

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

April 21, 2021

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/2021/>.

Review Meeting Summaries & Minutes

Official meeting minutes and facilitator's summaries from the April 7 and 14 meetings will be reviewed at the next TMT meeting.

Flow Request

Charles Morrill, WA, reported a flow augmentation request for Chief Joseph Dam, resulting from an FPAC discussion and coordination with BPA. The request was for a targeted weekly average flow of 90 kcfs from April 26 – May 2, and 110 kcfs for May 6 – 9. There is hope for a natural flow increase to minimize the amount of water needed to draft out of Grand Coulee to support the request. Tony Norris, BPA, confirmed that the request is for week average flows out of the project (Monday through Sunday), stating that the Action Agencies could implement it.

Jonathan Ebel, ID, requested further discussion among the group on flow patterns out of the Snake River, given the continually shifting water situation developing in the southern part of the basin; he asked for more information on augmentation and timing in the Snake River, to ensure fish benefits were aligned and to avoid a bad water situation later in the season. Joel Fenolio, BOR, presented upper Snake River flow augmentation prospects (to be posted to the TMT website), noting that things have dried up significantly; flow augmentation will be 427 kaf this year. With current conditions, potential flow augmentation start dates include: May 3 for the Upper Snake, mid-June for the Payette, and mid-May for the Boise system.

Reclamation is planning on starting to release from the Upper Snake on May 3rd targeting a release of 3,000 cfs by Wednesday. The slow ramp up is for public safety concerns over three days. The 3,000 cfs release would initially start to get the potential ~178 KAF released from the Upper Snake Basin over 30 days but adjustments may need to be made later. That total amount is uncertain given that Reclamation is still in the process of determining how much water is available from the 3 basins from potential rentals and how the accounts refill in early May.

Jonathan expressed caution on the flow request, and asked consideration regarding what the cost might be of reshaping the water sooner, based on the drying trends in the south basin.

The Upper Snake water management group is meeting tonight to present prospects with the current information. Jonathan reported that ID Power will be working to refill below the Hells Canyon Complex in mid-May, and Claire McGrath, NOAA, noted that Idaho Power is currently implementing their entrapment management plan, with minimum flows of 8,000 cfs. FERC license minimum flows are 5,000 cfs. The main constraint will be the weather coming through next week, and whether incoming rain will have a significant effect on snow melt and increase natural flows.

Claire noted that NOAA appreciates the concerns voiced by Idaho and emphasized passage timing for wild juveniles currently coming out of the mid-Columbia; she continued that the requested operation would support ESA listed and unlisted stock out of upper and mid-Columbia. Claire also noted that

tributary flows have begun to ramp up, indicating wild fish would move in greater numbers, and the additional flows will benefit the Colville Tribe's hatchery releases.

Jonathan noted a preference of targeting 85 kcfs for the 1st week of requested augmentation, and was okay moving forward with that first week, while monitoring the impact at Priest Rapids and McNary Dams. The group was comfortable implementing the first week of augmentation (90 kcfs between April 26 – May 3) and will revisit the 2nd week of augmentation (110 kcfs between May 6 – 9) at the next TMT meeting, checking on current conditions and forecasts. FPAC will also meet and discuss potential impacts.

- **ACTION: Joel and Jonathan will connect with ID Power to get more information on their plans over the next few weeks.**
- **ACTION: Joel will send presented materials from today's meeting for posting on the TMT website. [NOTE: the document was posted to the agenda after the meeting]**
- **ACTION: The group will revisit the possibility of implementing the 2nd week of flow augmentation at next week's TMT meeting.**

Operations Review

Reservoirs: Joel reported on Bureau of Reclamation projects:

- **Hungry Horse:** midnight elevation was 3,524.23 feet, and the project is ramping down releases to 2,000 cfs. Inflows dropped off with current cold temperatures, and elevation should keep below 3,526 feet for selective withdrawal, expected to end by April 23. The project will begin refill to Var-Q first in the first part of May. Joel noted that the Water Supply Forecast (WSF) is similar to first part of April and looks okay depending on if there is significant rain ahead.
- **Grand Coulee:** is passing inflow and filling a little. Midnight elevation was 1,259.7 feet, with average releases over the last 5 days at 59,000 cfs, and inflows around 75,000 cfs.

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

- **Libby:** midnight elevation was 2,401.6 feet, with average inflows of 7 kcfs, and outflows of 4 kcfs;
- **Albeni Falls:** midnight elevation was 2,053.9 feet, with average inflows of 21.5 kcfs, and outflows of 15.2 kcfs;
- **Dworshak:** midnight elevation was 1,508.6 feet, with average inflows of 10.1 kcfs, and outflows of 4.2 kcfs;
- **Lower Granite:** average outflows of 50.9 kcfs;
- **McNary:** average outflows of 139.9 kcfs; and
- **Bonneville:** average outflows of 144.7 kcfs.

Water Quality: Dan Turner, Corps, reported that TDG is well below 125% at fish passage projects; TDG is moderate because of operating at minimum generation spill the rest due to lower flows. Regarding missing data for Lower Monumental Dam during the first week of spill, Dan clarified that there was a bad air pressure sensor that required data deletion for a 5 to 6-day period.

Fish: Claire reported that juvenile numbers are fluctuating at the traps, and can be related to hatchery releases. There are high numbers of yearling Chinook at the Salmon River, Lower Granite, and Bonneville traps, with increases also observed at Rock Island. Low numbers at the Snake River traps are results of low trap capture efficiency due to low river flows.

There are still low numbers of sub-yearlings being detected in the system, although higher at Bonneville from large releases at the Spring Creek Hatchery. Sub-yearling Chinook detections are low at Lower

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Granite and Rock Island. Coho remain low at the Grande Ronde trap and McNary, although are increasing at Bonneville. Steelhead are generally increasing throughout the system, as well as a few sockeye, particularly at Rock Island.

Adult spring Chinook and steelhead are entering and moving through the mainstem projects; at Bonneville, with Chinook at 21% of the 10-year average; jacks at 48% of the 10-year average; steelhead at 42% of the 10-year average; and unclipped steelhead at 44% of the 10-year average.

At Ice Harbor, spring Chinook YTD passage is 44% of the 10-year average; steelhead at 13% of the 10-year average; and wild steelhead at 30% of the 10-year average. At Lower Granite, spring Chinook passage is 81% of the 10-year average; no jacks; steelhead at 35% of the 10-year average; and wild at 49% of the 10-year average.

Claire noted that the mid-Columbia projects are just getting started reporting adult counts, and are not too reliable yet as they deal with reporting delays.

Charles emphasized juvenile passage indices for Lower Granite steelhead and yearling, noting that the timing graphs suggest that low flows and cooler weather are not encouraging fish to move. Both ID and OR noted that these data can be largely influenced by hatchery releases, and that many wild fish out of the Grande Ronde are being detected at Lower Granite. OR emphasized that the need for good fish passage conditions is important early on in the season.

Power System: Tony reported continuing mild temperatures, and not much water in the river.

Following up on last week's report out on Lower Granite pool management, Jay Hesse, Nez Perce, noted appreciation for the Action Agencies' effort to consider and effort to implement operating to the lower 1-foot of the range.

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 April 28, 2021 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, April 21, 2021
Minutes: Melissa Haskin, BPA (contractor, FLUX Resources)

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

1. Review of 4/7 & 4/14 Facilitator's Summaries and Official Minutes

Approval of the 4/7 and 4/14 summaries and minutes have been postponed until the next meeting.

2. Flow Request - Charles Morrill, WA and Tony Norris, BPA

Charles Morrill, WA, reported on a flow augmentation request from FPAC, which has been pre-coordinated with BPA. Fish managers are requesting:

1. Weekly average flow target of 90 kcfs at Chief Joseph next week, from April 26 to May 2.
2. Weekly average flow target of 110 kcfs at Chief Joseph Dam from May 30 to May 9.

The flow request is for Monday-Sunday week-average flows. There is a hope that natural flows increase to minimize flows out of Grand Coulee. The Action Agencies are able to implement the request. Tony Norris, BPA, noted that as Charles Morrill, WA, said, the request reshapes water across the spring through refill at Grand Coulee.

Jonathan Ebel, ID, asked for additional information on patterns of flow out of the Snake River Basin as well as information on the timing of the upcoming augmentation operation. Joel Fenolio, Reclamation, answered that flows have been somewhat low. The first of the month forecast for the Boise, Payette, and Upper Snake Basins was ~79% of average. Flow augmentation will likely be 427 kaf this year, instead of 487 kaf. Given the current conditions, it is likely that Reclamation will use 100,000-acre-feet of space out of Rainbow Chart and 5,600 acre-feet out of Palisades Powerhead, and the Payette is on track to provide about normal space at 95,608 acre-feet of space; together this will fill in about 22,000 acre-feet at the Upper Snake above Milner. Reclamation might also need to use Anderson Ranch Powerhead for about 35,000 acre-feet. Augmentation will likely start the first or second week of May, likely May 3. This year, flows will be shaped incrementally at about 1 kcfs per day. Boise system augmentation will begin mid-May (about 36k will be available), followed by the Payette in mid-June. Delivery of Flow Augmentation will occur for about 30 days with the goal of being done by the end of May in the Boise and Upper Snake basins.

Additionally, TMT members made the following observations, comments, and questions:

- Ebel wondered about the cost of reshaping water this early in the season, given drying trends. He wondered if it would be wise to hold on to water reserves in the upper

Columbia until later in the season, should forecasts dry conditions persist/the forecast deteriorate, for instance if the low-elevation snow melts earlier than expected in the next storm system.

- The 427k out of the Upper Snake is likely that systems maximum ability, shared Ebel. This is due to the current elevation at Brownlee Reservoir and its refill pattern. Idaho Power will pass the water from flow augmentation but little else due to the current refill situation.
- The 120-day forecast on the Snake River at Anatone calls for peak flows under 50,000 kcfs in June.
- Joel Fenolio, Reclamation, noted that the Upper Snake water management group is meeting tonight (4/21). The irrigators in the Upper Snake above Milner Dam will present prospects for the water, which they may rent to Reclamation later in the season.
- Jay Hesse, Nez Perce Tribe, asked about the expectation for the Upper Snake flow conditions over the next few weeks as spring Chinook and steelhead migrate through the Snake River. Fenolio replied that conditions will remain the same over the next week. He added that Reclamation will add about 3 kcfs by the first week of May (out of Milner). This will be followed by potential flows out of Anderson Ranch in mid-May. Snowmelt runoff should help increase flows naturally moving into the end of the month. Hesse wondered if this would increase flows below the Hells Canyon Complex. Fenolio replied that Idaho Power is not a federal organization (and thus does not coordinate with the Action Agencies) but that they will likely pass flows downstream. Fenolio will try to get more information from Idaho Power for the next two TMT meetings. Ebel added that he has communicated with Idaho Power and their intent is to aggressively refill during May.
- Erick Van Dyke, OR, asked what constrains flows on the Snake in April and May and echoed Hesse's question about if the water will pass through the system. Fenolio noted that the main constrain is likely weather expected next week. Once the water supply forecast is released in April, and since this is a lone seller market from the irrigators, it is hard to get a guaranteed draft out of the reservoir. Reclamation has to work with a committee of 9 organizations to coordinate that water and what the irrigators might sell.
- Van Dyke stressed the importance of pass through for fish passage, especially at this point in the season.
- McGrath added that Idaho Power is currently implementing its entrapment management plan. The weekly report that Idaho Power sent NOAA indicates that expected flows are 8.5-13.5 kcfs. They are at a minimum flow level of 8.5 kcfs. Ebel noted this might be a rough year in the Snake and so it is important to maximize benefits for fish in the lower Columbia, if possible. The 8.5 kcfs minimum out of Brownlee only lasts until emergence, he noted. Due to the draft of Brownlee in March for maintenance, the reservoir may actually approach the settlement minimum of 5,000 cfs.
- McGrath added that the requested operation would support ESA-listed and unlisted stock out of upper and mid-Columbia. Flows in the mid-Columbia have started to come up due to increased flows out of the tributaries. Wild fish should begin to move in greater numbers. Studies have shown that juveniles arriving early May have higher smolt-to-adult return ratios than those arriving later. The flow request would also benefit the Colville Hatchery releases, which will start tonight and continue through Friday.

- Sheri Sears, Colville Tribe, is hoping that incoming precipitation raises flows in the Snake and Columbia Rivers. More natural flows would mean less flow out of Grand Coulee Dam now, reserving water for later in the season, she noted.
- The STP for Chief Joseph Dam next week shows flows in the upper 70s (kcfs) to lower 80s (kcfs). Coupled with the expected increase on the tributaries, Morrill noted that it would be a minimal draft to support the requested flow minimum. WA strongly supports 90 kcfs for next week.
- Ebel added that the tributaries that are increasing without a storage reservoir above them are below Chief Joseph Dam. A flow target at Chief Joseph Dam would not reduce the water use from Grand Coulee, looking across the whole season. It would increase the flows more than the ask, looking downstream at McNary. If the forecast or runoff increases, it will not save any water out of Coulee, he noted. McGrath noted that an alternative to this flow request would be setting a flow objective lower in the system, for example at Priest Rapids. That sort of request can be more difficult for BPA to manage, but is an option for FPAC to discuss, she added. McGrath added that the important thing is that there is flow to support the out migrants, whether that's from upstream or downstream. NOAA is open to both options. Norris reported that moving the control point to Priest Rapids would require significant error bounds around the week-averages due to the uncertainty in flows out of the tributaries and the fact that BPA does not operate the projects below Chief Joseph Dam. Precision is more attainable at Chief Joseph Dam and that would be BPA's preference. There would be less certainty if the control point was moved to Priest Rapids.
- McGrath added that the cost of shaping sooner rather than later is ~5.5 kcfs for the remainder of the spring season, May 10-June 30 (FPC ran the numbers using the most recent STP).

Following today's discussion, the group chose to implement the first week of augmentation: week average minimum releases of 90 kcfs at Chief Joseph next week, from April 26 to May 2. The group will hold off coordination of additional augmentation until next week's TMT meeting.

3. Operations Review

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

Reclamation projects:

Hungry Horse – Current elevation 3,524.23 ft, ramping down to releasing 2 kcfs due to a drop off in current and expected temperatures. The project is maintaining below 3,526 ft. for selective withdrawal maintenance, which should end on April 23. The team is now working on the last unit. Following selective withdrawal maintenance, the project will transition to VarQ in the first part of May. The forecast has not deviated much from the beginning of the month.

Grand Coulee – Current elevation 1,269.7 ft. and passing inflow. Releases averaging ~69 kcfs over the past 5 days and inflows ~75 kcfs.

Corps Projects:

Libby Dam – Midnight elevation 2,401.6 ft., yesterday's average inflows 7 and outflows 4 kcfs.

Albeni Falls – Midnight elevation 2,053.9 ft., inflows 21.5 kcfs and outflows 15.2 kcfs.

Dworshak Dam – Midnight elevation 1,508.6 ft., yesterday’s average inflows 10.1 kcfs and outflows were 4.2 kcfs.

Lower Granite – Yesterday’s average outflows were 50.9 kcfs.

McNary Dam – Yesterday’s average outflows were 139.9 kcfs.

Bonneville Dam – Yesterday’s average outflows were 144.7 kcfs.

3b. Water Quality – Dan Turner, Corps

TDG across the system is well below the 125% state standard at the fish passage projects. TDG is moderate due to low flows and projects being on minimum generation and spilling the rest. A bad air pressure sensor resulted in Lower Monumental’s tailwater TDG gauge going offline during the first week of spill. Those data ultimately had to be deleted since it was erroneous.

3c. Fish – Claire McGrath, NOAA

Juveniles: Counts are fluctuating and sometimes high, though that is likely related to hatchery releases. The 2-week passage index shows high numbers of yearling Chinook passing the Salmon River trap, Lower Granite’s trap, and Bonneville, as well. Numbers are increasing downstream as well at Rock Island. Passage is low on the Snake River, likely due to low trap capture efficiency rates from the low flows.

Overall, subyearling Chinook passage is low across the system, except for some high counts at Bonneville, which are likely due to releases from the Spring Creek Hatchery.

Coho counts are still low at the Grand Ronde trap and McNary Dam, but increasing at Bonneville Dam.

Steelhead are increasing throughout the system and sockeye are starting to pass at Rock Island and McNary.

Adults: Passage at Bonneville has jumped from 82 per day to 409 per day in the last week, with YTD totals of 1,873 at the project, which is 21% of the 10-year average. About 0-7 jacks have been passing per day over the last week at the project. YTD jack counts are 27, which is 90% of what was seen last year at this time and 48% of the 10-year average. Steelhead have been passing in the 4-16 per day range over the last week with 1,276 YTD, which is 50% of last year and 42% of the 10-year average. Unclipped are at 544 YTD, which is 43% of last year and 44% of the 10-year average.

At Ice Harbor, spring Chinook passage is 44% of the 10-year average with 7-28 passing per day. Steelhead are at 13% of the 10-year average, passing the project at 6-19 per day; and wild steelhead at 30% of the 10-year average with 6-16 passing each day. At Lower Granite, spring Chinook passage has been in the 2-8 per day range over the past week. The YTD count is 48, which is indicative of an early arrival (only 6 were seen by this time last year). This year’s numbers are 81% of the 10-year average, at this time. No jacks have been observed and steelhead counts have been 17-26 per day over the last week. The YTD is 35% of the 10-year average. Wild steelhead have been passing in the 13-21 per day range over the last week and the species is at 49% of the 10-year average.

There will be more to report in the coming weeks, noted McGrath. The season is just kicking off and with most numbers low, data are not too reliable yet.

Charles Morrill, WA, added that low flows and cool weather are likely influencing fish and their low passage numbers. Erick Van Dyke, OR, commented that good passage conditions are critical early in the season.

3d. Power – Tony Norris, BPA

It is spring so temperatures are mild and flows are below average.

Today's Attendees:

Agency	TMT Representative
Army Corps of Engineers	Doug Baus (Chair), Lisa Wright, Julie Ammann
Bonneville Power Administration	Tony Norris, Scott Bettin, Eve James
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	Brian Marotz
Nez Perce Tribe	Jay Hesse
Umatilla Tribe/CRITFC	Absent
Colville Tribe	Sheri Sears
Warm Springs Tribe	Jen Graham
Kootenai Tribe	Absent
Spokane Tribe	Absent

Other Attendees (non-TMT members):

Corps – Alexis Mills, Aaron Marshall, Willow Walker, Dan Turner, Jon Roberts, Chris Peery, David Bogema

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

Clearing Up – K.C. Mehaffey

Columbia Basin Bulletin – Mike O'Bryant

DS Consulting – Emily Stranz (Facilitator), Colby Mills

Portland General Electric – Ruth Burris

Oregon DEQ – Paula Calvert

Snohomish PUD – Mike Shapley