Colville Tribes, about spill at Chief Joseph Dam, Tony Norris, BPA, noted that the project's powerhouse capacity is still limited, and flows continue to be high. Tony will connect with Kirk to provide more information on anticipated powerhouse capacity.

Water Quality: Dan Turner, Corps, reported similar conditions as last week, with some TDG levels above gas caps due to forced spill on the system (most due to lack of turbine on the lower Columbia, and some lack of load spill at various hours).

Regarding the Lower Granite tailwater gauge that was washed out due to high flows, he noted that the Corps Walla Walla district is working with USGS to design and install a permanent replacement. Jon Roberts, Corps, added that they hope to have the permanent fix later this summer if all goes well with getting the necessary materials. He also noted that the temporary replacement gauge isn't yet providing accurate numbers because high river flows prevent it from being placed at the correct depth; the Water Quality team will adjust the gauge location every 2-3 weeks as flows recede. Dan reported that the Bonneville gauge has been reinstalled, and the Cascade Island gauge has been temporarily removed due to high flows.

Fish: Trevor Conder, NOAA, reported that adult summer Chinook at Bonneville are increasing (5,000 yesterday). He noted a counting error that is appearing in data; the Corps is working to fix this. Summer steelhead are increasing, as well as shad and sockeye (50,000 yesterday); a few PIT-tagged Snake River sockeye are enroute to the Snake. A total of 26 sockeye have passed Ice Harbor to date. Despite delays in the Snake from high flows and spill, fish passage is picking up, with conversion rates up to the mid-90s from Ice Harbor to Lower Granite (based on PIT-tags). Overall, fish are a bit delayed, but lower temperatures this year should help.

TAC has updated their sockeye prediction based on counts and will meet about the fishery tomorrow. Charles Morrill, WA, provided TAC's Monday update in the meeting chat:

"TAC estimated that the preliminary post-season run size for upriver spring and Snake River spring/summer Chinook at the Columbia River mouth was 185,100 adult fish, compared to the pre-season forecast of 122,900 adults. The post-season estimate will be finalized when the run reconstruction is done in December.

The sockeye count at Bonneville Dam through June 26 is higher than the pre-season river mouth forecast. TAC upgraded the sockeye run size at the Columbia River mouth to 426,000 fish compared to the pre-season forecast of 198,700. TAC upgraded the upper Columbia summer Chinook run size to 66,800 adults at the Columbia River mouth, compared to the pre-season forecast of 56,300 adults.

TAC will continue to monitor and assess the sockeye and summer Chinook returns and will provide run size updates as warranted. TAC is scheduled to meet again next Tuesday July 5."

He also provided sub-cumulative passage graphs for McNary and Bonneville:

- McNary: https://www.fpc.org/smolt/smolt_queries/R_smoltcumulativepassindex_resultsv7.php
- Bonneville: https://www.fpc.org/smolt/smolt_queries/R_smoltcumulativepassindex_resultsv7.php

Trevor reported that juvenile passage is winding down except for sub-yearlings, which are declining but still passing in good numbers.

Dave Swank, USFWS, reported that juvenile lamprey counts are down compared to last week. Adult counts at Bonneville are 87% of last year and 25% of the 10-year average (1/3 way through run). He noted that a discrepancy between some Columbia River projects could be likely due to some adults overwintering between The Dalles and John Day. The Dalles is 2% of both last year's run and the 10-year average; John Day is 24% of last year and 14% of the 10-year average. Delays could be to colder than average water temperatures.

Power System: Tony reviewed results of implementing oversupply mitigation; curtailing variable generating resources to minimize TDG in the system. He noted a lot of water in the system, and that during morning hours and weekends there has been lack of market spill; he expects similar conditions over the July 4 weekend.

Questions or Comments from Members of the Public – There were no questions or comments from members of the public

The next scheduled TMT meeting is on July 6 at 9:00 AM.

Columbia River Regional Forum

Technical Management Team

OFFICIAL MINUTES

June 29, 2022

Minutes: Melissa Haskin, 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 of Meeting Minutes and Summaries

The 6/8 meeting minutes and 6/10 and 6/22 summaries were approved with no additional edits.

2. Spill Priority List

Alexis Mills, Corps, provided an update on the Spill Priority List. Fish managers have requested that the project priority order be returned to the same order coordinated for summer 2021. Mills showed a draft of that list with updated sample spill caps. As coordinated with TMT last week, Ice Harbor level 1 was capped at 45 kcfs starting June 22. This list returns to the same project order as in summer 2021, with spill caps in Level 1 expected to meet but not exceed 120% TDG in the tailrace or 115% in the downstream forebay during lack of load operations.

TMT members shared the following feedback and comments with the group:

1. Jonathan Ebel, ID, shared that the Spill Priority List is a constantly changing document and he is open to seeing how today's order will go.
2. Trevor Conder, NOAA, commented that today's list is "workable." He added that he believes there could be some improvements and that he questions why Little Goose is after Lower Monumental, but that he is open to seeing how this order goes and evaluating the data after it has been implemented.

Stranz commented that what she heard from the group is that it is ok to implement the draft spill priority list (same as summer 2021) and that it can be revised throughout the season, as necessary. No objections to this were voiced.

3. Operations Review

3a. Reservoirs – Joel Fenolio, Reclamation; Lisa Wright, Corps

Reclamation projects:

Hungry Horse – Midnight elevation 3,558.42 ft.; currently releasing 11 kcfs to control refill now that the project is out of flood control operations. Inflows of 13 kcfs. Over the weekend, Columbia Falls dropped below flood stage for the first time in two weeks. Flathead Lake is out of surcharge as of today.

Grand Coulee – Midnight elevation 1,285.2 ft. Releases have been averaging about ~260 kcfs and inflows have been matching that. The end-of-month target is 1,285 ft. Through the July 4

weekend, the project will fill at about half a foot per day, and reach refill at 0.4 ft. from full on July 15.

Upper Snake Flow Augmentation: The 53,000 acre-feet of Palisades Powerhead have been released. Both the Payette and Boise systems are releasing their flow augmentation volumes. Total flow augmentation should come in at 365 kaf this season. This is an 85 kcfs increase from the last update Joel gave. Most of this is from the Payette system, which is estimated to provide 179 kaf. There will be about 83 kaf from rentals. If rentals do come in at that amount, it will be much larger than normal – in fact, it may be a record, noted Fenolio. On the Boise, there should be about 56 kaf of flow augmentation water, with 14 kaf coming out of Anderson Powerhead, which had not previously been on the flow augmentation list for this year due to drought conditions.

Corps Projects:

Libby Dam – Midnight elevation 2,430.7 ft., yesterday’s average inflows 42.8 and outflows 12.4 kcfs. **Albeni Falls** – Midnight elevation 2,061.6 ft., inflows 80.5 kcfs and outflows 78.6 kcfs. **Dworshak Dam** – Midnight elevation 1,599.9 ft., inflows and outflows 9.5 kcfs. **Lower Granite** – Yesterday’s average outflows were 86.1 kcfs. **McNary Dam** – Yesterday’s average outflows were 375.5 kcfs. **Bonneville Dam** – Yesterday’s average outflows were 395.4 kcfs.

Kirk Truscott, Colville Tribe, asked about conditions and operations at Chief Joseph Dam. Specifically, he wondered why spill is almost the same as generation flow. He is surprised by the high spill given the recent warm weather. Tony Norris, BPA, shared that powerhouse capacity is limited at the project. Additionally, the Action Agencies are still controlling Grand Coulee’s forebay. Norris commented that a good indication that the Action Agencies are moving as much water as possible is if they are spilling at Grand Coulee Dam. Truscott asked if he could speak with Tony offline to get a better idea of when conditions will change at Chief Joseph Dam. → The two will take this conversation offline.

3b. Water Quality – Dan Turner, Corps

Dan Turner, Corps, reported on water quality. Similar to last week, TDG levels are above the gas caps due to forced spill on the system. Most of the forced spill is due to lack of turbine on the Lower Columbia River. The Corps is trying to meet FOP spill levels. The Lower Granite tailwater gauge was washed out and destroyed during high flows. Turner previously reported on this. The Corps is working with USGS to design and install a new gauge. This will take some time. Jon Roberts, Corps Walla Walla noted that a permanent fix likely will not occur until late August or September due to availability of materials. The Corps has put in an emergency request for those. For now, a temporary gauge has been installed. The data coming in are showing lower TDG levels than what would be expected given the spill rates. The Corps is deleting the data it believes to be inaccurate. There can be a slight lag between when the data are posted and then deleted. Roberts shared that the low data quality is likely a location issue. Right now, the temporary gauge is not far enough in the river and therefore not at the correct depth to provide the most accurate data. This is due to high flows. As flows go down, the water quality team will continue to adjust the temporary gauge, relocating it further out into the river. This will occur every 2-3 weeks.

Additionally, the Bonneville tailwater gauge at Cascades Island has been re-installed. Typically, when high flows are expected, the gauge is removed and then reinstalled when flows recede.

3c. Fish

Adults: Conder reported on fish for NOAA.

At Bonneville, adult summer Chinook have come out of a lull and are increasing. He shared that 5,000 fish passed the project yesterday. There is a counting error the Corps is working on fixing.

Steelhead are increasing, and shad are still passing in good numbers. Sockeye are increasing; 50,000 were counted yesterday. TAC has updated their run prediction and are meeting tomorrow. A number of PIT-tagged sockeye have been detected and are en route to the Snake River.

At Ice Harbor, 26 PIT-tagged sockeye have been counted to-date.

Conder noted there have been some delays in the Snake River due to high flows. However, fish are starting to convert. Conversion rates are now in the mid-90% range from Ice Harbor to Lower Granite. Conder commented that things seem to be getting back on track following the high flow, high spill conditions. Conder did note that the fish are delayed. He is hopeful that the lower temperatures will negate passage issues.

Charles Morrill, WA, shared an update from TAC using the comment function in today's web meeting. The text read:

TAC estimated that the preliminary post-season run size for upriver spring and Snake River spring/summer Chinook at the Columbia River mouth was 185,100 adult fish, compared to the pre-season forecast of 122,900 adults. The post-season estimate will be finalized when the run reconstruction is done in December. The sockeye count at Bonneville Dam through June 26 is higher than the pre-season river mouth forecast. TAC upgraded the sockeye run size at the Columbia River mouth to 426,000 fish compared to the pre-season forecast of 198,700. TAC upgraded the upper Columbia summer Chinook run size to 66,800 adults at the Columbia River mouth, compared to the pre-season forecast of 56,300 adults. TAC will continue to monitor and assess the sockeye and summer Chinook returns and will provide run size updates as warranted. TAC is scheduled to meet again next Tuesday July 5.

Morrill also provided links to the cumulative passage graphs for McNary and Bonneville for subyearlings as well as the smolt passage index at Bonneville.

As far as juveniles, passage is winding down for everything except subyearlings. Those are passing in good numbers and on a slight decline.

Dave Swank, USFWS, shared an update on lamprey. Not much is happening with juveniles; counts are down compared to last week. Meanwhile, adult counts at Bonneville are at 87% of last year's numbers and 35% of the 10-year average, thus far. This could change, since the run is only about 1/3 of the way complete. He noted that there is a discrepancy in counts between The Dalles and John Day. He thinks this may be because of wintering adults between John Day and The Dalles. At The Dalles, counts are only at 2% of last year's run and 2% of the 10-year

average. Meanwhile, John Day is at 24% of last year’s numbers and 14% of the 10-year average. Swank thinks that passage is likely delayed at one of those projects due to the colder-than-average temperatures. This will become clearer as the run progresses.

3d. Power – Tony Norris, BPA

Tony showed a chart of when BPA had to implement oversupply mitigation when variable generating resources are curtailed to minimize the impact of spill on TDG in the system. There is a lot of water in the system. During the morning and weekend hours, there has been lack of market spill. Norris expects this to continue through the holiday weekend.

Today’s Attendees:

Agency	TMT Representative
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	Trevor Conder, Kelsey Swieca
US Fish & Wildlife Service	Dave Swank
Washington	Charles Morrill
Oregon	Erick Van Dyke
Idaho	Jonathan Ebel
Montana	Brian Marotz
Nez Perce Tribe	
Umatilla Tribe/CRITFC	Tom Lorz
Colville Tribe	Kirk Truscott
Warm Springs Tribe	
Kootenai Tribe	
Spokane Tribe	

Other Attendees (non-TMT members):

- Corps – Alexis Mills, Dan Turner, Jon Roberts, Scott St. John
- DS Consulting – Emily Stranz (Facilitator), Colby Mills
- BPA – Melissa Haskin (Contractor with CorSource Technology Group)
- Oregon DEQ – Marilyn Fonseca
- Clearing Up – K.C. Mehaffey