

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

August 26, 2020

DRAFT Facilitator's Summary

Facilitator: Emily Stranz; Notes: Colby Mills

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://pweb.crohms.org/tmt/agendas/2020/>.

Review Meeting Summaries & Minutes

TMT Members approved official minutes and facilitator's summaries for the August 7 meeting. The official meeting minutes and facilitator's summary for August 12 were approved, pending the addition of Oregon's SOR voting rationale to the meeting minutes.

Dworshak Dam Operations

Jon Roberts, Corps, reported on operations at Dworshak Dam. The project is currently discharging 8,500 cfs with a forebay elevation of 1,545 feet and is projected to reach 1,540 feet by the end of August. TDG has been staying close to 100% in the tailwater, and 98.5% in the hatchery.

River temperatures at the Anatone gauge are at 71 degrees F, 68 degrees F in the Clearwater, and Lower Granite tailwater is 67.7 degrees F. The Lower Granite pool surface temperature is still warm from the recent heat wave: around 75 degrees F, reaching up to 76/77 degrees F. The heat will continue to dissipate over next few days and water temperatures are projected to decrease slightly with incoming precipitation in the region. In the Lower Granite forebay, water from the 3-meter mark is being pulled into the RSW at 71/72 degrees F. Water at the 20-meter mark at the fish trap intake is between 66-67 degrees F, and the fish trap is currently at 66.27 degrees F.

The 10-day forecast shows continued cooling temperatures on Tuesday and Thursday, with the weekend warming back up on Saturday; parts of the region will reach the low 90s. Sunday and Monday could see a little precipitation and cooler temperatures. The extended forecast into September shows lows in the 50s and highs in the 80s.

With the cooler forecasts and upcoming RSW closure on September 1, the Lower Granite tailwater temperature will begin to drop; project operations will pull cool water through the turbines from deeper in the reservoir and the tailwater is expected to reach 65/66 degrees F. Dworshak is looking at a reduction down to 8 kcfs on Friday at midnight, and will still provide enough cool water for the Lower Granite fish trap, ideally though mid-September.

Jay Hesse, Nez Perce, reported that the Dworshak Board is scheduled to meet this Friday. They will consider a proposal for September water augmentation, utilizing the 5-feet of water above the 1,535-foot elevation, and maintaining a 7.5-8 kcfs release through Sept 10/11 with a gradual ramp down through the end of September. Jay will report back on this at the next TMT meeting.

Lower Granite Dam - Removable Spillway Weir Operations

Dave Swank, USFWS, provided an update on the Salmon Manager's desire to leave the Lower Granite Dam RSW in place through the end of August, as requested in the SOR coordinated at TMT on August 7. Salmon Managers have been monitoring PIT-tag detection data and noted a drop in juvenile detections at the RSW following the shift to reduced summer spill on August 15. However, Dave expressed the RSW PIT-tag array is helpful in tracking both juvenile passage and adult fallback/re-ascension behavior.

It was noted that juvenile Chinook counts are likely undercounted in the spillway especially for fish tagged with smaller tags and the fact that the array is flat rather than wrap-around. Jay noted that juvenile PIT-tagging by the Nez Perce and USGS in the Clearwater utilize a combination of PIT-tag sizes, and that it's known that smaller sizes have a lower detection rate.

Jonathan Ebel, ID, noted that the data collected through the RSW are valuable, and can provide insight on the effects of tagging and fish handling for adult steelhead, as well as time spent in the forebay before falling back.

Operations Review

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

- **Grand Coulee:** the project is drafting to 1,279.5 feet by Monday afternoon. Banks Lake will also be 5-feet from full by end of August.
- **Hungry Horse:** midnight elevation was 3,554.4 feet, with releases of 2,400 cfs for most of August. The project will drop releases to 2,100 cfs on Sunday night, aiming to be as close to 3,550 feet as possible by the end of September. There is a minimum generation request for September 8-12, and releases would raise to 3,000 cfs during that time.

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

- **Libby:** midnight elevation was 2,450.4 feet, with average inflows of 6.5 kcfs and outflows of 9 kcfs;
- **Albeni Falls:** midnight elevation was 2,062.3 feet, with average inflows of 8.1 kcfs and outflows of 10.0 kcfs;
- **Dworshak:** midnight elevation was 1,546.1 feet, with average inflows of 0.9 kcfs and outflows of 8.4 kcfs;
- **Lower Granite:** average outflows of 25.6 kcfs;
- **McNary:** average outflows of 132.5 kcfs; and
- **Bonneville:** average outflows of 138.6 kcfs.

Water Quality: Dan Turner, Corps, reported that all gauges are running and TDG is within water quality criteria.

Fish: Claire McGrath, NOAA, noted that adult fall Chinook and steelhead are passing through the system, with coho starting to appear lower in the system. A few adult sockeye are still passing, especially at the upper Columbia and lower Snake River projects. A summary of adult counts is posted on the TMT website.

For juveniles, low numbers of sub-yearling Chinook are passing at most projects, index has ranged between 10-1,000 per day depending on the project; a report is posted on the TMT website. Reduced sampling rates at some projects are due to elevated water temperatures and low juvenile numbers. Elevated mortality at McNary Dam during seasonal sampling is a concern and FPOM is considering the best approach to monitoring to limit holding and exposure during elevated temperatures. Charles Morrill, WA, noted a concern that the shorter 8-hour sampling window (midnight to 0800 hours) does not provide an accurate picture of what is actually happening to fish before entering the bypass; more specifically, that forebay temperatures are causing the elevated mortality. The conversation will continue at FPOM, and Salmon Managers will circle back to the TMT regarding outcomes.

At Bonneville (at 0500 hours) adult fall Chinook YTD passage is 36,000, or 95% of the 10-year average; fall Chinook jacks YTD passage is 21,436, or 49% of the 10-year average; coho are looking good at 190% of the 10-year average; steelhead are at 42 % of the 10-year average; and wild steelhead are at 48% of the 10-year passage. Shad are still passing in low numbers and are at 200% of the 10-year average.

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At Lower Granite, fall Chinook YTD passage is 627, or 60% of the 10-year average; jacks YTD passage is 163, or 98% of the 10-year average; sockeye YTD passage is 619; steelhead YTD passage is 5,366, or 35% of the 10-year average; and wild steelhead are at 39% of the 10-year average.

Claire noted that sockeye passage timing this year at Bonneville is similar to the historical average, although is noticeably later at Lower Granite. The increase in sockeye passage from last year is good news. It is still a low year for lamprey and they are well into the tail end of the adult run.

Priest Rapids counts are posted in the fish count summary; fall Chinook adults, jacks, and steelhead are all passing.

Power System: Tony Norris, BPA, noted incoming cooler weather into the system. Snake River projects are still planning on returning to the MOP ranges (as of August 31) minus any additional constraints coincident with the draft at Dworshak to elevation 1,520 feet.

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 a conference call on September 2 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

Wednesday, August 26, 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. Review of Meeting Minutes

The August 7 facilitator's summary and official minutes were approved with no additional edits. The August 12 facilitator's summary and official minutes were approved with an edit from Erick Van Dyke, OR, to add Oregon's voting rationale to the SOR poll results.

2. Dworshak Operations - Jon Roberts, Corps

Jon Roberts, Corps, reported on operations at Dworshak Dam. The project is discharging 8.5 kcfs. The forebay is at 1,545 ft. elevation and is expected to be at 1,540 ft. at the end of the month. TDG is ~100% in the tailwater and the hatchery is ~98.5% TDG.

Water temperature in the Snake River at Anatone is currently 71°F. In the Clearwater River at Orofino, temperatures are 68°F and in the Lower Granite tailwater, temperatures are around 67.7°F. Inflows are down slightly. The region saw some light precipitation last night and overall, water temperatures in the region are down drastically from August 19 with the help of increased Dworshak Dam releases. The forebay at Lower Granite was 76-77 °F near the surface but water at the 20-meter mark at the fish trap intake is between 66-67°F. Temperatures at the fish trap are at 66.27°F. Roberts noted that temperatures in the forebay should cool over the next few days.

The 10-day weather forecast shows a slight cool down Tuesday through Thursday but heading into weekend things will warm up into the low 90s in some areas. Some areas may see showers on Sunday but Roberts is unsure of how much precipitation there will be and how much that will cool things down.

Roberts shared an operational scenario, available on the TMT website. Friday at midnight, the Corps will reduce Dworshak Dam releases to 8 kcfs in anticipation of the Lower Granite RSW closing September 1 with the end of summer spill. Temperatures in the Lower Granite tailrace should be at 65-66°F. The Corps will monitor temperatures at the fish trap closely and move cool water to keep the trap in operation, ideally through the end of September.

The Dworshak Dam Board is scheduled to meet Friday. Jay Hesse, Nez Perce, gave a heads up that the board will be considering a proposal to keep Dworshak Dam above 1,535 ft. elevation at the end of August for use in September. Hesse will report back at the next TMT meeting on September 2.

3. Lower Granite Dam Removable Spillway Weir Operation - David Swank, USFWS

SOR 2020-5 was approved on Friday, August 7. The SOR, available in full on the TMT website, requested that the RSW be left open through the end of August or until salmon managers asked for it to be closed. The reason for the SOR was that salmon managers sought to utilize the new PIT-tag monitoring array in the RSW to learn about juvenile salmon behavior, as well as adult fallbacks. Salmon managers have been closely monitoring PIT-tag detection data at their weekly FPAC meetings. Detections in the RSW dropped after the shift to summer spill on August 15, but yesterday picked up again.

Swank mentioned that different sizes of PIT-tags are used in the Clearwater and smaller PIT-tags can be detected at lower rates due to their design. Thus, detections for juvenile Chinook may be underestimates. He also reported there have been elevated counts of adult steelhead in the RSW compared to prior weeks. These steelhead have higher fallback rates after they are tagged and released. Salmon managers are collecting valuable information about the effects of tagging. They would like to leave the RSW in through the end of the month, said Swank.

Hesse added that the data will also be helpful in determining how long fish are spending in the forebay before falling back.

4. Operations Review

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

Hungry Horse – Midnight elevation 3,554.4 ft. Outflows are at 2.4 kcfs and be held at 2.4 then dropped to 2.1 kcfs Sunday night to hit the end of September elevation target of 3,550 ft. There is a minimum generation request for September 8-12.

Grand Coulee – Drafting for the end of August elevation target of 1,279.5 ft. (which should be hit on Monday, August 31). Banks Lake should hit its 5-foot from full target by the end of day on August 31.

Libby Dam – Midnight elevation 2,450.4 ft., yesterday's average inflows were 6.5 kcfs and outflows were 9 kcfs.

Albeni Falls – Midnight elevation 2,062.3 ft., inflows 8.1 kcfs and outflows 10 kcfs.

Dworshak Dam – Midnight elevation 1,546.1 ft., yesterday's average inflows 0.9 kcfs and outflows were 8.4 kcfs.

Lower Granite – Yesterday's average outflows were 25.6 kcfs.

McNary Dam – Yesterday's average outflows were 132.5 kcfs.

Bonneville Dam – Yesterday's average outflows were 138.6 kcfs.

4b. Water Quality – Dan Turner, Corps

The Corps is meeting water quality criteria and the gauges are working.

4c. Fish – Claire McGrath, NOAA

Claire McGrath, NOAA, reported on fish. For juveniles, there are still low numbers of subyearling Chinook passing at most projects. The smolt index is reporting 10-1,000 per day, depending on the project. There are reduced sampling rates at some projects due to elevated water temperatures and low juvenile numbers.

During sampling at McNary mortality has been high. There have been regional discussions to modify smolt monitoring. Right now, the project is collecting fish from midnight to 8 am to try to limit holding and exposure during elevated temperatures. Charles Morrill, WA, noted that the data are showing that mortality is happening upstream, which indicates that high water temperatures is the cause.

For adults at Bonneville, fall Chinook are at 1,632 to 4,612 per day and ~36,000 YTD (132% of last year's count and 95% of the 10-year average). Jack Chinook are at 229-529 per day and 21,436 YTD (103% of last year; 49% of the 10-year average). Coho are looking good thus far at 190% of the 10-year average. Steelhead are passing at 688 to 1,087 per day (126% of last year and 42% of the 10-year average). Wild steelhead are at 269-420 per day, which is 109% of the 10-year average and 48% of the 10-year average. Shad are still passing in low numbers and are at 200% of their 10-year average.

At Lower Granite, fall Chinook adults are passing 42-74 per day and YTD is 60% of the 10-year average. Jacks are strong at 9-53 per day, which is 98% of the 10-year average. Sockeye numbers are low, at 1-5 per day. Steelhead are passing the project at 29-72 per day with a YTD of 5,366 for the year (111% of last year and 35% of the 10-year average). Wild steelhead are at 39% of the 10-year average.

Sockeye timing this year is similar to the historic average at Bonneville but later than average at Lower Granite.

At Priest Rapids, fall Chinook adults and jacks, steelhead, and sockeye are still passing.

4d. Power – Tony Norris, BPA

The region is cooling off.

The Lower Snake Projects are released from MOP constraints on August 31st at midnight. Coincident with the draft of DWR to elevation 1,520 feet in September, the Lower Snake projects will be returned to their August 31st MOP ranges as a soft constraint unless any additional project constraints preclude the draft.

5. Next TMT and Other

The next TMT meeting is call on September 2 at 9 a.m.

Today's Attendees:

| Agency | TMT Representative |
|---------------------------------|--------------------------------------|
| Army Corps of Engineers | Doug Baus, 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 |

| Agency | TMT Representative |
|-----------------------|---------------------------|
| Washington | Charles Morrill |
| Oregon | Erick Van Dyke |
| Idaho | Jonathan Ebel |
| Montana | Jim Litchfield |
| Nez Perce Tribe | Jay Hesse |
| Umatilla Tribe/CRITFC | Absent |
| Colville Tribe | Sheri Sears |
| Warm Springs Tribe | Absent |
| Kootenai Tribe | Absent |
| Spokane Tribe | Absent |

Other Attendees (non-TMT members):

Corps – Dan Turner, Jon Roberts, Chris Peery, Laura Hamilton, Willow Walker, Alfredo Rodriguez

BPA – Melissa Haskin (CONTR, FLUX Resources, Notetaker)

DS Consulting – Emily Stranz (Facilitator), Colby Mills

Yakama Nation Fisheries – Tom Iverson

Snohomish PUD –Mike Shapley

Clearing Up – K.C. Mehaffey