

**Colorado River Storage Project
Fontenelle Working Group
Meeting Minutes
August 26, 2021**

Participation

This meeting was held Thursday, August 26, 2021, at 10:00 am. Due to the ongoing COVID-19 (Coronavirus) pandemic, the meeting was held via WebEx virtual meeting. Attendees are listed below.

Purpose of Meeting

The purpose of these working group meetings is to inform the public and other interested parties of Reclamation’s current and future operational plans and to gather information from the public regarding specific resources associated with Fontenelle Reservoir and the river corridor below it. In addition, the meetings are used to coordinate activities and exchange information among agencies, water users, and other interested parties concerning the Green River.

General

Dale Hamilton began the meeting at 10:00 am, discussed virtual meeting logistics, and introduced the meeting agenda and presenters: Paul Miller and Mark Delorey. To avoid audio feedback, attendees introduced themselves via the chat function in the virtual meeting (attendees who identified themselves or were identified by their meeting attendee name are included in the list of attendees below).

Green River - Fontenelle Reservoir: Spring Forecast and Runoff Review – Paul Miller

Paul Miller, Service Coordination Hydrologist, National Weather Service, Colorado Basin River Forecast Center

Paul presented information on the 2021 water year, forecast performance, and upcoming weather.

Water year 2021 (October-July) precipitation above Fontenelle was well below average. Most Natural Resources Conservation Service (NRCS) Snow Telemetry (SNOTEL) stations were between 70 and 80% of normal (median); this correlated well with the areal precipitation in the CBRFC hydrologic model. Generally, monthly maximum temperatures did not deviate much from normal until the much-above normal June. But looking at daily data, new daily historic maximum temperatures were observed at the end of March into early April, mid and late April, and then late May and much of June.

SNOTEL snow conditions at mid elevations above Fontenelle were, after a slow start, close to normal near March 1. However, little precipitation after March 1 led to below normal March snow accumulation and below normal peak snow water equivalent levels. Rapid melt beginning April 1 was exacerbated by near record temperatures around April 1. Snowpack in the CBRFC model at high elevations was generally below normal throughout the year, with peak snow water equivalent well below normal and the dry March through May impacting snowpack accumulation. Rapid melt occurred from mid-May through June.

The observed April–July unregulated runoff volume into Fontenelle Reservoir was 319,000 acre-feet which is 44% of average and 49% of median. The lack of precipitation beginning in March led to a steady decline in the forecast from the March 1 forecast of 480,000 acre-feet. The model performed well this year, even given the exceptionally dry conditions going into the start of the year and the dry 2021

water year. The 2021 forecast error was much less than average historical forecast error for all months. Streamflow at the Green River near La Barge, Wyoming gage has been much below normal to below normal throughout most of the calendar year, with some August flows being near record low levels. The 2021 mean daily peak flow at the Green River near La Barge gage came in at 5,080 cfs on June 11, which was near the lower end of the forecasted range but within the normal peak flow timing.

Upcoming weather is indicating a chance for some precipitation, but generally above normal temperatures continuing.

In response to a question about forecasts for 2022, Paul stated that due to how dry 2021 was, the initial 2022 forecasts will likely be below normal unless we see significant precipitation and early snowpack accumulation.

Fontenelle Reservoir Hydrology and Forecasted Operations – Mark Delorey

Mark Delorey, Hydraulic Engineer, U. S. Bureau of Reclamation

Mark Delorey presented information on 2021 spring/summer operations, forecast information, and forecasted 2021/2022 fall/winter operations.

In 2021, inflow into Fontenelle peaked at 4,700 cfs on June 9th which was roughly only half of last year's peak of 9,140 cfs. The pool elevation peaked at 6495 feet on July 8th which is 76% of capacity; last year peaked at 95% capacity. The observed inflows and forecasted runoff started to decrease starting in March resulting in lower releases throughout the summer than were forecasted in the fall. Releases were at 825 cfs. There were no bypass releases this year.

Snowpack above Fontenelle peaked at 88% of median snow water equivalent on April 1, 2021 which was lower than last year's totals. And with the dry soil conditions we had a dry runoff season. Over the next three months, temperatures are forecasted to be below average, and precipitation is forecasted to be below normal. The unregulated April thru July runoff volume into Fontenelle was forecasted to be 55% of average (62% of median) when we met for our April 21, 2021 working group meeting. In the end, we received 318,000 acre-feet which is only 44% of average (49% of median) April thru July runoff volume. This observed runoff was the sixth driest year since 1966, a significant drop from last year which was near average.

Fontenelle is currently at elevation 6493.66 feet, 243,000 acre-feet of storage (73% full), with inflows averaging 575 cfs, and releases have been lowered to 600 cfs. Based on the hydrology, releases throughout the summer should have been lower but were kept at 700 cfs to maintain better temperatures for fish and have been lowered now that temperatures are getting lower at night. Operations through April 2022 will be based on the August most probable forecast from the Colorado Basin River Forecast Center. The current plan is to keep releases at 600 cfs through the end of October then increase the release to 825 cfs through the fall/winter baseflow period. This plan is highly dependent on observed and forecasted inflows and is subject to change as conditions change.

General Discussion, Comments, Questions

Following the two presentations, Dale provided some information on conditions throughout the Upper Colorado River Basin. Lake Powell and Lake Mead elevations have been declining for the past 20 years; they were at 95% capacity back in 1999/2000, now both are around 30-35% capacity—the lowest they have been since they first filled. Releases are being made from Flaming Gorge, Blue Mesa, and Navajo Reservoirs consistent with provisions of the Upper Colorado River Basin Drought Response Operations

Agreement (DROA) to supplement reservoir storage at Lake Powell. Planned supplemental releases from Flaming Gorge will total 125,000 acre-feet. Upper Basin states are working to get a Drought Operations Plan in place by next April. Dale shared where to find 24-month studies (<https://www.usbr.gov/uc/water/crsp/studies/index.html>), which contain information about reservoir forecasted operations.

In response to a question about lower storage at Lake Powell being partially a result of increased water use, Dale replied that the largest impact to the reservoir storage is the dry hydrology we've seen over the past 20 years. A question was asked about whether information about the running total flow volume at Lee Ferry is provided on the Reclamation website. The 10-year average is noted in the Annual Operating Plan (<https://www.usbr.gov/uc/water/rsvrs/ops/aop/index.html>) with the 2021 Annual Operating plan noting that,

The ten-year total flow of the Colorado River at Lee Ferry for water years 2011 through 2020 is 92.50 maf (114,100 mcm). This total is computed as the sum of the flow of the Colorado River at Lees Ferry Arizona, and the Paria River at Lees Ferry, Arizona, surface water discharge stations which are operated and maintained by the United States Geological Survey.

If additional questions or comments arise, send them to Dale Hamilton (dthamilton@usbr.gov) and/or Mark Delorey (mdelorey@usbr.gov).

Next Meeting

- Thursday, April 21, 2022 at 10:00 am via WebEx (tentative)

Attendees

Mark Westenskow	City of Green River
Ryan Rust	City of Green River
Doc Wendling	Sweetwater County, Commissioner
Judy Roderick	Sweetwater County, Emergency Management
Emily Covey	Sweetwater County, Emergency Management
Robert Keith	Wyoming Game & Fish Department
Jessica Dugan	Wyoming Game & Fish Department
Ben Bracken	Alternate Upper Colorado River Commissioner
Cody Allred	PacifiCorp
Ron Wild	Rocky Mountain Power
Bryan Seppie	Joint Powers Water Board
Sage Hilstad	Joint Powers Water Board Attorney
Tyler Schiltz	Ciner
Tom Koerner	Seedskadee National Wildlife Refuge
Paul Miller	NWS, Colorado Basin River Forecast Center
Dale Hamilton	Reclamation
Mark Delorey	Reclamation
Paul Davidson	Reclamation
Nathaniel Todea	Reclamation
Chris Watt	Reclamation
Peter Crookston	Reclamation
John Morton	Reclamation

Kirk Jensen
Tom Davidowicz
Gary Henrie

Reclamation
Reclamation
Reclamation