

Colorado River Storage Project
Flaming Gorge Working Group
Meeting Minutes
August 28, 2024

Participation

This meeting was held Wednesday, August 28, 2024, from 12:00 pm to 3:00 pm MT, at the Utah Division of Wildlife Resources in Vernal, Utah and via Microsoft Teams virtual meeting. Attendees are listed on the last page.

Purpose of Meeting

The purpose of these working group meetings is to inform the public and other interested parties on Reclamation's current and future operational plans and to gather input from the public and stake holders regarding and interested parties regarding resources associated with the dam [Flaming Gorge Reservoir].

Introductions – Alex Pivarnik (Bureau of Reclamation)

This is the final Flaming Gorge Working Group meeting this year. The earlier ones were in March and April.

Current and Forecasted Hydrology – Brenda Alcorn (Colorado Basin River Forecast Center)

Brenda presented on the Water Year (WY) 2024 hydrologic conditions to date and forecasted conditions.

Brenda reviewed the previous fall's soil moisture conditions. WY2023's good runoff conditions in the Upper Green provided good conditions for efficient runoff this year. The Yampa's fall soil moisture condition was not as good at the start of WY2024.

For precipitation, the Upper Green had a poor start to the WY, but a very wet February and March. Unfortunately, warm and dry conditions in April and June contributed to a below normal accumulation for the year. Precipitation in the Yampa was better, with near normal conditions.

Modeled Snow Water Equivalent (SWE) also showed a poor start to the WY in the Upper Green but peaked just above average. Warm, dry conditions in April started melt, but cooler conditions and some precipitation in May led to some recovery of the snowpack. A large melt event in June resulted in an earlier than average end to the snowpack. Snow conditions in the Yampa were better than the Upper Green. Temperature plots, especially for the cool May and warm June, were also presented to help explain the snowpack conditions.

Brenda presented the water supply forecast evolution plot, peak flow forecasts, and current conditions.

Questions

T. Wright Dickinson asked about ASO in the Green River Basin and its impacts to the CBRFC's modeling. Brenda noted that there was one flight in 2023 that was used to inform the forecast. The information from the ASO flight was not directly input into the forecast model but did inform the adjustment to the forecast. There was another flight in 2024, but information from that flight was not shared with the CBRFC and was not included in any forecast. It was noted that much of the Upper Green Basin is very high elevation wilderness area with poor coverage of snow sensors to inform the CBRFC's models, so this area would benefit from ASO-like surveys.

The CBRFC is also working to develop "experimental forecasts" with Colorado, which has more snow-flights. The data from Colorado's snow flights are being fed directly into the CBRFC's model and being released as the "experimental forecasts" as there is not enough data to fully adopt these forecasts at this time.

A few people in the room advocated for more snow-flights, as they are most helpful in areas where it is hard to measure snowpack by more traditional means.

Green River Research and Endangered Fish – Tildon Jones (Recovery)

Tildon started with a background on the listed fish, the threats to those species, the Recovery Program, and the native fish lifecycle in comparison to idealized flow and river temperatures.

The Recovery Program's request for this year (which was average below median for spring operations and moderately dry for the rest of the year), prioritized 1) the Small Mouth Bass (SMB) flow spike, 2) the Colorado Pike Minnow (CPM) base flow, and 3) the Larval Trigger Study Plan (LTSP).

SMB Flow Spike

There are three invasive fish species that Recovery focuses on, with SMB being one of the highest concerns. SMB have better success in average to drier years. The SMB flow spike request focuses on temperature and flow so that juvenile SMB will be removed from the nest and not guarded by the male SMB. The SMB flow spike consisted of 72 hours of Flaming Gorge release at power plant capacity.

Leslie James asked if there was any concern related to impacts to the protected species from the drop in temperatures during the SMB flow spike. Tildon clarified that larger drops in temperature (~10°C) generally occur in warm backwaters that cool when they are reconnected as a side-channel during the higher flows. A smaller (~4°C) change in the river is within natural conditions and not expected to impact native fish. Dr. Bestgen noted that when the river temperatures are cool enough, SMB tend to turn away from reproducing; this is usually observed during and after the SMB flow spike.

T. Wright Dickinson asked about how far the SMB juveniles need to be moved for the experiment to be successful. Tildon clarified that we don't track individuals and where they end up, but on a more population-wide scale, the SMB flow spike removes the juveniles. Within the next few weeks, surveys will be done to try to find SMB. Any SMB caught will be sent to Dr.

Bestgen to be aged (in days). In previous years, we have not caught any born during or for brief periods before and after the SMB flow spike.

CPM Base Flow

The CPM base flows are intended to improve survival and recruitment of young CPM by targeting 1,700-3,000 cfs at Jensen. Utah Department of Wildlife Resources (UDWR) has observed CPM juveniles in the middle Green as of last week.

T. Wright Dickinson asked why the target is 1,700-3,000 cfs. Tildon explained that this flow level creates backwater conditions (mostly between Jensen and Ouray) without flows going over the sand bars or disconnecting the backwaters. These backwaters are nursery habitat for the CPM.

LTSP

The LTSP is intended to shift flows from the Yampa peak to being timed based on the presence of Razorback Sucker, with the intent to push larvae into wetlands. The flow levels provided this year did result in wetlands connecting. Crews have started sampling which will continue through late September.

Questions for Recovery

Benji Johnson asked about any physical harvest of invasive fish. Tildon noted that this is an area that the Recovery program works on but highlighted the goals of containing the invasives in reservoirs (through screens/nets) and removal from the river (through electrofishing/nets). Recovery is looking into other technologies.

T. Wright Dickinson asked how the listed species were doing in the big picture. Tildon explained that it is a mixed bag. Humpback are doing well, especially in Glen Canyon, and were downlisted from endangered to threatened. Razorback populations have been increasing. CPM populations have been on the decline in the Green River, but they may be increasing on the Colorado. Bonytail nearly disappeared before researchers understood their needs. All bonytail may be from the hatchery and we are revising hatchery protocols as we understand the species better.

Benji Johnson asked about financial incentives to remove the invasives. Glen Canyon offers a bounty for Brown Trout and the National Parks Service (NPS) has considered other species. Tildon noted that some reservoirs and river districts offer a bounty on Northern Pike. There are also some reservoirs that offer fishing competitions with prizes.

Fontenelle Reservoir Operations – Mike Callahan (Bureau of Reclamation)

Mike Callahan reviewed Flaming Gorge operations, starting with a background of the project.

Spring operations, including the LTSP and SMB flow spike experiments, are based on a May 1 forecast, which was classified as an average, below median. Baseflow operations, including the CPM base flow, are based on the observed April-July hydrology, which was classified as moderately dry.

Mike discussed some special conditions that impacted operations in WY2024. During the LTSP, a cold snap resulted in a decrease in Yampa flows of ~6,000 cfs, which resulted in an extended but lower magnitude high release. During the CPM baseflow, rainfall in the Yampa and issues on the Maybell Canal resulted in some higher flows at Jensen than targeted.

Some highlights for current and future operations were provided. There will be a slight modification in flows for UDWR fish monitoring on September 3 and 4. CPM baseflows (targeting flows at Jensen) are currently being met through a 1,565 cfs release from Flaming Gorge; a directive has gone out to decrease the Flaming Gorge release to 1,525 cfs. Releases are expected to be around 1,000-1,100 cfs in October and November and ~1,250 cfs in December through February (which should result in flows around 1,500 cfs in Reach 2). Releases in the transition period will be based on winter hydrology and next spring's forecast.

Questions

T. Wright Dickinson asked about the forecast for the winter. Brenda noted that this region has no strong correlation with the El Niño-Southern Oscillation. Current winter forecasts are based on probabilistic models (using an ensemble of 30 years of hydrology). At this time of year, soil moisture conditions are driving, but snowpack will drive as conditions develop. Current forecasts are likely below average.

Questions/Comments

T. Wright Dickinson provided a comment on the Flaming Gorge pool elevation target in the early spring. He noted that the DROA created a scenario where Flaming Gorge was at a lower elevation and able to store more water. He suggested that stakeholders would prefer more space in the reservoir than allowed under the current ROD to handle larger inflows. Alex Pivarnik noted the comment and responded that the spring elevation target does change to reflect the hydrology and forecast.

Derek Fryer noted that WAPA met with the river water users earlier this year. He wanted to let the interested parties know that flexibility has been difficult during the Glen Canyon Small Mouth Bass action. Bruce Lavoy responded that the 800 cfs base flow is very difficult for the Rafters (Reach 1 in June specifically), but recent flows have been good.

Leslie James noted that WAPAs contract commitments to CRSP customers are as an integrated project. Glen Canyon is the biggest part of that, so impacts there are larger. CREDA often makes comments on concerns related to not doing bypass operations. CREDA expects to double down on not wanting bypass operations in the future on other facilities with Glen Canyon's SMB action being implemented.

Next Meeting

March 2025. Details to be shared closer to the event.

Attendees

Akers, Phil - NPS

Alcorn, Brenda - CBRFC

Bair, Woody - Flaming
Gorge Resort

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| Baxter, Rick - USBR | Gaylord, Tim - Holiday River | Muir, Cody - USFS |
| Becker, Amanda - USBR | Griswold, Jason - NPS, Dinosaur NM | Palmer, Jason - City of Green River, WY Utilities |
| Behery, Susan - USBR | Hamilton, Dale - USBR | Partlow, Michael - UDWR |
| Bestgen, Kevin - Colorado State University | Harris, Courtney - WAPA | Patno, Heather - USBR |
| Billerbeck, Rob - NPS | Heath, Brett - USFS | Pedro, William - NPS, Dinosaur NM |
| Brown, Chris - WY | Henrie, Gary - USBR | Pivarnik, Alex - USBR |
| Callahan, Michael - USBR | Henriquez, Walter - WAPA | Rampton, Ted - Self |
| Callister, Kathleen - USBR | Herrera, Lisa - unknown | Reid, Roxann - USBR |
| Chitrakar, Suman - WY SEO | James, Leslie - CREDA | Riley, Martin - USBR |
| Clegg, Kevin - USFS | Johns, Butch - Dutch John Mayor | Rowland, Ryan - USGS Utah Water Science Center |
| Despain, Tara - USDA | Johnson, Benji - CBRFC | Schelly, Robert - NPS, Dinosaur NM |
| Dickinson, T. Wright - Vermillion Ranch | Knight, Erik - USBR | Speas, David - USBR |
| Elbrock, Billy - USBR | Lavoie, Bruce - OARS | Todea, Nathaniel - USBR |
| Ferrantelli, Charlie - WY SEO | Lunz, Kate - FWS | Zancanella, Ronda - Sweetwater County Public Health |
| Freel, Andrew - USGS | Maquis, Jared - USBR | |
| Fryer, Derek - WAPA | McKinnon, Taylor - Biological Diversity | |
| Garrison, Michelle - CO DNR | Mmiller - Unknown | |