



## MONTHLY REPORT TO THE COLORADO RIVER BOARD OF CALIFORNIA

February 15, 2023

### COLORADO RIVER BASIN WATER SUPPLY CONDITIONS REPORT

As of February 13<sup>th</sup>, the surface water elevation of Lake Powell was 3,522.33 feet with nearly 5.39 million-acre feet (MAF) of storage, or 23% of capacity. The surface water elevation of Lake Mead was 1,047.49 feet with 7.50 MAF of storage, or 29% of capacity. As of February 12<sup>th</sup>, the total System storage was 19.04 MAF, or 33% of capacity, which is about 2.67 MAF less than the total System storage at this time last year.

As of February 9<sup>th</sup>, storage in the Upper Basin reservoirs, excluding Lake Powell, included the following volumes: 47% of capacity at Fontenelle Reservoir in Wyoming; 68% of capacity at Flaming Gorge Reservoir in Wyoming and Utah; 93% of capacity at Morrow Point and 36% of capacity at Blue Mesa Reservoir in Colorado; and 51% of capacity at Navajo Reservoir in New Mexico.

As of February 3<sup>rd</sup>, the January observed inflow into Lake Powell was 0.36 MAF (107% of normal) and the February forecasted inflow is 0.30 MAF (82% of normal). The forecasted unregulated inflow into Lake Powell for Water Year (WY) 2023 is 10.44 MAF (109% of normal). The April through July 2023 unregulated inflow into Lake Powell is 7.50 MAF (117% of normal).

#### Colorado Basin River Forecast Center Webinar

On February 7<sup>th</sup>, the Colorado Basin River Forecast Center (CBRFC) held a webinar to review the current water supply conditions and forecast. CBRFC provided a brief review of December and January precipitation conditions which were well above average across the Colorado River Basin.

To date, Upper Colorado Basin WY-2023 precipitation is 123% of average. The WY-2023 precipitation conditions in the Green River Basin range from 97% to 141% of average and the WY-2023 Colorado River headwaters precipitation conditions range from 106% to 117% of average. The Lower Colorado River Basin WY-2023 precipitation conditions range from 138% of average in the Upper Gila Basin to 167% of average in the Virgin River Basins.

CBRFC discussed modeled soil moisture conditions from the lower soil zone of its hydrologic model for the Upper and Lower Colorado River Basin. In the fall of 2022, the Upper Colorado River Basin experienced below normal soil moisture conditions, due to past years of below normal summer and fall precipitation, as well as runoff. In the Lower Colorado River Basin, soil conditions improved during January due to above average precipitation, and as of early February, soil moisture conditions are above average in several areas.

As of February 1<sup>st</sup>, SWE conditions were above normal across a majority of the Basin. In the Upper Colorado River Basin SWE ranged from 106% of average above Fontenelle to 193% of average in the Price/San Rafael/Dirty Devil Basin, while the Lower Colorado River Basin, SWE ranged from 168% of average in the Salt River Basin to 541% of average in the Verde River Basin. The CBRFC noted that temperatures in January were colder than normal which resulted in snow creation and retention at lower elevations.

As of February 1<sup>st</sup>, water supply forecasts for April to July runoff volumes for the Upper Colorado River Basin range from 85%-175% of normal and 117% of normal for Lake Powell. In the Lower Colorado River Basin, which has a runoff period of April to May, runoff volumes range from and 85% to 315% of median.

The weather outlook for February is expected to be less active than December and January with below normal temperatures.

The next CBRFC water supply webinar is scheduled for Tuesday, March 7<sup>th</sup>.

## **COLORADO RIVER BASIN PROGRAM UPDATES**

### Seven Basin States Process Updates

Representatives of the Colorado River Basin States met regularly throughout January in an effort to prepare a consensus modeling framework that could be analyzed by Reclamation in the Supplemental Environmental Impact Statement (SEIS) it is currently preparing for operation of Lakes Powell and Mead during the remaining interim period (i.e., through 2026). The SEIS proposes to modify the 2007 Record of Decision for the “Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead” to provide greater certainty for operations at low reservoir elevations through the duration of the interim period. Despite significant effort, the Basin States were unable to reach a consensus-based proposal by the end of January.

On January 30<sup>th</sup>, the states of Arizona, Nevada, Wyoming, Colorado, Utah, and New Mexico submitted a proposed modeling framework to the Department of the Interior that apportioned 1.543 MAF/year of reductions to Lower Basin water users and Mexico based upon Nevada's reservoir evaporation and other system losses methodology; raised the triggering elevations for existing reductions through the 2007 Guidelines and Drought Contingency Plan (DCP); and implemented additional reductions on a pro-rata basis to the Lower Basin States at low lake elevations.

On January 31<sup>st</sup>, California submitted a proposed modeling framework to the Department that would implement 1.0 MAF/year of reductions to the Lower Basin States, maintain existing triggers under the 2007 Guidelines and DCP, require additional conservation and Drought Operations Agreement (DROA) releases in the Upper Basin, and implement further reductions in water use of up to 0.950 MAF/year in the Lower Basin if Lake Mead elevations continued to decline.

Reclamation is expected to consider both modeling framework submittals as it moves forward with a draft SEIS, which is anticipated for release in the spring (late-March or early-April). The Basin States will continue to meet over the coming months with the goal of agreeing on an operational framework that addresses potential reduced water supply conditions and low reservoir elevation scenarios. The goal would be to provide consensus-based information and recommendations that can help inform the development of the both the Final SEIS and associated Record of Decision. The Final SEIS and ROD are expected to be released prior to the release of the August 2023 24-Month Study Report.

### Colorado River Basin Salinity Control Program Implementation

#### *Salinity Control Forum Work Group Meeting*

The Salinity Control Forum Work Group met in Palm Desert at the Coachella Valley Water District (CVWD) offices February 7-9. The focus of the meeting was to review the draft results to be included in the 2023 Triennial Review of water quality standards for salinity in the Colorado River System. The Clean Water Act requires that every three years the Basin States review water quality standards for the Colorado River. The work group also received updates from federal agencies funding program implementation and conducting research on salinity control activities. During the meeting an update was provided on the status of the Paradox Valley Unit (PVU) Salinity Control Project. The Work Group also toured CVWD facilities and Salton Sea dust control sites. The Work Group was appreciative of CVWD's offer to host the meeting and provide meeting support.

## Paradox Valley Unit Salinity Control Project

Reclamation resumed operation of the PVU brine injection well on Monday January 23, 2023. The injection operation will continue at six-month intervals with an injection rate of 115 gallons per minute unless adverse seismic conditions are observed and while Reclamation continues to conduct a seismic risk analysis. At the operational injection rate, the pore pressure within 2 to 3 km of the injection well will increase slightly over the next few years and the unit will intercept and dispose of ~65,000 tons of salt/year. Reclamation concluded the first six-month injection test at the PVU on December 2<sup>nd</sup>, 2022. The surface injection pressure at shut in was ~4110 psi and all conditions were normal. Previously PVU had not operated since March 2019 in response to a significant seismic event. When fully operational, PVU removed about 100,000 tons of salt per year that would have otherwise entered the Colorado River.

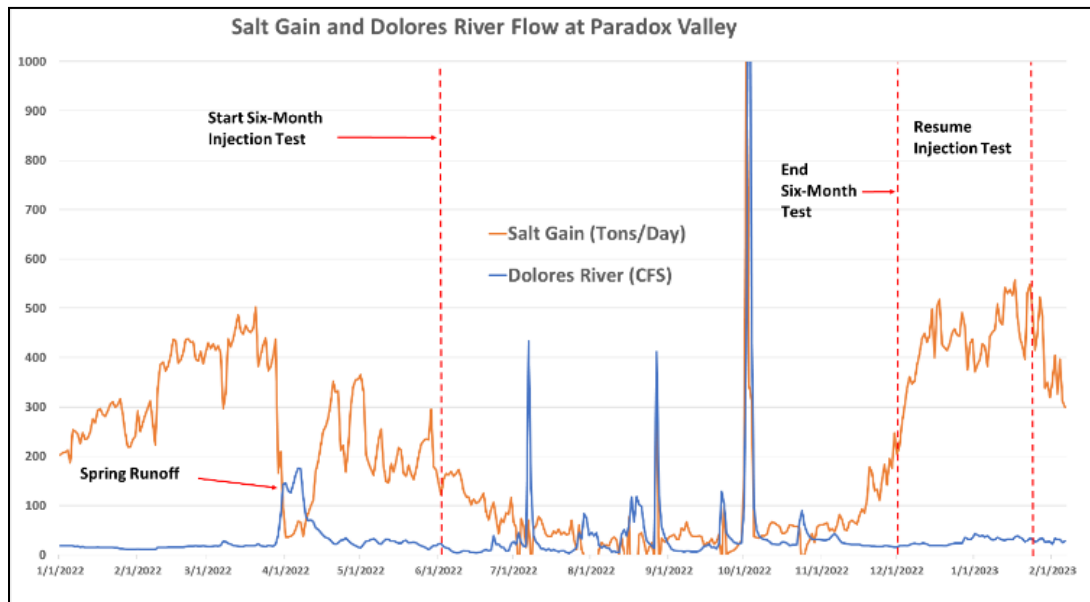


Figure 1. Paradox Valley Unit Operations

## Coachella Valley Water District and Salton Sea Tour

The Work Group participated in a tour of CVWD facilities and Salton Sea restoration areas, which included presentations by staff from CVWD, Imperial Irrigation District, Reclamation, and the California Department of Water Resources. Mr. Robert Cheng from CVWD and Ms. Jessica Humes from the Imperial Irrigation District provided great support to organize and lead the tour. Work Group members learned a lot about CVWD operations and issues connected to the Salton Sea.



*Figure 2. Work Group visiting Salton Sea Dust Control Project*

### Glen Canyon Dam Adaptive Management Program

The Glen Canyon Dam Adaptive Management Program (GCDAMP) held its Annual Reporting Meeting on January 24-25 followed by a meeting of the Technical Work Group (TWG) on January 26, both in Phoenix, Arizona. 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, tribal perspectives, and the results of recent experimental actions.

As the level of Lake Powell declines, the water released from the dam has warmed significantly. While this improves conditions for native fish, it can also benefit certain nonnative species of concern. Among these are brown trout, green sunfish, and smallmouth bass, all of which have become increasingly common below Glen Canyon Dam in the last several years. In 2022, smallmouth bass were detected spawning below Glen Canyon Dam, kicking off an effort to prevent widespread establishment of the species. Smallmouth bass will prey on all life-stages of humpback chub and are of growing concern to biologists monitoring humpback chub populations in the Colorado River below Glen Canyon Dam.

Researchers are evaluating barriers to prevent smallmouth bass from passing through the dam, dam release patterns that might disrupt smallmouth bass reproduction, and downstream removal methods to reduce the population already established in the Lees Ferry reach. Mechanical removal of smallmouth bass was conducted in the Lees Ferry area from September

to mid-December 2022. A total of 345 smallmouth bass were captured throughout Glen Canyon. Captures were highest closest to the dam. Additional data is needed to evaluate the effectiveness of the electrofishing removal effort.

The TWG voted to advance a Nonnative Fish Strategic Plan to the Adaptive Management Work Group (AMWG). The goal of the plan is to coordinate and oversee smallmouth bass response actions undertaken by the program. Reclamation is also in the initial stages of an Environmental Assessment of modifications to Glen Canyon Dam operations to disadvantage smallmouth bass. Actions under consideration include “spike flows,” high spring releases that have been utilized at Flaming Gorge Dam to disrupt smallmouth bass spawning, and the use of bypass releases from Glen Canyon Dam to cool water temperatures.

It is likely to take several years for the increasing abundance of nonnative fish to have a noticeable effect on native fish populations. Native fish still dominate the Grand Canyon reach, with populations of the threatened humpback chub continuing to increase in the western Grand Canyon near the inflow to Lake Mead. This population has increased exponentially in the past ten years. The population of humpback chub upstream near the Little Colorado River also appears to be stable. Population estimates of adult humpback chub are high, although the population of sub-adult humpback chub was below the Long-Term Experimental and Management Plan (LTEMP) Biological Opinion trigger in 2020 and 2021. In response, Reclamation coordinated with the U.S. Fish and Wildlife Service and National Park Service to increase translocations of young fish. Translocating juvenile fish to tributaries results in higher growth and survival rates, boosting the overall population. Havasu Creek translocations of humpback chub have resulted in the establishment of an additional spawning and recruiting population. Havasu Creek appears to be a potential refuge for native fishes if warm-water invasive species become established.

A report was provided in 2021 and 2022 “Bug Flow” experiments. Bug Flow experiments, also referred to as macroinvertebrate flows, are designed to provide lower flow from Glen Canyon Dam on the weekend to potentially improve the success of invertebrate egg-laying along the river bank. Based on the 2022 samples processed thus far, during the 2022 experiment an 80% increase in midges and a 120% increase in caddisflies was observed. During 2021, a year without a Bug Flow experiment, midges declined by approximately 50% while there was no statistical difference in caddisfly abundance.

Monitoring of sediment is showing the effects of a recent lack of high flow experiments (HFEs). During the six years of the LTEMP, the trigger to conduct an HFE have been met three times, but only one HFE has been conducted. Concerns about other resources, including the risk of dispersing nonnative fish below the Dam and the low level of Lake Powell, have been barriers to

HFE implementation. Dam maintenance scheduling has also compromised the ability to conduct HFES. The last full-magnitude HFE was in 2012. A substantial number of sandbars in Marble Canyon are at their lowest condition since monitoring began.

Finally, the Adaptive Management Work Group (AMWG) will meet February 15-16 and the TWG will hold its next meeting on April 12-13, both with in-person and virtual attendance options.

## **GENERAL ANNOUNCEMENTS AND UPDATES**

### Washington, D.C. Report

#### *California Committee Leadership*

The following California members will hold key leadership roles in the new Congress, including:

- Rep. Grace Napolitano (D-CA-31) is the Ranking Member of the Transportation and Infrastructure Subcommittee on Water Resources and Environment.
- Rep. Jared Huffman (D-CA-2) is the Ranking Member of the Natural Resources Subcommittee on Water, Wildlife and Fisheries.
- Sen. Alex Padilla (D-CA) is the Chair of the Environment and Public Works Subcommittee on Fisheries, Water, and Wildlife.
- Sen. Dianne Feinstein (D-CA) is the Chair of the Appropriations Subcommittee on Energy and Water.

#### *Fiscal-Year 2024 Appropriations*

The Biden administration plans to release the president's budget on March 9<sup>th</sup>. Some Congressional offices have already opened up their appropriations portals with deadlines in early March. The House has already said that they plan to pass individual appropriations bills this year, something that we have not seen in a long time.

#### *Colorado River Caucus*

Senators from the seven Colorado River Basin States are exploring the establishment of a Colorado River Caucus. Senator Hickenlooper (D-CO) is expected to serve as the chair of the caucus. The purpose is to establish regular dialogue among the basin states members and to have regular meetings with leadership staff from the Department of the Interior and Reclamation.

#### *Waters of the United States*

On January 18<sup>th</sup>, the U.S. EPA and the Army Corps of Engineers (Corps) noticed a final rule in the Federal Register revising the definition of "Waters of the United States" (WOTUS) under the Clean

Water Act. This is the second and final step that the Biden Administration has taken to rewrite the definition after the Administration revoked the Trump-era “Navigable Waters Protection Rule”.

The new Rule codifies practices and policies of the pre-2015 *Rapanos* era WOTUS guidance. It also establishes a category for adjacent wetlands as wetlands next to, abutting, or near other jurisdictional waters that meet the relatively permanent or significant nexus standard tests. The Rule will go into effect on March 20th.

#### *WATER For California Act*

Congressman Valadao (R-CA) has reintroduced the WATER for California Act (H.R. 215). The bill, cosponsored by the entire California Republican delegation, would:

- Require the Bureau of Reclamation to operate the Central Valley Project in accordance with the 2019 Biological Opinions unless changes are agreed to as a part of the voluntary agreement process;
- Prevent reconsultation on the Biological Opinion unless certain criteria are met;
- Override state law to allow for the raising of Shasta dam to move forward;
- Retroactively fund the WIIN Act funding request for the raising of Shasta dam that were not approved by Congress;
- Reauthorize the storage account from the WIIN Act; and
- Deem the Central Valley Project Improvement Act complete.

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