

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM
January 16, 2019
DRAFT Facilitator’s Summary
Facilitator: Emily Stranz; Notes: 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. 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.nwd-wc.usace.army.mil/tmt/agendas/2019/>

January Water Supply Forecast

Chris Runyan, BOR, began by providing the TMT with an update on the Water Supply Forecast for Hungry Horse Dam. The April through August runoff forecast is 90% of average, at 1,740 KAF. The project is currently operating to Columbia Falls minimum flows.

Doug Baus, Corps, reported on the official water supply forecasts for Corps projects:

- **The Dalles:** NWRFC April to August volume forecast (5 days QPF) is 83 MAF, or 95% of average.
- **Lower Granite:** NWRFC April to July volume forecast (5 days QPF) is 17 MAF, or 88% of average.
- **Libby:** Corps April to August volume forecast is 5,721 KAF, or 97% of average.
- **Dworshak:** Corps April to July volume forecast is 2,239 KAF, or 92% of average.
- **Grand Coulee:** NWRFC April to August volume forecast (5 days QPF) is 56 MAF, or 99% of average.
- **Albeni Falls:** NWRFC April to August volume forecast (5 days QPF) is 12 MAF, or 94% of average.

Doug continued with an update on the water year precipitation and monthly temperature trends. In terms of precipitation, the Snake River Basin above Ice Harbor Dam is currently at 6.1 inches, or 75% of normal. Below normal precipitation is a trending theme throughout the Columbia River Basin, with the exception of the Upper Columbia Basin above Arrow Dam, which currently has 20.9 inches, or 96% of normal precipitation. The Columbia River mainstem, above The Dalles has 8.3 inches, or 79% of normal precipitation.

Temperatures are mostly above average throughout the Columbia Basin. For January, Snake River above Ice Harbor Dam average temperature is 0.4 degrees F above average; the Upper Columbia Basin above Arrow Dam is 5.9 degrees F above average; and, in the Columbia mainstem at The Dalles temperature is 2.1 degrees F above average.

Doug walked the TMT through NWRFC climate forecasts, however, noted that they have not been updated since December 31st. The 10-day QPF shows quite a bit of variability, and the 5-day QPF is predominantly above average precipitation in the US portion of the Columbia River Basin.

Looking at the climate forecast, both the 6 – 10 day outlook and the 8 – 14 day outlook show a probability of above average temperatures (trending towards normal), and predominantly below average precipitation. For the 30-day outlook, forecasts predict above average temperatures and below average precipitation throughout the entire Columbia River Basin.

Charles Morrill, WA, noted that according to Kyle Dittmer, CRITFC, the year is shaping up to look more like an ENSO neutral than an El Niño year.

Chum Operations

Doug reported that the Action Agencies continue to implement the chum incubation operation at Bonneville Dam, which maintains a tailwater elevation minimum of 11.3 feet at all hours. This operation will continue until otherwise coordinated with the TMT. Charles added that WDFW estimates a total of 15,000 Chinook spawning in the area this year. He noted that the Hamilton counts are not final, however, they are expected to be between 2,000-3,000 chum.

Current hourly data at Bonneville Dam show a total outflow at 0800 hours of 181 kcfs and project tailwater elevation at 14.2 feet. Inflow forecasts over the next 10-day period show a decrease in inflows down to 135 kcfs over the first 3 days and then ramping up to 150 kcfs by the end of the 10-day period.

The next TMT meeting is a conference call on January 30, 2019, 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 OFFICIAL MINUTES
January 16, 2019
Minutes: Melissa Haskin, FLUX Resources

1. Introduction

Representatives of Corps, BPA, Umatilla Tribe, WA, and others participated in today's TMT meeting chaired by Doug Baus, Corps, and facilitated by Emily Stranz, DS Consulting. See the end of these minutes for a list of attendees. Due to a furlough/government shutdown, some federal members of TMT may not be available for TMT meetings and calls.

2. January Water Supply Forecast - Doug Baus, Corps

2a. Forecasts.

Doug Baus, Corps, and Chris Runyan, Reclamation, updated TMT on the January water supply forecast:

Hungry Horse: 5-day average inflows of 523 cfs with outflows yesterday of 3,175 cfs.

Midnight elevation 3,535.59 ft. The reservoir is operating to Columbia Falls minimums.

The April-August runoff forecast was 90% of average.

The Dalles: The forecast is for 83 maf for the April-August volume (95% of normal for 30-year average).

Lower Granite: The current April-July forecast is for 17 maf (88% of the 30-year average).

Libby: January runoff forecast for April-August 5,721 kaf (97% of 30-year average).

Dworshak: January runoff forecast for April-July is 2,239 kaf (92% of the 30-year average).

Grand Coulee: The April-August forecast calls for 56 maf (99% of the 30-year average).

Albeni Falls: The April-August forecast is for 12 maf (94% of the 30-year average).

2b. NWRFC Water Year Precipitation Table

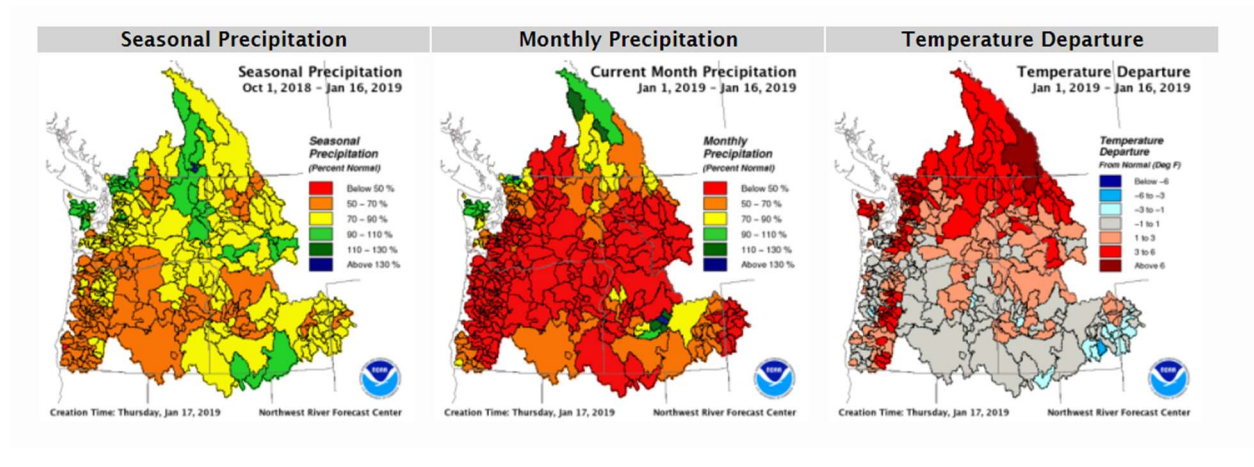
The NWRFC precipitation table shows below normal precipitation for most of the Columbia Basin, except above Arrow which is currently 96% of normal at 20.9 inches.

2c. NWRFC Monthly Temperature Table

The NWRFC Monthly Temperature Table shows above average temperatures across the region.

2d. NWRFC Current Month Summary Graphics

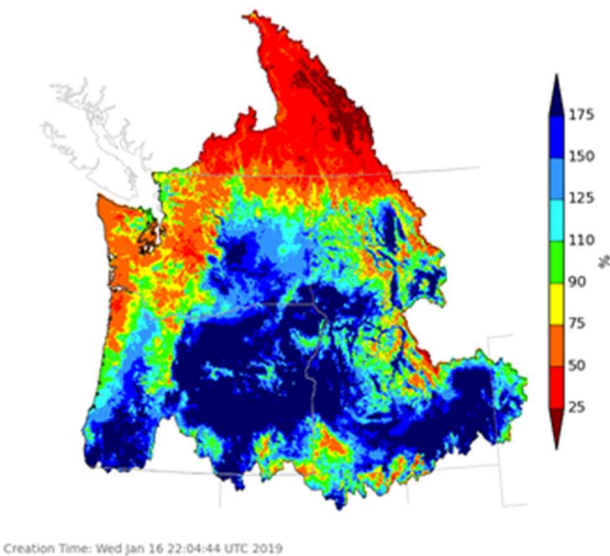
For the most part, season precipitation is below average.



2e. NWRFC Forecast Precipitation Summary

The 10-day precipitation forecast shows quite a bit of variability, with some locations in the basin expected to get above average precipitation and other locations expected to get lower than average precipitation. The 5-day forecast calls for mostly above average precipitation in the US portion of the Columbia Basin.

Northwest River Forecast Center
10 Day QPF (Percent of Climatology), Ending 12Z, 01/26/19



2f. Climate Forecast

Both the 6- 10-day forecast and the 8- 14-day forecast show a probability of above average temperatures. This trend towards normal in the 8- 14-day forecast, which will be good for the snow pack accumulation. The 30-day calls for above average temperatures and below average precipitation throughout the basin but the forecast is outdated due to the shut down and should be taken with a grain of salt.

3. Chum Operations

There is nothing new to report. The chum incubation operation continues with a Bonneville Dam tailwater minimum of 11.3 ft. at all hours. Today’s tailwater was 14.2 ft. and outflows at 0800 were 181 kcfs. The inflow forecast is for a decrease of inflows down to 135 kcfs and then up to 150 kcfs near the end of the 10-day period.

Scott Bettin, BPA, inquired about the final number of chinook that spawned at Ives Island, which Charles Morrill, WDFW reported to be about 15,000 (a pretty good year). Charles also reported that 2-3 thousand chum returned to Hamilton Springs.

4. Next TMT. The next TMT meeting is face-to-face on January 30, 2019, at 9 a.m. at the Corps NWD office in Portland, OR.

Today’s Attendees:

TMT Members:

Agency	TMT Representative
Army Corps of Engineers	Doug Baus (Chair), Julie Ammann
Bonneville Power Administration	Tony Norris, Scott Bettin
Bureau of Reclamation	Chris Runyan
NOAA Fisheries	N/A (furloughed)
US Fish & Wildlife Service	N/A (furloughed)
Washington	Charles Morrill
Oregon	N/A
Idaho	Russ Kiefer
Montana	Jim Litchfield
Nez Perce Tribe	Jay Hesse
Umatilla Tribe	Tom Lorz
Colville Tribe	N/A
Warm Springs Tribe	N/A
Kootenai Tribe	N/A
Spokane Tribe	N/A

Other Attendees (non-TMT members):

Corps – Dan Turner, Alfredo Rodriguez, Laura Hamilton, Aaron Marshall
 DS Consulting – Emily Stranz (Facilitator), Colby Mills
 FLUX Resources – Melissa Haskin (Note taker)
 Columbia Basin Bulletin – Mike O’Bryant
 Clearing Up – K.C. Mehaffey
 Avista – Pat Maher