

**MONTHLY REPORT TO THE  
COLORADO RIVER BOARD OF CALIFORNIA**

February 9, 2022

**COLORADO RIVER BASIN WATER SUPPLY CONDITIONS REPORT**

As of January 31, 2022, the surface water elevation of Lake Powell was 3,531.75 feet with 6.35 million-acre feet (MAF) of storage, or 26% of capacity. The surface water elevation of Lake Mead was 1,067.14 feet with 8.97 MAF of storage, or 34% of capacity. As of January 30<sup>th</sup>, the total System storage was 21.83 MAF, or 37% of capacity, which is about 5.48 MAF less than the total System storage at this same time last year.

As of February 1<sup>st</sup>, storage in the Upper Basin reservoirs, excluding Lake Powell, included the following volumes: 54% of capacity at Fontenelle Reservoir in Wyoming; 77% of capacity at Flaming Gorge Reservoir in Wyoming and Utah; 90% of capacity at Morrow Point and 29% of capacity at Blue Mesa Reservoir in Colorado; and 51% of capacity at Navajo Reservoir in New Mexico.

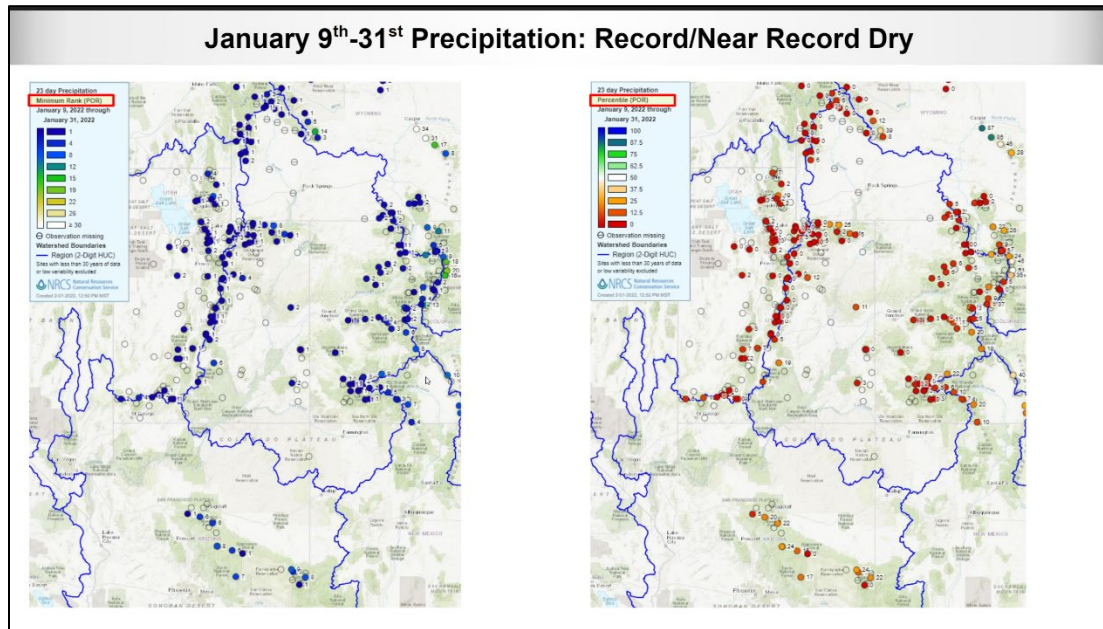
As of January 18<sup>th</sup>, the December observed inflow into Lake Powell was 0.27 MAF (83% of normal) and the January forecasted inflow is 0.25 MAF (74% of normal). The preliminary forecasted unregulated inflow into Lake Powell for Water Year (WY) 2022 is 8.50 MAF (89% of normal). The forecasted April through July 2022 unregulated inflow into Lake Powell is 6.10 MAF (95% of normal). To date, WY-2022 precipitation is 112% of normal and the current Basin snowpack is 106% of normal.

Colorado Basin River Forecast Center Webinar (Monday, 2/7/022)

On February 7<sup>th</sup>, the Colorado Basin River Forecast Center (CBRFC) held a webinar to review the Basin's current water supply conditions and forecasts. The CBRFC reported that precipitation conditions for WY-2022 to date have been a mixed bag. In October 2021, precipitation conditions were above average throughout the Basin while precipitation conditions greatly declined in November, with many SNOTEL sites across Utah, southwest Colorado, and central reporting record low values. The first three weeks of December brought improved precipitation conditions, with many SNOTEL sites across Utah and western Colorado reporting values ranked top five wettest on record. A high-pressure ridge persisted through most of January, resulting in low precipitation and decreases in water supply forecasts throughout the Basin. Figure 1 shows

record to near dry SNOTEL minimum rank and percentile values for the Upper Colorado River Basin from January 9<sup>th</sup> to January 31<sup>st</sup>. The image on the left shows the precipitation rank for the SNOTEL station. A station with a “1” means that it recorded the lowest precipitation value on record for this time period. The image on the right shows percentile values for the SNOTEL station.

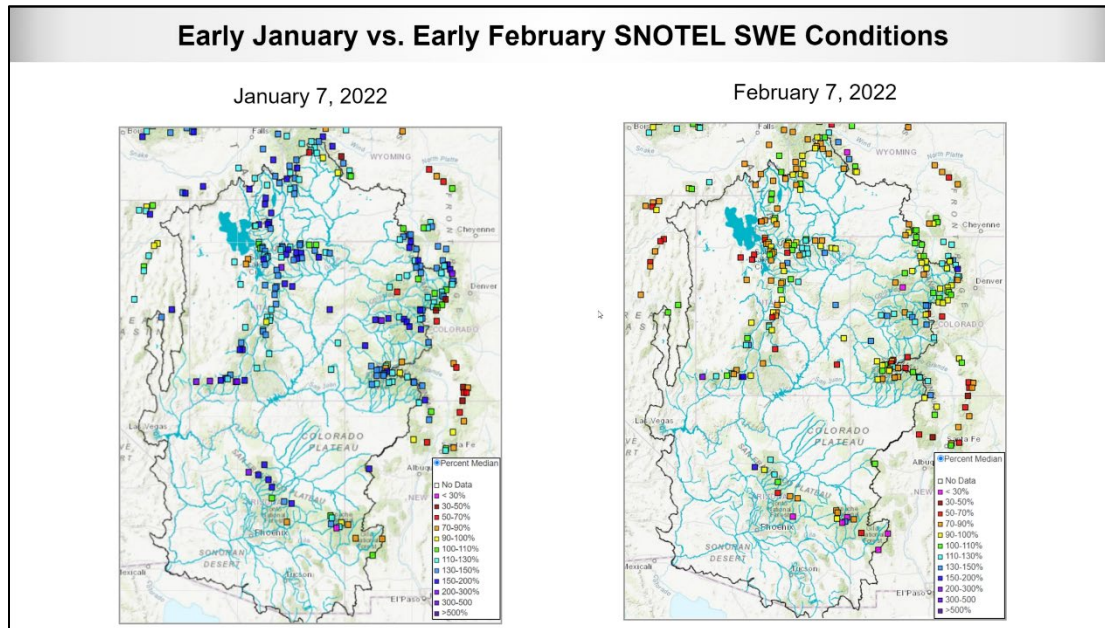
**Figure 1: January 9<sup>th</sup> to 31<sup>st</sup> Precipitation: Record/Near Record Dry SNOTEL**



CBRFC reported that soil moisture conditions in 2021 were much improved compared to the previous year, due to a wet monsoonal season. However, the CBRFC noted that soil moisture deficits persist, particularly across western Colorado.

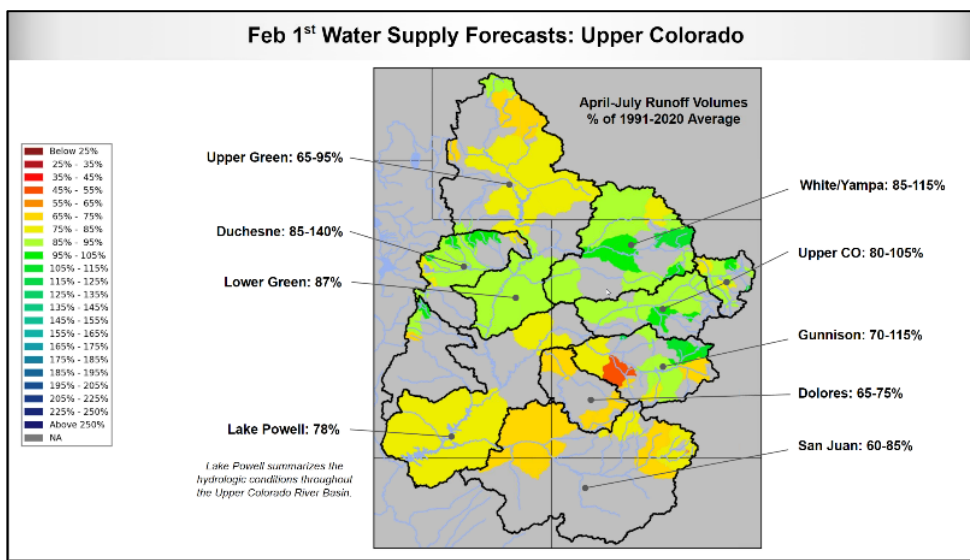
As of February 7<sup>th</sup>, snow water equivalent (SWE) conditions for the Upper Colorado River Basin range from 95% of median in the Upper Green, Price/San Rafael, and Yampa/White River Basins to 110% of median in the Gunnison River Basin. In the Lower Basin, SWE conditions range from 40% of median in the Upper Gila River Basin to 115% in the Virgin River Basin. Figure 2 shows the impact of persistent below normal precipitation conditions over the last month.

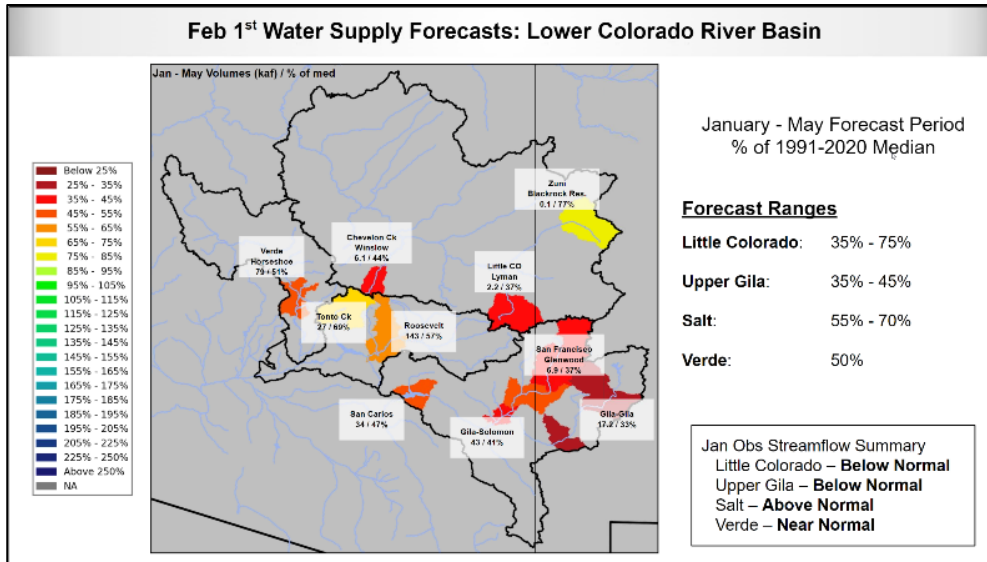
**Figure 2: Early January vs. Early February SNOTEL SWE Conditions**



As mentioned above, the persistent dry conditions have impacted water supply forecasts throughout the Basin which occur from April to July in the Upper Basin and from January to May in the Lower Basin. The February 1<sup>st</sup> water supply forecasts for the Upper Colorado range from 60% to 115% of normal, while the forecasts for the Lower Colorado range from 30% to 75% of normal. Figure 3 displays water supply forecast maps for the Upper and Lower Colorado Basin.

**Figure 3: February 1<sup>st</sup> Water Supply Forecast: Upper and Lower Colorado River Basin**





Weather models indicate that over the next few weeks, below normal precipitation conditions will continue with the chance of light precipitation across the northern portion of the Upper Colorado River Basin.

The CBRFC also provided an update on its efforts to compare the seasonal unregulated streamflow volumes from the climate normal period of 1981 to 2010 and 1991 to 2020. The analysis showed that the new normal (1991-2020) unregulated streamflow volumes have declined between 0% to close to 30% in the Upper Basin compared to the 1981-2010 values. For streamflow volumes that have dropped by 30%, averages will appear larger as compared to last year. Consequently, CBRFC stressed the importance of referring to the CBRFC’s volumetric forecasts.

## COLORADO RIVER BASIN PROGRAM UPDATES

### Colorado River Basin Salinity Control Program

#### *Colorado River Basin Salinity Control Program Implementation*

The Salinity Control Forum Work Group has scheduled a hybrid in-person-virtual meeting for February 15-17 with in-person participation at the Arizona Department of Water Resources offices in Phoenix. Key topics under discussion include updates from Reclamation, the U.S. Geological Survey, and Natural Resources Conservation Service on program funding, research, and implementation.

## Glen Canyon Dam Adaptive Management Program

The Technical Work Group (TWG) of the Glen Canyon Dam Adaptive Management Program (GCDAMP) met on January 11-13 via webinar in conjunction with the program's Annual Reporting meeting. The group received updates on the status of resources below Glen Canyon Dam and throughout the Grand Canyon, including sediment and beach erosion, native and nonnative fish, hydropower generation, tribal perspectives, and the results of recent experimental actions.

Researchers reported that the number of brown trout below Glen Canyon Dam continues to increase. Prior to 2014, brown trout were rare in this stretch of the river, but the population has increased exponentially over recent years, with an estimated 2021 population of 8,500 adult brown trout in the Lees Ferry Reach. Brown trout are warmwater nonnative fish that are expected to have a greater impact on native fish than rainbow trout, which have historically been the dominant nonnative fish in the area. The National Park Service (NPS) initiated an incentivized harvest program in 2020, which pays anglers to catch and harvest brown trout. Researchers estimate that this program has reduced the brown trout population by approximately 7-9%, but angler participation remains low. Researchers are also making progress in determining habitat use, food resources, and reproductive timing of brown trout, which may offer additional levers with which to manage the species in the future.

Researchers reported that another nonnative species of concern, a smallmouth bass, was captured during a survey for the first time since 2006. Smallmouth bass have had a significant impact on native fish in the Upper Basin, and monitoring will be conducted to determine whether this detection was an isolated incident. As the elevation of Lake Powell draws closer to the dam's intake elevation, there is increasing concern that non-native fish in Lake Powell could pass through the dam and establish reproducing populations below the dam.

Researchers reported that, although humpback chub populations in the Western Grand Canyon appear steady, the population near the Little Colorado River has fallen short of its population targets for several years. The population of sub-adult humpback chub was below the Long-Term Experimental and Management Plan (LTEMP) Biological Opinion trigger in 2020 and based on preliminary data, will likely be below the trigger in 2021 as well. Reclamation coordinated with the U.S. Fish and Wildlife Service and NPS in 2021 to increase translocations of young fish in 2021 in response to these low sub-adult population estimates. Translocating juvenile fish to tributaries results in higher growth and survival rates, boosting the overall population.

Researchers provided initial results from the spring disturbance flow (SDF) conducted at Glen Canyon Dam in spring 2021. This release consisted of approximately five days of unusually low flows in order to conduct dam maintenance, followed by several days at the maximum release within powerplant capacity. Preliminary results indicate that the impact of the SDF on most resources was minimal, but additional information will be provided over the coming months.

A scientific advisory panel review of previous "bug flow" experimental releases has been completed. Bug flows are low, steady weekend releases during summer months and were conducted in 2018-2020. The results of these experiments seem somewhat equivocal, with some invertebrate species increasing over the course of the experiments and other species appearing unaffected. Untangling the effects of bug flows from other variables has been challenging. A final report will be made available on Reclamation's website.

Funding for the GCDAMP was provided by hydropower revenues in 2021 and is expected to be provided by federal appropriation in 2022. However, the federal government is currently operating under a continuing resolution (H.R. 5305), which funds projects at the same level as in the previous year. Because the GCDAMP did not receive appropriations in 2021, the continuing resolution does not provide any funding for the program. So far, GCDAMP programs and efforts have not been reduced as a result of this funding difficulty, but it is possible that failure to pass a 2022 federal budget may affect program implementation.

Finally, the Adaptive Management Work Group (AMWG) will meet February 9-10 and the TWG will hold its next meeting on April 12-13, both via webinar.

#### Lower Colorado River Multi-Species Conservation Program

Ms. Laura Vecerina, the long-time Deputy Program Manager for the Lower Colorado River Multi-Species Conservation Program (LCR MSCP), retired at the end of January after almost 40 years of federal service. Ms. Vecerina has been with the LCR MSCP since the initial planning phases of the program in the mid-1990s. Ms. Carrie Ronning, the current Wildlife Group Manager for the LCR MSCP, is assuming the Steering Committee coordination activities.

The Lower Colorado River Multi-Species Conservation Program (LCR MSCP) held a virtual meeting on January 27 to receive updates regarding restoration and wildlife monitoring in Mexico and the United States. Presentations were provided on implementation efforts of both the LCR MSCP and environmental activities pursuant to Minute No. 323.



Finally, the Financial Work Group of the LCR MSCP will meet on February 17<sup>th</sup> to discuss expenditures during the previous year, as well as the budget and workplan for the current year.

## **GENERAL ANNOUNCEMENTS AND UPDATES**

### *Drought Planning in the Upper Colorado River Basin*

Reclamation and the Upper Basin States held a webinar on January 28, 2022, to present the draft drought response operations framework document for determining how reservoirs in the Upper Colorado River basin will be operated this year in response to the region's historically dry conditions. The aim of the drought plan is to keep Lake Powell from dropping below elevation 3,525 feet. Mr. Rod Smith, with Interior's Office of the Solicitor, said that annual drought response operating plans will be determined between February and April when hydrologic data and water supply availability in the basin is more clearly understood.

The draft framework defines foundational terms such as monitoring flows, accounting for water releases, and consulting with stakeholders. It is the starting point for developing annual drought response reservoir operating plans, which would specify water releases for the year. Board staff worked with the California agencies to develop a combined set of comment responses to framework document, which were discussed during a webinar among the California agencies. Board and California agency staff also participated in the January 28<sup>th</sup> Reclamation webinar. The draft framework is now available for public review and comment until February 17<sup>th</sup>. Comments can be submitted to [droa@usbr.gov](mailto:droa@usbr.gov).

Additional information on draft framework is available at <https://www.usbr.gov/dcp/droa.html>.

### Colorado River Basin Weather Modification Program

On September 15, 2021, the Six Agency Committee approved California's share of expenses for the Weather Modification Program for WY-2022 in the amount of \$324,702.33. The funds are being utilized to extend operations and support programs for existing weather modification projects in Colorado, Utah, and Wyoming. The following table provides the cloud seeding operation for Water Year 2022 season-to-date and Water Year 2021 season totals funded in part by the Six Agency Committee.

Upper Basin Cloud Seeding Operations		
State	Water Year 2022 Season-to-Date (hours)	Water Year 2021 Season Totals (hours)
Colorado	5765	7696
Utah	3798	5709
Wyoming	909	1057

### Airborne Snow Observatory

The California Department of Water Resources recently released a video showcasing its investment in remote snowpack measurements through the Aerial Remote Sensing of Snow program by partnering with Airborne Snow Observatories, Inc. (ASO). Data from ASO has proven to be the most accurate assessment of snowpack conditions that, when coupled with newer, sophisticated runoff models, will improve runoff forecast accuracy. The video can be viewed at the link below.

<https://cadwr.app.box.com/v/aerialsnowobservatory>

### Washington, D.C. Report

#### *Appropriations*

The federal government continues to operate under a Continuing Resolution (CR) that expires on February 18<sup>th</sup>. Senate Appropriations Chair Mr. Patrick Leahy (D-VT) said recently that negotiations are “getting much closer to something that both the House and the Senate could agree on.” The alternative is enacting stopgap spending bills for the rest of the year, which would keep spending levels flat and preserve spending riders from the previous administration.

#### *Infrastructure*

Federal agencies are signaling how they plan to spend billions of dollars provided by the Infrastructure Investments and Jobs Act (IIJA) that Congress passed in November.

- The U.S. Army Corps of Engineers has released its \$22.8 billion spending plan last week: <https://usace.contentdm.oclc.org/utis/getfile/collection/p16021coll6/id/2236>
- The Bureau of Reclamation will receive \$8.3 billion over five years and released its spending plan last week as well: [https://www.usbr.gov/bil/docs/spendplan-2022/Reclamation-BIL\\_Spend\\_Plan\\_2022.pdf](https://www.usbr.gov/bil/docs/spendplan-2022/Reclamation-BIL_Spend_Plan_2022.pdf)



For FY-2022, Reclamation did not select individual projects for funding, instead allocating Federal funds at the program level. As it makes funding decisions, Reclamation will be guided by four goals: critical infrastructure, tackling the climate crisis, advancing environmental justice, and driving the creation of jobs.

#### *Build Back Better Act*

Build Back Better Act negotiations appear to be stalled for now. Senator Joe Manchin (D-WV), the critical vote for the package, stated recently that the original package is dead. Issues like bolstering U.S. - China competitiveness, the Russia situation in Ukraine, the hearings for a new U.S. Supreme Court nominee, and bipartisan voting rights legislation are at the forefront of Congress's agenda for now.

#### *Water Resources Development Act (WRDA)*

Congress is also currently working through its biannual water resources development act legislative process. The Senate Committee on Environment and Public Works is currently wading through submissions from Senate offices. The House Committee on Transportation and Infrastructure is collecting project and policy proposals through February 24<sup>th</sup>. Both chambers continue to hold hearings on the matter.

#### *Clean Water Act Case Headed to the Supreme Court*

The U.S. Supreme Court will once again interpret the reach of the Clean Water Act, whose scope has been the subject of court and administrative battles for more than three decades. The justices agreed to hear *Sackett v. EPA*, a case in which an Idaho couple is arguing for a more limited definition of the law.

This will be the second time the Sackett case will come before the Supreme Court. In 2007, before building a house on the property, the Sacketts had filled in a wetland area on land that the agency says should not have been altered because it was a regulated wetland. In 2012, the court ruled unanimously that the Sacketts could bring a civil suit against the EPA to challenge its findings. That decision did not consider the merits of the Sackett's argument, only that they could have their day in court. The court will hear the case this year during its October term.

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