

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

April 12, 2023

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/2023/>. Suggested edits for the summary are welcome and can be sent to Colby at colby@dsconsult.co.

Review Meeting Summaries & Minutes - TMT Members approved the March 22 and April 5 official meeting minutes and facilitator's summaries, with no additional edits.

Official April Water Supply Forecasts – Joel Fenolio, Reclamation, reported the official April water supply forecast for Hungry Horse Dam, noting that the forecast has dropped since March. The residual April through July forecast is 1,700 kaf, or 86% of average. May through September is 1,680 kaf, or 95% of average; this year will likely be a delayed runoff. Joel noted that the Heise forecast came in at 112% of average, which has bumped the rainbow chart from 90 kaf to 150 kaf on prospects for this year's flow augmentation. While there's still uncertainty on how rentals will pan out, they are above the 427 kaf threshold at the moment.

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

- **The Dalles:** NWRFC April to August volume forecast is 77 maf, or 86% of average;
- **Lower Granite:** April to July volume forecast is 18 maf, or 91% of average;
- **Libby:** Corps runoff forecast April to August is 4.7 maf, or 77% of average; and
- **Dworshak:** NWRFC runoff forecast April to July volume forecast is 2.5 maf, or 102% of average.

In response to a query from Kirk Truscott, Confederated Tribes of the Colville Reservation, Doug noted that Grand Coulee estimated water supply forecast April to August volume is 49 maf, or 84% of average. The Corps clarified that more details on highlighted forecasted periods, forecast authors, and relevancy can be found in the Water Management Plan posted on the TMT website.

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

- **Hungry Horse:** midnight elevation was 3,509.56 feet, with releases reduced down to 1.4 cfs with the start of fill last night. Western Montana is now seeing a streamflow response with added precipitation and warm wind through the basin in the last couple of days. Inflows yesterday were at 5,500 kaf and the elevation is still well below 3,520 feet. The Knief Creek culvert repair will likely be complete by April 24. Depending on runoff patterns, the project will potentially do selective withdrawal in the first week of May.
- **Grand Coulee:** project elevation was 1,239.6 feet yesterday, and is rising. There are streamflow responses in the northern part of basin, and the project should start refill over the next week or so. Joel clarified that drum gate maintenance is still planned for the full 8 weeks (potentially the first part of May); the reservoir is still 15 feet below 1,255 feet.

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

- **Libby:** midnight elevation was 2,401.8 feet, with average inflows of 10 kcfs, and outflows of 4 kcfs;
- **Albeni Falls:** midnight elevation was 2,052.4 feet, with average inflows of 18.3 kcfs, and outflows of 9 kcfs;
- **Dworshak:** midnight elevation was 1,520.8 feet, with average inflows of 15.2 kcfs, and outflows of 5.1 kcfs;
- **Lower Granite:** average outflows of 57.3 kcfs;
- **McNary:** average outflows of 126.1 kcfs; and
- **Bonneville:** average outflows of 149.2 kcfs.

Aaron Marshall, Corps, provided a real time update on Minimum Operating Pool (MOP) operations at the lower Snake River projects. Lower Granite, Lower Monumental, and Ice Harbor dams are operating within their specified MOP ranges. Little Goose began operating to a 0.5-foot raised MOP range on April 5 to help maintain the Lower Granite minimum tailwater elevation of 633 feet. So far this year, Little Goose has been able to operate within the bottom 1.5-foot about 99% of the time, with 2 hourly readings slightly above the 634.5-foot elevation. Aaron reminded the TMT that adjustments to MOP operations are described in the 2020 CRSO Biological Assessment and are documented in the FOP. The Corps is looking for opportunities to return Little Goose to the normal MOP range as flows increase with spring runoff. Additionally, Aaron noted that the Corps is pulling together information to better understand any impacts from low tailwater readings; this will be shared with TMT. Jay Hesse, Nez Perce Tribe, appreciated these efforts.

Water Quality: Alexis Mills, Corps, reported that spring spill began last week on lower Snake River projects, and on Monday for lower Columbia River projects. 12-hour TDG values in the tailraces are well below the state water quality standards of 125%, primarily due to projects operating at minimum generation, spill the rest.

Fish: Trevor Conder, NOAA, reported that there are still less than 100 spring Chinook adults per day passing Bonneville, trending below the 10-year average, but similar to last year. One issue of note at Bonneville is the high smelt run coming through the bypass system, which is resulting in a significant number of pinnipeds in the area for this time of year (70+). The higher risk to early returning spring Chinook will likely lead to emergency hazing efforts soon. Steelhead at Bonneville are fairly low; single digits at McNary; and a few spring Chinook have entered the Snake River at Ice Harbor.

For juveniles, migration appears to be picking up and going as expected. Lower Granite is in the 10s of thousands for yearling Chinook, they are also starting to pass through Bonneville, with 500 on April 11. Trevor noted that the timing seems to coincide well with the spill program. Steelhead are seeing a similar increase in numbers, and are picking up at Lower Granite.

Dave Swank, USFWS, noted there are a few juvenile lamprey moving through the system. Yesterday, the Little White Salmon National Fish Hatchery released 1.5 million spring Chinook juveniles into the Little White Salmon River, and the Spring Creek National Fish Hatchery released approximately 6.7 million fall Chinook juveniles into the Columbia River, and their second release is scheduled for April 20. There are lots of juvenile salmon currently moving through the system.

Charles Morrill, WDFW, reported on chum trapping results for Hamilton Springs that began on February 15, noting that counts reached 1,000/day on March 8, and on March 11 they began a 4-on-3-off sampling series.

- Feb 15-Mar 9: 4,032
- Mar 11-17: 27,187
- Mar 20-23: 38,415
- Mar 27- 31: 60,878
- Total to date: 130,512

Power System: Tony Norris, BPA, reported spring wind on the system, and notable stream flow responses in the Snake River.

Question and Comments from non-TMT Members – There were no questions or comments from members of the public.

The next scheduled TMT meeting is on April 19, 2023 at 2:00 PM.

This meeting will be held in-person, for those who can attend, at the U.S. Fish & Wildlife Service's Columbia River Fish and Wildlife Conservation Office in Vancouver, Washington.

**Columbia River Regional Forum
Technical Management Team
OFFICIAL MINUTES
Wednesday, April 12, 2023
Minutes: Andrea Ausmus, 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 Summaries and Minutes – March 22 and April 5

- March 22 – Summaries and Minutes – approved
- April 5 – Summaries and Minutes – approved

2. Official Water Supply Forecast – Joel Fenolio, BOR & Doug Baus, Corps NWD

April

a. Hungry Horse

- Forecast dropped from March
- April – July
 - 1700 kaf
 - 86% of average
- May – September
 - 1680 kaf
 - 95% of average
- Back fill in terms of a delayed run off.
- Heise forecast came in 112% of average. Jumped up from average with all of the snow building in Southern Idaho. Bumps up the rainbow chart from 90 kaf to 150 kaf on prospects of flow augmentation this year. At this moment, there is not a good feel on how the rental are going to go. They are above the 427 kaf threshold.

b. The Dalles

- April – August
 - 77 maf
 - 86% of average

c. Lower Granite

- April – July
 - 18 maf
 - 91% of average

- d. Libby
 - April – August
 - 4.7 maf
 - 77% of average
- e. Dworshak
 - April – July
 - 2.5 maf
 - 102% of average

Kirk Truscott, Colville, asked for the water supply forecast for Grand Coulee.

Baus shared the water supply forecast at Grand Coulee

- April through August
 - 49 maf
 - 84% of average

Truscott said it appears to not have gotten better from last forecast.

Jonathan Ebel, ID, asked if the Corps uses the RFC for Grand Coulee. In Fenolio's case the Reclamation does not match the RFC's forecast.

Tony Norris, BPA, said in the Water Management Plan there is a table of which forecasts are the official forecast for which projects and for which purposes.

Baus said that on the first page of the official water supply forecasts there is a table from the Water Management Plan with this information. It lists the water supply forecast locations, periods, and authors. It also provides the purpose of the information.

Fenolio also shared that the forecasts that they are seeing up north between the statistical water supply forecasts and the watershed models (used for the RFC) they are lining up better than what is being seen in Southern Idaho. It will be interesting to see how their forecasts develop as things change in streamflow response in Southern Idaho where they were thinking they would have soil moisture deficits and they are seeing it run off rampantly from the first heat wave. We could see the RFC forecast more come in line as we have a better idea of how the runoff pattern will shape up.

3. Operations Review

a. Reservoirs

Reclamation – Joel Fenolio

- Hungry Horse Dam (Hour ending 6)
 - Midnight elevation: 3509.56 ft. (Last night starting to fill)
 - Releasing Average Outflows: 1.4 cfs

- Seeing streamflow response in Montana (some precipitation and warm wind through basin).
- Inflows 5500 kaf
- Knieff Creek Culvert Repair done April 24 (check in call next week).
- Depending on runoff – will begin selective withdrawal beginning first week of May – if releases stay below 3525.
- Grand Coulee Dam
 - Midnight elevation: 1239.6 ft.
 - Rising a bit with responses at north part of the basin.
 - Should begin to see it refill over the next week.

Erick Van Dyke, OR, asked if refill means drum gate maintenance is nearing completion.

Fenolio said no, that it would still take the full eight weeks, it will still go in to the first part of May. Still 15 feet below 1255.

Corps – Lisa Wright

- Libby Dam
 - Midnight elevation: 2401.8 ft.
 - Inflows: 10 kcfs
 - Outflows: 4 kcfs
- Albeni Falls
 - Midnight elevation: 2052.4 ft.
 - Inflows: 18.3 kcfs
 - Outflows: 9 kcfs
- Dworshak Dam
 - Midnight elevation: 1520.3 ft.
 - Inflows: 15.2 kcfs
 - Outflows: 5.1 kcfs
- Lower Granite average outflows: 57.3 kcfs
- McNary average outflows: 126.1 kcfs
- Bonneville average outflows: 149.2 kcfs

b. MOP Operations – Lower Snake Projects

Corps – Aaron Marshall

- Lower Granite, Lower Monumental, Ice Harbor
 - Operating within MOP ranges

- Little Goose
 - Began operating to half-foot raised MOP range on April 5 to help maintain the Lower Granite tailwater elevation.
 - Operating in the normal MOP range 99% of the time
 - 2 hourly readings slightly above 634.5-foot elevation
- Reminder: Adjustments to MOP operations are described in the 2020 BA and in the 2023 FOP***
- They are looking to return Little Goose to normal MOP range as flow increase during spring runoff.
 - The Corps is pulling together more information for TMT for better understanding of MOP operations as to what is impacted by low tailwater readings. This is not available as of yet.

Hesse appreciates the updates and the driving effort to gather information to provide a better understanding.

c. Water Quality – Alexis Mills, Corps

- TDG Tracking
 - 12-hour TDG standards are well below the 125%
 - Primarily operating at minimum generation and spill the rest

d. Fish – Trevor Conder, *NOAA Fisheries*

- Adults
 - Bonneville
 - Spring Chinook: < 100
 - Tracking below the 10-year average, which is expected with the lower temperatures.
 - A good smelt run this year and they are seeing them at Bonneville (which is fairly rare). They are coming through the bypass system. This has brought in pinnipeds (70+) so are at a higher risk for the early spring Chinook because of that. Some emergency hazing efforts are soon to begin to try to handle that situation.
 - Steelhead numbers are still low.
 - McNary
 - Low single digit numbers
 - Spring Chinook: 17 count (April 9)
 - Steelhead numbers are still low.
 - Ice Harbor
 - Spring Chinook: starting to trickle in
 - Important for the adult criteria part of the spill program

- Juveniles
 - Lower Granite
 - Ramping up from 100s (few weeks ago) to 10,000s for yearling Chinook.
 - Similar response with steelhead smolt
 - Bonneville
 - 500 counted (April 11) subyearling Chinook
 - Coincide with spill program
 - Hatchery releases
 - Little White Salmon National Fish Hatchery
 - Released ~ 1.5 million Spring Chinook juveniles into the Little White Salmon River
 - Spring Creek National Fish Hatchery
 - Released ~ 6.7 million Fall Chinook juveniles directly into the Columbia River.
 - Second release is planned for April 20, 2023
- e. Lamprey – Dave Swank, *US Fish and Wildlife*
- Few juveniles trickling through systems
- f. Chum – Charles Morrill, *WDFW*
- Hamilton Springs Chum
- Starting trapping on February 15, 2023. On March 11, they began a ‘4 on / 3 off’ sampling period

Sampling Period		Total Chum Sampled
February 15	March 9	4,032
March 11	March 17	27,187
March 20	March 23	38,415
March 27	March 31	60,878
		130,512

- Still on climbing trend
- Will provide another update next week.

[Kelsey Swieca, NOAA, thanked Morrill for the chum update.](#)

- g. Power System – Tony Norris, *BPA*
- There is wind on the system.
 - There is a stream flow response in the Snake River.
 - It is Spring and things change quickly

4. Public Comments: None

5. Set agenda for next meeting – March 15, 2023, at 2:00 pm PST

Today's Attendees:

Agency	TMT Representative(s)
Army Corps of Engineers	Doug Baus (chair), Julie Ammann, Lisa Wright
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	Jay Hesse
Umatilla Tribe	Tom Lorz (CRITFC)
Colville Tribe	Kirk Truscott
Warm Springs Tribe	
Kootenai Tribe	
Spokane Tribe	

Other Attendees (non-TMT members):

Corps – Alexis Mills, Aaron Marshall

DS Consulting – Emily Stranz (Facilitator), Colby Mills

BPA – Andrea Ausmus (note taker, Contractor with CorSource Technology Group)

Chelan PUD – Jay Fintz

Energy Keepers – Eve James

Clearing Up – K.C. Mehaffey

Oregon DEQ – Marilyn Fonseca

Puget Sun Energy – John Chandler

Snohomish PUD – Mike Shapley

Talen Energy – Patrick McGonigal