

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

April 28, 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

TMT members approved the official meeting minutes and facilitator's summaries from the April 7 and April 14 meetings. Minutes and summary from the April 21 meeting will be reviewed at the next meeting.

Chief Joseph Dam Flow Request

Charles Morrill, WA, reported a flow augmentation request, which had no objections from FPAC members present at their 4/27 meeting. The request was for a flow target of 110 kcfs at Chief Joseph Dam for May 3 – 9. Tony Norris, BPA, confirmed that Action Agencies can implement the operation as requested. Charles noted there are continued concerns regarding Snake River conditions, and the conditions will be closely monitored.

Operations Review

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

- **Hungry Horse:** after finishing selective withdrawal maintenance on Thursday, the project has been releasing 2,000 cfs and is starting to fill the pool. All replacements were made and paneling fixed. The project will start ramping up to Var-Q flow tomorrow, and is expected to be 5,600 cfs initially, until the new forecast is released next week.
- **Grand Coulee:** midnight elevation was 1,269.4 feet, with inflows around 90,000 cfs, and the project is currently operating to target the Chief Joseph 90 kcfs flow request.

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

- **Libby:** midnight elevation was 2,403.1 feet, with average inflows of 6.6 kcfs, and outflows of 4 kcfs;
- **Albeni Falls:** midnight elevation was 2,054.9 feet, with average inflows of 24.0 kcfs, and outflows of 19.1 kcfs;
- **Dworshak:** midnight elevation was 1,518.1 feet, with average inflows of 10.2 kcfs, and outflows of 1.7 kcfs;
- **Lower Granite:** average outflows of 47.9;
- **McNary:** average outflows of 177.4; and
- **Bonneville:** average outflows of 181.1 kcfs.

Aaron Marshall, Corps, provided an update on Lower Snake River MOP operations. Lower Granite Dam is currently operating in a 3-foot raised MOP range from 736.0-737.0 feet as a soft constraint with inflows below 50 kcfs. Yesterday, inflows were 48 kcfs. Forecasts show inflows rising back above 50 kcfs by Friday, and the project will transition to the 2-foot raised MOP range for flows between 50-80 kcfs.

Little Goose Dam continues to operate in a 1-foot raised MOP range, with a minimum forebay elevation of 634 feet in order to maintain the required minimum tailwater elevation at Lower Granite for navigation safety. Lower Monumental and Ice Harbor dams are both operating within the lowest 1.5-foot MOP range; fish barge operators require reductions in spill at Lower Monumental during transit across the

Lower Monumental tailrace. As a result, slight excursions outside of MOP at Lower Monumental and Ice Harbor may occur as spill is reduced and the forebays respond.

Water Quality: Dan Turner, Corps, reported on TDG, noting that levels are below the 125% WQ standard. TDG is 120% and below as projects are mainly operating at minimum generation and spilling the rest.

Fish: Claire McGrath, NOAA, reported that juvenile numbers at the traps and projects are generally increasing throughout the system, with fluctuating numbers of Chinook yearlings associated with hatchery releases. The Grande Ronde trap is not currently sampling to avoid exceeding their take allocation due to high numbers of hatchery releases. Sub-yearling Chinook are increasing at Lower Granite, while low at Rock Island. Steelhead passage is increasing at Lower Granite and Bonneville. Regarding steelhead counts, Jonathan Ebel, ID, noted that the Lewiston trap has low capture efficiency rates associated with low discharge in the Snake River. When outflows were increased, juvenile passage ticked up significantly.

Fish Managers are hoping that outmigration is just later than previous years and not lower. In the mid-Columbia, flow augmentation and increasing natural flows hope to bring increasing passage numbers. The cumulative population index at Lower Granite for both hatchery and unmarked yearling Chinook and steelhead shows a slower rate of passage this year, attributed to the low river flow conditions from the Upper Snake. This result is also reflected in the transport data, which started collection on April 23, and transport on April 24 at Lower Granite, Little Goose and Lower Monumental dams. The initial transport summary shows 1/3 the amount of last year's transported fish have been transported this year in the first week across all projects, a result of the slow start to juvenile passage.

For adults, spring Chinook at Bonneville have increased to 25% of the 10-year average; jacks at 46%, steelhead at 41%, and wild steelhead are at 44% of the 10-year average. At Lower Granite, passage has barely begun, with spring Chinook at 23% of the 10-year average; jacks at 34%, steelhead at 6%, and wild steelhead at 50%. At Priest Rapids, spring Chinook adults are at 6% of the 10-year average.

Power System: Tony reported a fair amount of wind on the system over the last several days, although still temperate conditions and modest loads. Hydropower generation is picking up with 180 kcfs in the lower Columbia River; as of April 21, BPA has been able to flex spill at Bonneville. Flexible spill has been occurring at other projects.

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 May 5, 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 28, 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 4/21 & 4/28 Facilitator's Summaries and Official Minutes

The April 14 facilitator's summary and official minutes were approved. The 4/21 minutes and summary will be reviewed at the next TMT meeting.

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

Charles Morrill, WA, reported on a request from FPAC for a flow target of 110 kcfs for May 3 through May 9 at Chief Joseph Dam. Tony Norris, BPA, reported that the Action Agencies can implement the operation.

3. Operations Review

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

Reclamation projects:

Hungry Horse – Selective withdrawal maintenance finished one day early (Thursday, April 22). Since then, Reclamation has been filling the pool and will ramp up tomorrow to Var-Q flows, which, given the forecast, should be around 5.6 kcfs. Var-Q flows will be adjusted when a new forecast is released at the beginning of next week. Fenolio is still waiting on a final report regarding maintenance but thinks that all paneling has been fixed and all necessary replacements were successful.

Grand Coulee – Elevation 1,269.4 ft. with inflows at 90 kcfs. The project is operating to the Chief Joseph Dam 90 kcfs flow request, as discussed at last week's TMT meeting.

Corps Projects:

Libby Dam – Midnight elevation 2,403.1 ft., yesterday's average inflows 6.6 and outflows 4 kcfs.

Albeni Falls – Midnight elevation 2,054.9 ft., inflows 24 kcfs and outflows 19.1 kcfs.

Dworshak Dam – Midnight elevation 1,518.1 ft., yesterday's average inflows 10.2 kcfs and outflows were 1.7 kcfs.

Lower Granite – Yesterday's average outflows were 47.9 kcfs.

McNary Dam – Yesterday's average outflows were 177.4 kcfs.

Bonneville Dam – Yesterday's average outflows were 181.1 kcfs.

MOP Operations: Aaron Marshall, Corps, reported on MOP operations. On the Lower Snake River, Lower Granite Dam is operating in a 3-foot raised MOP (736-737.0 as a soft constraint) for navigation purposes when flows are below 50 kcfs. Yesterday, flows at the dam were below

48 kcfs. Flows should rise above 50 beginning on Friday, which would push the project to a 2-foot raised MOP. Little Goose is operating in a 1-foot raised MOP (634-635.5 ft. in the forebay) to maintain the minimum elevation necessary in the Lower Granite Dam tailrace for navigation safety. Lower Monumental and Ice Harbor Dams are both operating within the lowest 1.5-foot MOP range. Marshall reported that there may be slight excursions above MOP at Lower Monumental and Ice Harbor as a result of spill reductions at Lower Monumental for the fish transport barge.

3b. Water Quality – Dan Turner, Corps

TDG across the system is well below the 125% standard at the fish passage projects. At many projects, they are below 120%. Most projects are on minimum generation and spilling the rest.

3c. Fish – Claire McGrath, NOAA

Juveniles: Counts have been increasing at all traps throughout the system as juvenile passage begins to pick up for the spring season. It is important to note that some high counts are due to hatchery releases. The trap at Grand Ronde is temporarily offline so that hatchery releases do not skew season passage data.

Subyearling Chinook salmon are passing in increasing numbers at Lower Granite, likely due to hatchery releases. Low numbers are being observed at Rock Island Dam. There is little to report on juvenile coho at the moment. The steelhead passage index is high at Lower Granite and Bonneville.

Jonathan Ebel, ID, noted that there is low capture efficiency at the Lewiston trap currently, due to low flows in the area. As flows increase, so does capture efficiency.

Morrill took the TMT through the cumulative population index at Lower Granite for both hatchery and unmarked yearling Chinook, as well as steelhead. All three species are passing at slower rates than prior years, likely due to the low flow river conditions.

McGrath noted that collection of smolts for transport began on April 23, followed by the first barge on April 24 at Lower Granite, Little Goose and Lower Monumental dams. Last year, a low percentage of the overall run was transported, in large part due to high spill. This year, in the week since transport started, 1/3 of the fish transported over the whole 2020 season have already been transported. Increased flows over the next week should result in higher passage numbers. So far, the season is off to a late start.

Adults: At Bonneville, spring Chinook doubled in daily counts over the past two days from 500 per day to ~1,000 per day. The species is at 5,747 YTD, which is 127% of last year and 25% of the 10-year average). Jacks are at 124 YTD, which is 156% of last year and 45% of the 10-year average. Steelhead are low thus far, coming in at 1,313 YTD, which is 44% of last year's numbers at this time and 41% of the 10-year average. Wild Steelhead are at 44% of the 10-year average.

Passage at Lower Granite has just started. Spring Chinook are at 150 YTD, with 8-26 fish passing per day over the last week. The YTD count is 23% of the 10-year average. Jacks are reporting in at 34% of the 10-year average. Steelhead are at 2,339 YTD, and passing at 10-30 per

day over last week. The YTD total is 36% of the 10-year average. Wild steelhead are coming in at 50% of 10-year average at 1,401 YTD.

At Priest Rapids, passage is just starting. Spring Chinook YTD is 24, which is 6% of the 10-year average. Fish managers are hoping that passage picks up over the next few weeks.

3d. Power – Tony Norris, BPA

Weather systems over last few days have resulted in some wind on the system. The region is still experiencing fairly temperate conditions. Loads are modest and hydropower generation is starting to pick up as flows increase (there is 180 kcfs in the system, currently). With the increased flows, Bonneville Dam was able to implement flex spill hours starting April 21, so now BPA is able to flex at all projects. Graphs showing the flexible spill operations are available on the TMT website.

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	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	Absent
Warm Springs Tribe	Jen Graham
Kootenai Tribe	Absent
Spokane Tribe	Absent

Other Attendees (non-TMT members):

Corps – Alexis Mills, Aaron Marshall, Dan Turner, David Bogema, Denise Griffith, Willow Walker, Jon Roberts

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

Columbia Basin Bulletin – Mike O’Bryant

DS Consulting – Emily Stranz (Facilitator), Colby Mills

Oregon DEQ – Paula Calvert

Clearing Up – K.C. Mehaffey

Members of the public – Charles Pace