COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

January 8, 2020 DRAFT Facilitator's Summary Facilitator & Notes: Emily Stranz, 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. 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://www.nwdwc.usace.army.mil/tmt/agendas/2020/.

Official Water Supply Forecasts

Joel Fenolio, BOR, reported that the official water supply forecast (WSF) for Hungry Horse (May-September) is 1,582kaf, which is 93% of average. The April – August forecast, which uses snowpack from January 1st is 95% of average. Joel noted a significant increase in snow accumulation in the Flathead Basin and reported that although there are no requirements to draft for Hungry Horse for flood risk, they may start drafting for selective withdrawals.

Doug Baus, Corps, reported on the official WSF for Corps projects:

- The Dalles April-August is 87maf, which is 99% of average;
- Lower Granite April-July is 19maf, which is 98% of average;
- Libby April–August is 5,481kaf which is 93% of average; and,
- Dworshak April-July is 1,532kaf which is 63% of average.

Doug also reviewed the water year precipitation table

(https://www.nwrfc.noaa.gov/water_supply/wy_summary/wy_summary.php?tab=4). So far for this water year, precipitation in the Snake River above Ice Harbor Dam is 57% of normal; the Upper Columbia above Arrow Dam is 102% of normal; and the Willamette River above Portland is 49% normal.

The general trend for precipitation has been below normal this water year, however, the 6-10 and 8-14 day RFC climate forecasts are expecting below average temperatures and above average precipitation. Looking further out at the 30 day forecast, below average temperatures are expected, with an equal chance for below average or average precipitation.

Chum Operation Update

Doug reported that the chum incubation operation that was coordinated at the December 18th TMT meeting is still being implemented. Briefly, the operation calls for a Bonneville tailwater minimum elevation of 11.3ft at all times. Additional details of the operation are available on the TMT website. This morning at 0700 hours the tailwater was 12.7ft, with 132.6kcfs outflow.

Claire McGrath, NOAA, reported that co-managers coordinated over the holiday week and no additional actions were needed to support the end of the chum spawning operation. Chum are no longer being observed passing Bonneville; there are still some steelhead and Coho passing. Claire noted that the high Coho counts over Bonneville in December have been verified.

The next TMT meeting is face-to-face on January 22nd at 9:00 AM. A process meeting will follow for TMT Members.

Agenda items include a recap of the chum tributary counts. Additionally, if TMT members have any questions, suggestions, or information for the TMT chum operation review conversation, please connect with Claire.

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 OFFICIAL MINUT

Technical Management Team OFFICIAL MINUTES January 8, 2020

Minutes: Melissa Haskin, FLUX Resources

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

1. Official Water Supply Forecasts - Doug Baus, Corps NWD, and Joel Fenolio, Reclamation

Joel Fenolio, Reclamation reported on January's WSF for Hungry Horse, which is based on the snowpack as of January 1, 2020. Hungry Horse will likely start drafting for selective withdrawal maintenance in April. Doug Baus, Corps, reported on Corps projects.

Project	Timeframe	Forecast	Percent of 30-Year Average
Hungry Horse	May-September	1,582 kaf	93%
	April-August	1,842 kaf	95%
Libby Dam	April-August	5,481 kaf	93%
Dworshak Dam	April-July	1,532 kaf	63%
Lower Granite Dam	April-July	19 maf	98%
The Dalles Dam	April-August	87 maf	99%

Doug also took TMT through the NWRFC Water Year Precipitation Table of observed precipitation so far this water year, highlighting a few areas:

- At the Snake River above Ice Harbor Dam, precipitation is 4.4 inches or 57% of normal.
- In the Columbia River Basin above Arrow Dam, precipitation totals thus far are 20.1 inches or 102% of normal.
- At the Columbia River Basin above The Dalles, precipitation to-date is 6.6 inches or 66% of normal.
- In the Willamette River Basin above Portland, precipitation for the year thus far has been 14.0 inches or 49% of normal.

In general, precipitation has been below average so far this water year. However, the RFC forecasts show increasing precipitation and building snowpack throughout the basin. Both the 6 to 10-day and 8 to 14-day outlooks show a probability of below average temperatures and above average precipitation. In the 30-day forecast, there is a probability of below average temperatures and an equal chance of below or above average precipitation in the western Columbia River Basin. The 30-day forecast shows a chance of above average precipitation in northwestern Montana.

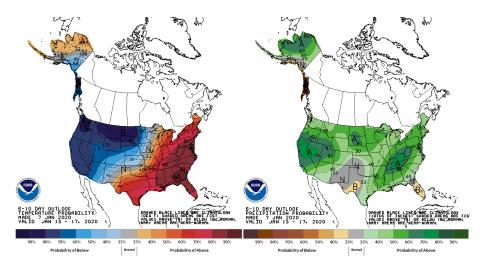


Figure 1. The RFC 6-10 day temperature outlook. Figure 2. The RFC 6-10 day precipitation outlook.

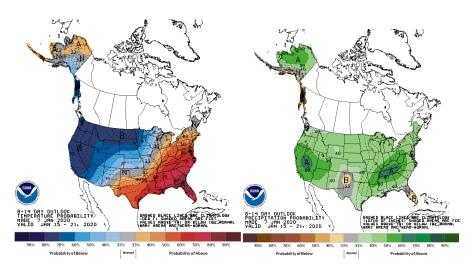


Figure 3. The RFC 8-14 day temperature outlook. Figure 4. The RFC 8-14 day precipitation outlook.

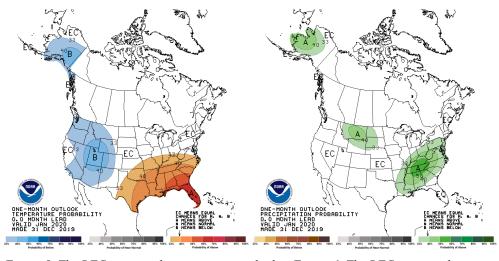


Figure 5. The RFC one month temperature outlook. Figure 6. The RFC one month precipitation outlook.

2. Chum Operation - Doug Baus, Corps NWD and Claire McGrath, NOAA Fisheries

The Corps is implementing the incubation phase of the chum operation as coordinated at the December 18 TMT meeting. The operation is maintaining a minimum tailwater elevation of 11.3 ft. all hours. At 0700 today, the Bonneville tailwater was 12.7 ft. Outflow was 132.6 kcfs.

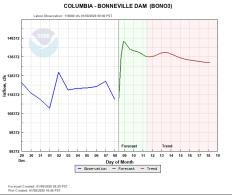


Figure 7: Inflow forecast for Bonneville Dam January 8-18.

Claire McGrath reported that co-managers coordinated over the holiday weekend as planned. Incubation was continued based on declining observations of chum in the area. At the end of December, there were a few days where steelhead and coho counts at Bonneville picked up including two days where the coho counts were over 700. These counts have been verified.

Charles Morrill, WA, reported that he will have updates on chum in the tributaries at the next TMT meeting. He said that counts peaked at Hamilton Creek on November 27, 2019, at around 1,500.

Claire McGrath asked ahead of the next TMT process meeting that members forward questions or objectives to her by the end of the week so that she can make an agenda.

3. Next TMT

The next TMT meeting is face-to-face on January 22, 2020, at 9 a.m, at the Corps NWD office in Portland, OR.

Today's Attendees:

Agency	TMT Representative		
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	Paul Wagner, Claire McGrath		
US Fish & Wildlife Service	Dave Swank		
Washington	Charles Morrill		
Oregon	Erick Van Dyke		

Agency	TMT Representative
Idaho	N/A
Montana	Jim Litchfield
Nez Perce Tribe	Jay Hesse
Umatilla Tribe/CRITFC	Tom Lorz
Colville Tribe	Sheri Sears
Warm Springs Tribe	Jen Graham
Kootenai Tribe	N/A
Spokane Tribe	N/A

Other Attendees (non-TMT members):

Army Corps of Engineers – Dan Turner, Steve Hall, Jon Roberts DS Consulting – Emily Stranz (Facilitator) FLUX Resources – Melissa Haskin (Note taker) Columbia Basin Bulletin – Mike O'Bryant Clearing Up – K.C. Mehaffey