

# **Colorado River Storage Project Flaming Gorge Working Group Meeting Minutes March 16, 2023**

## **Participation**

---

This meeting was held Thursday, March 16, 2023, from 10:00 am to 12:00 noon, at the Uintah Conference Center in Vernal, Utah and via Microsoft Teams 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 Flaming Gorge 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 United States Bureau of Reclamation (USBR) called the meeting to order at 10:00 a.m., noted that this is the first in-person meeting in three years, thanked everyone for attending, discussed the purpose of the Flaming Gorge Working Group meetings, meeting logistics, and introduced the meeting agenda and presenters.

Dale noted that the Flaming Gorge Working Group has been meeting since the 1990s and was formalized in the 2005 final Environmental Impact Statement (EIS) and 2006 Record of Decision (ROD) as the public consultation portion of the National Environmental Protection Act (NEPA) process to review and gather input on ongoing study plans and adaptive management as we learn more about the system and the endangered fish. Typical Working Group meetings take place in April and August to present proposed (April meeting) and actual (August meeting) operations. These newer March meetings are intended to provide operational plans to the group earlier and provide more time for input. The 2023 draft operations plan is available for review and comment. Comments are due by the close of business on April 20<sup>th</sup> following the April working group meeting to allow time to finalize the plan on or around May 1<sup>st</sup>.

## **Recovery Program 2022 Green River Flow Request: Implementation and Results**

---

Tildon Jones, Upper Colorado River Endangered Fish Recovery Program (Recovery Program)

Tildon presented some background information on the Upper Colorado River Endangered Fish Recovery Program then shared some results of last year's flow experiments.

There are four Endangered Species Act listed fish (3 endangered, 1 threatened) in the Colorado River that are all native to the basin and found nowhere else: Colorado pikeminnow, razorback sucker, and bonytail are all listed as endangered; humpback chub is now listed as threatened after being downlisted from endangered to threatened two years ago. They all live up to 40+ years and the Colorado pikeminnow and the razorback sucker can be highly migratory.

The Recovery Program was established in 1988 among several partners with the goal to recover the endangered fish while water development proceeds by balancing Endangered Species Act compliance

with the Law of the River. The Recovery Program provides Endangered Species Act compliance in a holistic way instead of individual entities being required to manage recovery efforts in smaller areas; the Program covers over 2,000 projects and over 2.8 million acre-feet of water used in Colorado, Utah, and Wyoming. There are five recovery elements: Habitat/Flow Management, Habitat Development, Stocking Endangered Fish, Managing Nonnative Fish, and Research and Monitoring. Instream flow management occurs throughout the Upper Colorado River Basin—Flaming Gorge is one of six points of flow control in the basin and is an important area as it impacts 300 to 400 miles of habitat.

The Recovery Program's 2022 Flow Request priorities for dry to moderately dry conditions were: 1) conduct a flow spike experiment to disadvantage smallmouth bass reproduction in Reaches 1 and 2, 2) experimental summer base flows to benefit Colorado pikeminnow juveniles in backwaters in this reach around Vernal and Ouray, and 3) Larval-triggered spring peak flows to create nursery habitat and get razorback sucker into that nursery habitat.

Drought Response Operations last year offered us more flexibility and volume of water, so we were able to use some Drought Response Operations water to implement these experiments while also meeting the need to send water downstream to Lake Powell.

The first experiment in chronological order—the Larval-triggered spring peak—was accomplished. Larvae were captured May 21 and the Larval Trigger flows were accomplished May 25-June 4 as the dam released full bypass for 7 days and flow at Jensen exceeded 14,000 cfs for 5 days (max 17,000 cfs). The spring release connected 5 wetlands (4 managed: Stewart Lake, Stirrup, Johnson Bottom, Old Charley; and 1 non-managed: Above Brennan). The experiment was successful. 4,577 wild Razorback suckers (RZBs) were released from the four managed wetlands and several records were set: most RZBs released from Stewart Lake (3,294), largest RZB from Stewart Lake (8-inches), largest RZB from any wetland (10.6-inches), and the most RZB from Old Charley (615). These wetland habitats are preferred nursery habitat for the RZB because they're able to grow faster—it's warmer, and there's more food for them—in their first year of life which helps them survive later into their life cycle. We essentially produced as many Razorbacks in 2022 as we had in all the previous years combined; we had about 4600 in the previous years (2012-2021) and had just under 4600 last year. This year was a great success, with the best results in the roughly 10 years we've been attempting the Larval-triggered spring peak.

The smallmouth bass flow spike was accomplished. It occurred June 21-24 as the dam released full powerplant for 3 days with the SWS lowered to decrease water temperature about 3 degrees Celsius. Preliminary 2022 electrofishing data indicate that 2022 saw a roughly 54% reduction in smallmouth bass produced in the year compared to the long-term mean, and a roughly 85% reduction in bass compared to warm years similar to 2022. The flow spike appears to be very successful at reducing numbers of bass in the reach affected by Flaming Gorge releases. Data is still being analyzed to determine if captured smallmouth bass hatched before, during, or after the flow spike.

The base flows to benefit the Colorado pikeminnow targeted just below 2,100 cfs at Jensen and were accomplished. Colorado pikeminnow were observed on July 2. Juvenile pikeminnow were collected in backwaters but the data is still being analyzed.

2022 was the first time that all three requested experiments were accomplished in a single year. Thanks was expressed to Reclamation for adjusting the timing of DRO releases to help accomplish these experiments.

## Hydrology & Forecasted Flaming Gorge Operations

---

Nathaniel Todea, Hydraulic Engineer, U.S. Bureau of Reclamation

Nathaniel presented information on Flaming Gorge and the 2023 forecasted hydrology and operations plan.

The 1956 Colorado River Storage Project authorized construction of Flaming Gorge Dam and other projects for: allowing Upper Basin States to utilize their 1922 Colorado River Compact apportionments, regulating Colorado River (and main tributaries) flow, storing water for beneficial consumptive use, reclamation of arid and semiarid lands, flood control, and hydroelectric power generation.

For operations, the Green River below Flaming Gorge is divided into three reaches: Reach 1 from Flaming Gorge Dam to the Yampa River confluence, Reach 2 from the Yampa River confluence to the White River confluence, and Reach 3 from the White River confluence to the confluence with the Colorado River. Flaming Gorge Releases are correlated to reach 1, and if reach 2 operational targets are met, reach 3 targets are assumed to be met.

Flaming Gorge operations follow a 4-step process. Step 1 is getting an official flow request from the Upper Colorado River Endangered Fish Recovery Program and an initial draft Flaming Gorge Operation Plan (FG Ops Plan) developed and sent to the Flaming Gorge Technical Working Group. Step 2 is to develop and finalize a Flaming Gorge Technical Working Group proposal. Step 3 (the step we're currently on for this year) is to share the proposal with and get comments from the Flaming Gorge Working Group. Step 4 is to finalize the Flaming Gorge Operation Plan.

Snowpack above Flaming Gorge is at 116% of median snow water equivalent as of March 15<sup>th</sup> and Flaming Gorge is at 65% of capacity. The Colorado Basin River Forecast Center (CBRFC) March 1<sup>st</sup> runoff forecast for Flaming Gorge was at 880,000 acre-feet—but the model is indicating that the mid-month forecast will be higher, ~1,100,000 acre-feet—which would put Flaming Gorge in the Average Above Median hydrologic classification. Snowpack in the Yampa and White River basins is at 137% of median which is a little better than the Upper Green. The March 1<sup>st</sup> forecast for the Yampa River (Maybell plus Lily) is 1,700,000 acre-feet, which is in a Moderately Wet condition. The CBRFC also forecasts potential river flows in the Yampa at Deerlodge based on current conditions; the current forecasts indicate that statistically, the Yampa is likely to see a number of days above 15,000 cfs in late May with 7 days above 18,000 cfs.

The 2023 Recovery Program request provided 3 priorities for each of three sets of hydrologic classifications: average (below median) or drier, average (above median), and moderately wet or wet. Our current hydrology indicates we'll likely have average (above median) conditions this year which would align with the average (above median) request for (priority 1) spring releases consistent with the Larval Trigger Study Plan (LTSP), (priority 2) experimental base flows, and (priority 3) smallmouth bass flow spike. Nathaniel noted that the spring peak flow targets have been refined slightly by LaGory 2019. The Larval Trigger Study Plan spring peak flows for the average (above median) dry scenario would have a peak flow at Jensen above 18,600 cfs in 1 of 2 average years and 8,300 cfs in other average years. The smallmouth bass flow spike would be at full powerplant capacity for 72 hours with a 2000 cfs per day ramp down. The Colorado Pikeminnow base flows for the average scenario would target 2,000-2,600 cfs.

The Flaming Gorge Operation Plan for May 2023 through April 2024 is in draft form and will be finalized in early May after considering and incorporating comments. The Average (below median), scenario in the draft plan would have a spring release up to 4600 cfs; a smallmouth bass flow (with a 1-day ramp up to 4600 cfs, a 72-hour hold at 4600 cfs, and a 2000 cfs per day ramp down); and a Colorado

Pikeminnow base flow release of ~1,650 cfs to get ~2,000 cfs in Reach 2. Slides showing releases for Average (above median), Moderately Wet, and Wet hydrologic classifications were also presented. Five scenarios are presented in the draft Flaming Gorge Operation Plan. In response to a question, it was stated that the lower bound for releases under the Average (below median) condition is 800 cfs.

Nathaniel shared a possible Drought Response Operations release scenario for an Average (below median) hydrologic classification where winter base flows would be reduced to ~800 cfs to recover some storage in Flaming Gorge (to elevation 6025 feet by the end of February).

The current Flaming Gorge release is 925 cfs. The bypass will be used March 27-31 due to turbine/penstocks testing; the 800 cfs release will be shifted from the penstocks/powerplant to the bypass. April daily average releases will be 800 cfs. There will be a fishery assessment (electro fishing) in late April.

The shifting of 800 cfs from power generation to the bypass for five days is for planned maintenance on all three units and would be a loss of about 600 MW per day or about 20 MWh for the full test.

### Drought Response Operations Planning

---

Dale Hamilton, Division Manager, U.S. Bureau of Reclamation

Dale presented an overview of the Drought Response Operations Agreement (DROA), the 2021 and 2022 DROA actions, Colorado River Storage Project (CRSP) reservoir status, 24-month study results, and options for the 2023 DRO Plan.

The Drought Contingency Plan Authorization Act, passed in 2019 included specific agreements on steps to address declining reservoir elevations at Lake Powell and Lake Mead. Attachment A1 is the Drought Response Operations Agreement for the Upper Basin to minimize the risk of Lake Powell dropping below elevation 3525 feet (a buffer above the 3490 minimum power pool elevation). One aspect of the plan that will likely come into play this year is Recovery of prior Drought Response releases by 1) accounting (recovering the released volume) or 2) reaching the May 1<sup>st</sup> target elevation (6023-6027 feet) for the current hydrologic condition.

In July 2021, the 24-month study indicated that Lake Powell would likely drop below elevation 3525 feet by April 2022. Consequently, 181,000 acre-feet was planned to be released from initial unit reservoirs to Lake Powell. The actual water-year 2021 DRO release was later reduced to 161,000 acre-feet (125,000 acre-feet from Flaming Gorge).

In 2022, Lake Powell did drop below elevation 3525 feet on March 14<sup>th</sup> and 24-month study continued to project elevations below 3525 feet prompting plans to release an additional 500,000 acre-feet from Flaming Gorge Reservoir and reduce releases from Lake Powell by 480,000 acre-feet (from 7.48 maf to 7.0 maf) in hopes of increasing the elevation of Lake Powell by nearly 16 feet. Also, monthly release volumes from Lake Powell were adjusted to maintain higher water levels during the typical low months. As a result, Lake Powell spent less time below elevation 3525 feet and the probability of dropping below elevation 3490 feet was reduced. Since December 2022, our hydrology has improved—to wet in the Yampa and at least average (below median) above Flaming Gorge—and 24-month study projections no longer show Lake Powell dropping below elevation 3525 feet. On March 7<sup>th</sup> DROA parties agreed to halt the remaining planned DRO releases from Flaming Gorge. The actual water-year 2022 DRO release was 463,267 acre-feet (all from Flaming Gorge). Flaming Gorge has released a total of 588,267 acre-feet in 2021 and 2022 DRO releases. Adding in Blue Mesa, a total of 624,267 acre-feet of DRO releases has been made in 2021 and 2022.

Currently, Flaming Gorge is 67% full and rising, Fontenelle is 40% full, Lake Powell is 23% full at elevation 3520.54 feet (below elevation 3525 feet) and is the lowest it has been since first fill, Blue Mesa is 36% full, and Navajo is 51% full. The March 24-month study projects that Lake Mead will not drop into Level 3 Shortage Condition until 2024, Lake Powell is not likely to go below 3525 feet in the next two years, Flaming Gorge is projected to come up to elevation 6017.22 by the end of April 2024 (and if recovery of DRO releases is planned it could potentially fully recover to elevation ~6022-6025 feet by the end of April 2024), and Blue Mesa is projected to reach elevation 7490.84 feet by the end of December 2023 which would be a full recovery of its 36,000 acre-feet DRO release.

The 2023 DRO Plan is in the early stages of development but could include: 1) additional DRO releases of up to 500,000 acre-feet from Flaming Gorge, 2) no DRO release and no DRO recovery maintaining the 588,000 acre-feet hole in Flaming Gorge, and 3) DRO recovery of some or all of the released DRO water or water surface elevation. The DRO Plan is scheduled to be finalized on May 1<sup>st</sup> along with the Flaming Gorge Operation Plan.

In June 2022, Reclamation Commissioner requested the Colorado River Basin States take additional actions to provide an additional 2-4 million acre-feet of water in 2023 to protect critical elevations in Lake Powell and Lake Mead. In July 2022, the Upper Division States responded with a 5-point plan. The Lower Division States took shortages in 2022 and 2023. In January 2023, there were 2 additional proposals (one from 6 of the basin states, one from California).

The Department of Interior and Reclamation have also initiated a 2023 Supplemental Environmental Impact Statement (SEIS) which will include alternatives to revise the 2007 Interim Guidelines to give more flexibility to conserve Lake Powell elevations and adjust the minimum annual release volume from Lake Powell while maintaining the 1922 Compact requirement to deliver at least 75 maf in any 10-year period.

Reclamation has also initiated the Update to the 2007 Interim Guidelines which are set to expire at the end of 2025—the Post-2026 Colorado River Operational Strategies for Lake Powell and Lake Mead—which will incorporate the Drought Contingency Plan and other efforts to address drought impacts.

Dale closed by showing a slide of Flaming Gorge storage divided into 500,000 acre-feet increments with boat ramp elevations.

In response to a request for clarification on changes in Flaming Gorge elevations shown in the 24-month study, it was stated that the projected elevations in the 24-month study do not include additional DRO releases or efforts to recover DRO releases, but normal operations within the lower end of the ROD release range. If DRO recovery is approved, it would be incorporated into future 24-month study projections.

A comment noted that the Upper Basin tribes are included as participants in the DROA working group and are consulted about any operations.

### Roundtable General Discussion/Q&A

Dale noted that Reclamation is mandated by law to assist in the recovery of the listed fish and each of the operations plans incorporates efforts to assist in recovery of the fish as well as incorporating input from stakeholders where possible—Reclamation at times isn't able to meet the desires of all stakeholders but does consider all comments—then opened the meeting for any discussion, comments, or questions group by group.

In response to a question, Brenda noted that the snowpack in the Yampa is extremely high. Often the Yampa River has multiple peaks which will depend on Spring weather. High flows from the Yampa may provide a good foundation for experiments, which may reduce the water needed from Flaming Gorge to fulfill them.

Dale asked various groups and individuals if they had input, comments, or questions. Many had no comment. Leslie James (CREDA) made a general comment/request that all decisionmakers in Reclamation coordinate together in making bypass decisions; decisions that take water from power generation make an impact on WAPA, the Basin Fund, and customers. Chris Brown (Wyoming) stated that Wyoming is interested in recovering as much of the previous releases from Flaming Gorge as possible. Amy Haas (Colorado River Auth. of Utah) stated that Utah’s priority is recovery of Flaming Gorge water as quickly as possible. Michelle Garrison (Colorado) stated that the focus for Colorado is also recovery. Colleen Cunningham (New Mexico) stated their focus is also on recovery. Matt Lucas (WRF Guides) stated he would like to see as much recovery in Flaming Gorge as possible. Tim Gaylord (Rafting) reiterated that the Yampa will cause very high flows in the lower reaches so it is a good year for recovery, that said low flows below 860 cfs cause issues and higher baseflows would be helpful. Dale requested Tim provide comments on public safety concerns at low base flows. Jerry Taylor (Lucerne Valley Marina) expressed thanks for answering questions and interest in knowing reservoir elevation forecasts as soon as possible to adjust the marina as needed. Jack Lytle (Daggett County) expressed gratitude for DROA releases being stopped for now and interest in recovery. In response to a question Jack posed about fixing the selective withdrawal structure, Jared Marquis stated that he is currently working with the Technical Service Center to determine what needs to be done to fix the selective withdrawal structure, so still very early on in the process, there is currently no target date, we’re anticipating BIL funding for the fix.

### Next Meeting

- Tuesday, April 20, 2023, at 10:00 am in Price at the fairgrounds (and Teams virtual meeting)
- Tuesday, August 15<sup>th</sup>, 2023, at 10:00 am in Vernal (and Teams virtual meeting) (tentative)

### Attendees

Jack Weimer		Jason Palmer	City of Green River
Jeanie Weimer		Sarah Bargsten	Cheyenne Brd. of Pub. Util.
Hattie Johnson	American Whitewater	Amy Haas	Colorado River Auth. of Utah
Tim Gaylord	Holiday River Expeditions	Bart Leeflang	Colorado River Auth. of Utah
Jen Callantine	Dinosaur River Expeditions	Tracy Killian	Duchesne Co.
John Rauch	Cedar Springs Marina	Bryan Seppie	Joint Powers Water Board
Matt Lucas	WRF Guides	Colleen Cunningham	New Mexico ISC
Bruce Lavoie	OARS	Christina Noftsker	New Mexico ISC
Seth Davis	OARS	Darrell Gillman	Utah Dept. Ag. And Food
Laura Belanger	Western Resource Adv.	Ryan Jones	Utah Dept. Ag. And Food
Grizz Oleen	Caerus Oil and Gas LLC	Chris Keleher	Utah Div. Wildlife Resrc.
Ted Rampton		Jordon Detlor	Utah Div. Wildlife Resrc.
Kevin Bestgen	Colorado State University	Trina Hedrick	Utah Div. Wildlife Resrc.
Joel Brown	Senator Lee	Chris Brown	State of Wyoming
Jack Lytle	Daggett Co., CRA Utah Cent.	Mel Fegler	Wyo. State Engineer's Office
Randy Asay	Dagget County	Leslie James	Col. Riv. Energy Dist Assoc
Matt Cazier	Uintah County	Tildon Jones	Recovery Program
Cody Wilkins	Uintah County Farm Bureau	Kevin McAbee	Recovery Program

Julie Stahl	Recovery Program	Aaron Selig	U. S. Forest Service
David Graf	Recovery Program	Cherette Bonomo	U. S. Forest Service
Morgan Brizendine	U. S. Fish & Wildlife Service	Tara Despain	U. S. Forest Service
Derek Fryer	Western Area Power Admin.	Andrew Volkmer	U. S. Bureau of Reclamation
Shane Capron	Western Area Power Admin.	Chris Cutler	U. S. Bureau of Reclamation
Tony Henriquez	Western Area Power Admin.	Chris Watt	U. S. Bureau of Reclamation
Brenda Alcorn	Col. Basin Riv. Forecast Ctr.	Dale Hamilton	U. S. Bureau of Reclamation
Dennis Phillips	Nat. Weather Service	Dave Speas	U. S. Bureau of Reclamation
Erin Walter	Nat. Weather Service	Gary Henrie	U. S. Bureau of Reclamation
Will Pedro	Nat. Park Service, Dinosaur	Jared Marquis	U. S. Bureau of Reclamation
Rob Billerbeck	Nat. Park Service	Kent Kofford	U. S. Bureau of Reclamation
Melissa Trammell	Nat. Park Service	Mike Callahan	U. S. Bureau of Reclamation
Jessica Farmer	Bureau of Land Management	Nathaniel Todea	U. S. Bureau of Reclamation
Jo Foster	Bureau of Land Management	Peter Crookston	U. S. Bureau of Reclamation
Kevin Clegg	U. S. Forest Service	Shane Mower	U. S. Bureau of Reclamation
Brett Heath	U. S. Forest Service	Susan Behery	U. S. Bureau of Reclamation
Cody Muir	U. S. Forest Service	Valerie Deppe	U. S. Bureau of Reclamation
Jayden Guymon	U. S. Forest Service	Zackary Leady	U. S. Bureau of Reclamation