

MONTHLY REPORT TO THE COLORADO RIVER BOARD OF CALIFORNIA

March 9, 2022

ADMINISTRATION

Approval of Minutes of the February 2022 Board meeting (Action)

Minutes for the February 2022 Board meeting are included in the Board packet for the Board's consideration and approval.

Consideration of Application for Water Subcontract from the Lower Colorado Water Supply Project (Action)

Overview of the Lower Colorado Water Supply Project

The Lower Colorado Water Supply Act (Public Law 99-655) was enacted by Congress in 1986 as a mechanism for California water users without Boulder Canyon Project Act Section 5 contracts for small amounts of water for domestic and industrial uses by exchange of up to 10,000 acre-feet of water per year from the Colorado River for current and future uses within California. Constructed by Reclamation, the Lower Colorado River Supply Project consists of four wells and pumping facilities in the Sand Hills area along the All-American Canal in Imperial County. The Project water is intended for domestic, municipal, industrial, and recreational uses only. Eligible Project beneficiaries are limited to "persons or Federal or non-Federal governmental agencies whose lands or interests in lands are located adjacent to the Colorado River in the State of California, who do not hold rights to Colorado River water or whose rights are insufficient to meet their present or anticipated future needs as determined by the Secretary." The City of Needles serves as the Administrator for the Project to enable eligible water users to subcontract for the use of Colorado River water subject to Project availability. The Board reviews applications for use of Project water supplies and then makes a recommendation to Reclamation as to whether a subcontract should be approved. Since 2001, the Board has received over 650 applications for the use of water from the Project and recommended approximately 5,900 acre-feet of current or future water uses for subcontracting with the City of Needles under the Project. This includes current approved uses of 797 acre-feet and future approved uses of 5,097 acre-feet.

Staff Recommendation for Board Consideration

The Board packet includes proposed Board Resolution 2022-1 recommending a subcontract for Lower Colorado Water Supply Project (Project) water in Imperial County, California be offered to the applicant and directs the executive director to forward the application to Reclamation. Ms. Laurie Marie Estes is requesting a new contract for 1.0 acre-feet of future use. If the Board recommends approval, a new subcontract would be developed by Reclamation for the owner at a future point in time. Board staff recommends that the Board approve and adopt Resolution 2022-1 during its meeting on March 9, 2022.

COLORADO RIVER BASIN WATER SUPPLY CONDITIONS REPORT

As of March 7th, the surface water elevation of Lake Powell was 3,526.01 feet with 5.99 million-acre feet (MAF) of storage, or 25% of capacity. The surface water elevation of Lake Mead was 1,066.03 feet with 8.89 MAF of storage, or 34% of capacity. As of March 6th, the total System storage was 21.37 MAF, or 36% of capacity, which is about 5.45 MAF less than the total System storage at this same time last year.

As of March 1st, storage in the Upper Basin reservoirs, excluding Lake Powell, included the following volumes: 47% 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 50% of capacity at Navajo Reservoir in New Mexico.

As of March 2nd, the February observed inflow into Lake Powell was 0.22 MAF (59% of normal) and the March forecasted inflow is 0.30 MAF (50% of normal). The preliminary forecasted unregulated inflow into Lake Powell for Water Year (WY) 2022 is 6.58 MAF (69% of normal). The forecasted April through July 2022 unregulated inflow into Lake Powell is 4.40 MAF (69% of normal). To date, WY-2022 precipitation is 100% of normal and the current Basin snowpack is 93% of normal.

Colorado Basin River Forecast Center Water Supply Webinar

On March 7th, the Colorado Basin River Forecast Center (CBRFC) held a webinar to review the Basin's current water supply conditions and forecasts. The CBRFC provided a summary of precipitation conditions in February. The dry weather pattern which existed in January continued into the beginning of February, resulting in very dry conditions throughout the majority of Basin. By mid-February, the Basin experienced wetter conditions which impacted the regions of Utah,

western Colorado, and Arizona. Significant storm activity during February 21-23 brought 2-3 inches of precipitation to higher elevations of the San Juan, Dolores, and Gunnison Basins. Central Arizona and Utah also received between 0.5 and 2 inches of precipitation. Unfortunately, the Upper Green Basin received little to no precipitation during this time and for the month of February several SNOTEL sites ranked as the driest in 40 years.

To date, precipitation conditions for WY-2022 in the Upper Colorado River Basin are near normal, while conditions in the Lower Colorado River Basin are below normal, with exception to the Virgin River Basin, at 100% of median. Dry soil conditions in the Upper and Lower Basin persist and is expected to impact spring runoff efficiency, especially for basins with below average soil moisture conditions.

As of March 7th, early snow water equivalent (SWE) conditions in the Upper Colorado River Basin are near normal, ranging from 75% of median in the Upper Green River Basin to 110% in the Gunnison River Basin. In the Lower Colorado River Basin, SWE conditions are near to slightly above normal for the Virgin River (95% of median) and Verde River Basins (110% of median), while the SWE for the Little Colorado, Salt, and Gila River Basins ranges from 45% to 60% of median. A storm system during March 4th to 6th brought precipitation to most of the Upper Colorado River Basin and a small portion of the Lower Colorado River Basin in central Arizona.

Water supply forecasts for April to July runoff have declined over the last month in the Upper Colorado River Basin. Spring runoff into Lake Powell is forecasted to be 69% of average (4,400 KAF). In the Lower Colorado River Basin, which uses the forecast period of January to May, the water supply forecasts range from 20% to 65% of median.

Weather models project that a storm system will move southward through the Basin during the next week, bringing up to 1 inch of precipitation in high elevation areas in the Upper Colorado River Basin and less than 0.25 inches of precipitation in the Lower Colorado River Basin.

Drought Operations and Basin States Activities to Protect Critical Elevations in Lakes Powell and Mead

The Upper Basin States and Upper Colorado River Commission continue to work with Reclamation to develop a plan for potential drought operations for 2022 from initial units of the Colorado River Storage Project (CRSP) above Lake Powell. Like the drought operations conducted in 2021, these operations are developed and implemented pursuant to the 2019 Upper Basin Drought Contingency Plan and Drought Operations Agreement (DROA). The proposed 2022 drought operations are intended to aid in reducing the risk of Lake Powell reaching or declining below elevation 3,525 feet. Currently, it is anticipated that most of the DROA releases for 2022 would likely come from the Flaming Gorge Reservoir on the Upper Green River on the Utah-Wyoming border.

Discussions are also ongoing among the Basin states and the Department of the Interior to identify other options and strategies that could be identified and adopted in conjunction with the 2022 DROA operations, Lower Basin DCP and 500+ Plan activities, and 2007 Interim Shortage Guidelines in an effort to bolster storage and protect critical elevations in both Lakes Powell and Mead.

Update of the Method to Develop the 5-year Colorado River System Projections

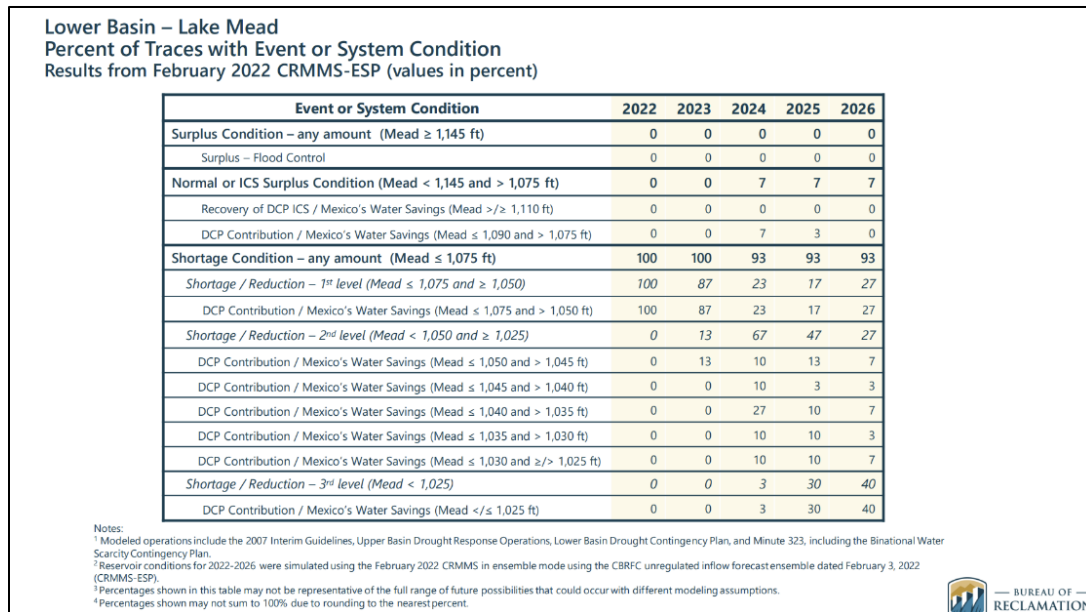
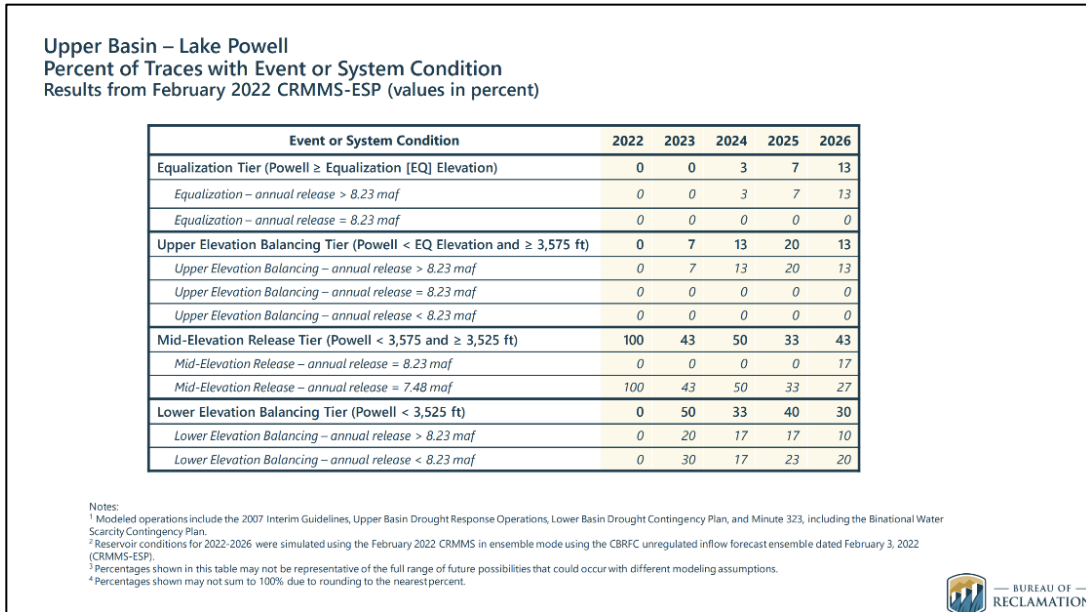
On February 18th, Reclamation hosted a webinar to discuss Reclamation's decision to begin utilizing the Colorado River Mid-term Modeling System (CRMMS) in place of the Colorado River Simulation System (CRSS) to develop the 5-Year Colorado River System Probabilistic Projections. To support this change, Reclamation performed a thorough analysis of each of the models' key attributes such as (hydrology and demands) and compared the models' performance to historical hydrology. Reclamation's analyses found that CRMMS outperformed CRSS in several areas. Reclamation explained that switching to CRMMS will streamline the modeling process and provide more consistency with the 24-Month Study and 2-year modeling projections and improve the performance of the model over the 5-year period. Reclamation will continue to apply the CRSS model for long-term planning studies.

February 2022 Colorado River Mid-term Modeling System 5-year Probabilistic Projections

On February 25th, Reclamation released the February 2022 5-year probabilistic projections for Lake Powell and Lake Mead operations using the CRMMS model. For Lake Powell, the projections indicate that in WY-2023 there is a 43% chance that the operational tier will be the Mid-Elevation Release Tier, with an elevation between 3,575 feet and 3,525 feet and 50% chance that the reservoir's operational tier will be the Lower Elevation Balancing Tier, elevation less than 3,525 feet.

For Lake Mead, there is an 87% chance in WY-2023, that the reservoir will be operated under the Level 1 Shortage Tier, with an elevation between 1,075 feet and 1,050 feet. In WY-2024, there is a 67% chance that the reservoir will be operated under the Level 2 Shortage Tier, with an elevation between 1,050 feet and 1,025 feet. See Figure 1 below for the full table of projections for Lake Powell and Lake Mead operations.

Figure 1: 5-Year Probabilistic Projections for Lake Powell and Lake Mead Operations



COLORADO RIVER BASIN PROGRAM UPDATES

Colorado River Basin Salinity Control Program Implementation

Work Group meeting

The Salinity Control Forum Work Group held a scheduled hybrid in-person / virtual meeting on February 15-16 with in-person participation at the Arizona Department of Water Resources offices in Phoenix. Key topics under discussion included updates from Reclamation, the U.S. Geological Survey, and Natural Resources Conservation Service on program funding, research, and implementation.

Paradox Valley Unit

During the Work Group meeting, Reclamation provided an update on the status of the Paradox Valley Unity (PVU) salinity control project, located in Montrose County, Colorado. PVU has not operated since March 2019 in response to a significant seismic event. When fully operational, the PVU removed about 100,000 tons of salt per year that would have otherwise entered the Colorado River. Of special note for water users in the Basin, Reclamation reported it is developing an Injection Test Plan for PVU that would restart operations subject to peer review and senior Reclamation and Department of Interior approval. Additionally, Reclamation reported that a seismic risk assessment for PVU is expected to be completed in mid-2022 that will evaluate potential for earthquakes over the next 2 years. Finally, Reclamation is conducting a risk assessment for PVU to estimate the annual rates for damage and/or loss of life from induced seismicity. The risk assessment is not expected to be completed until the end of 2024. The Colorado River Basin Salinity Control Forum will learn more about PVU activities during its May meeting, which is proposed to be held in Moab, Utah and could include a tour of the PVU facilities.

Pah Temp Springs

During the Work Group meeting, the U.S. Geological Survey (USGS) reported the results of a pump test conducted at the Pah Tempe Springs Geothermal area located in Washington County, Utah. Pah Tempe Springs, also known as Dixie Hot Springs or La Verkin Springs, are located along the Virgin River at the mouth of Timpoweap Canyon in Washington County, Utah. The springs are recognized as a substantial localized source of dissolved solids (salt) discharging to the Virgin River, which is a tributary to the Colorado River at Lake Mead. The purpose of the pump test is to better understand the aquifer properties thus allowing USGS to model pumping requirements to capture the brine presently discharging to the Virgin River.

Glen Canyon Dam Adaptive Management Program

The Adaptive Management Work Group (AMWG) for the Glen Canyon Dam Adaptive Management Program (GCDAMP) met via webinar on February 9 - 10. The AMWG received a report regarding current funding for the GCDAMP. The federal government has not yet passed a FY-2022 budget and is currently operating on a continuing resolution. Declining hydropower revenues and decreasing Colorado River Storage Project initial cost repayment obligations are resulting in increased reliance on federal appropriations relative to previous program years. As this change is not reflected in the continuing resolution, program funds for the current year are uncertain. Reclamation is prepared to request discretionary funds if necessary.

The GCDAMP received information that, as the elevation of Lake Powell declines, it is likely that water temperature and the risk of nonnative fish entrainment will increase. When the elevation of Lake Powell draws closer to the level of the dam intakes, there is an increased potential for non-native fish, including green sunfish and smallmouth bass, to pass through the dam and potentially establish breeding populations below Glen Canyon Dam. Potential management measures to address this concern are being investigated. Warmer water may also lead to shifts in the ecosystem, some of which may be difficult to reverse. The AMWG passed a resolution directing the Technical Work Group (TWG), with support from the Grand Canyon Monitoring and Research Center, to (1) identify the scope of work for an evaluation of potential effects on resources from water quality released from Glen Canyon Dam and (2) subject to funding, prepare an assessment report focused on water quality parameters and impacts on affected resources in the Colorado River Ecosystem. The full text of the resolution can be found [here](#).

The GCDAMP is currently evaluating the opportunity for a spring high flow experiment (HFE). To rebuild sandbars in the river, the Long-Term Experimental and Management Plan (LTEMP) includes triggers for potential spring or fall HFEs based on the estimated sand mass balance resulting from Paria River sediment inputs during the spring and fall accounting periods. The program is currently within the spring accounting window, Dec 1, 2021 – June 30, 2022. Time still remains in the accounting window; however, sand inputs from the Paria River thus far are insufficient to trigger a Spring HFE. HFEs do not result in changes to the annual release volumes from Glen Canyon Dam.

Finally, the TWG is scheduled to hold a virtual meeting on April 12-13 and the AMWG is scheduled to hold a virtual meeting on May 18, 2022.

Status of the Lower Colorado River Multi-Species Conservation Program

The Lower Colorado River Multi-Species Conservation Program (LCR MSCP) held a Financial Work Group call on February 17. The group discussed the FY-2021 budget, which was \$26.5 million. Actual expenditures in FY-2021 were below budget at \$23.1 million. Differences between the approved budget and expenditures are in part due to adjustments necessitated by the ongoing pandemic. Some field work was unable to be carried out due to safety restrictions and difficulty obtaining materials. Inflation is also increasing costs program costs. As anticipated, overall spending on research is decreasing as the program matures and the knowledge gaps needed to implement and monitor projects have been addressed. The program has completed the majority of its planned activities throughout the pandemic. The FY-2022 LCR MSCP annual budget is estimated to be approximately \$25.4 million.

The next meeting of the LCR MSCP Steering Committee is scheduled to be held virtually on April 27, 2022.

Pathways to 30x30: Accelerating Conservation of California's Nature

The California Natural Resources Agency (CNRA) released a draft of "Pathways to 30x30: Accelerating Conservation of California's Nature (Pathways to 30x30)" for public comment on December 15, 2021. Pathways to 30x30 was generated in response to Governor Newsom's nature-based solutions Executive Order N-82-20, which aims to accelerate conservation of California's lands and coastal waters. California's 30x30 initiative is part of an international movement to protect nature across the planet.

CRB staff submitted a comment letter to CNRA providing feedback on Pathways to 30x30. The comments submitted included requests for additional clarity in areas of the draft plan where there is overlap between the LCR MSCP and Pathways to 30x30, potential research needs to align Pathways to 30x30 with water supply and water quality efforts in California and suggested additional state planning resources that may be useful to reference in Pathways to 30x30. A copy of the letter was included in the Board packet.

GENERAL ANNOUNCEMENTS AND UPDATES

Reclamation outlines initial 2022 water allocations for Central Valley Project water contractors

On February 23, 2022, Reclamation announced the initial 2022 water supply allocations for Central Valley Project (CVP) Contractors. Initial allocations for Sacramento River and South-of-Delta irrigation contractors are zero percent of their contract amount. Initial allocations for Sacramento River Municipal and industrial (M&I) water service contractors are set at public health and safety needs consistent with the CVP M&I Water Shortage Policy. Initial allocations for American River, In-Delta, and South-of-Delta M&I contractors are 25% of historical use. These drastic reductions in water allocations reflect the below average CVP storage conditions and January and February precipitation that is on pace to be the driest on record. As of February 28th, Shasta Reservoir storage, which is the largest reservoir in the CVP System, was at 52% of average. Additional information on the water allocations can be found at the following link:

<https://www.usbr.gov/newsroom/#/news-release/4104>

Salton Sea Management Program Annual Report Released

On February 25, 2022, The California Natural Resources Agency submitted its 2022 Annual Report on the Salton Sea Management Program (SSMP) to the State Water Resources Control Board, prepared in compliance with Order WR 2017-0134. The report summarizes progress in 2021 toward reducing exposed lakebed and creating habitat at the Salton Sea. Highlights include breaking ground on the largest restoration project in the Sea's history, advancing with partners several other community-oriented restoration projects around the Sea, beginning vegetation enhancement on exposed lakebed to reduce dust emissions, and securing commitment from state leaders for an additional \$220 million in funding. The report is available at:

<https://saltonseaca.gov/>.

Washington, D.C. Report

New Interior Department Political Hires

The Department of the Interior recently announced a suite of new political appointees who are spread across a variety of agencies and responsibilities:

- Mr. Michael Brain as a deputy commissioner at the Bureau of Reclamation. Brain previously was a staffer on the House Energy and Water Development Appropriations Subcommittee, where he worked on funding bills for Reclamation and the U.S. Army Corps of Engineers.

- Mr. Gary Gold, an attorney, and engineer from Arizona, as deputy assistant secretary for water and science.
- Ms. Katherine Pustay Currie as a deputy infrastructure coordinator. Ms. Currie is returning to Interior, where she previously worked on the policy staff. She also worked in the Alaska State Legislature and on political campaigns.

Appropriations and Budget

The federal government has extended its Continuing Resolution (CR) until March 11th. Sen. Richard Shelby (R-Ala.) said this week that top appropriators have “made some breakthroughs” in omnibus negotiations and are still “trying to work out all obstacles between us” in the race to produce bill text by early next week. Negotiators are still working out the details of the emergency aid pieces of the package, including the \$6.4 billion the Biden administration says it needs to aid Ukraine.

Meanwhile, some members in Congress are beginning to take fiscal year 2023 appropriations requests. President Biden’s fiscal year 2023 budget request to Congress is delayed until at least late March.

Infrastructure

To help states, tribes, and local governments navigate the Beltway bureaucracy, the White House published a guidebook that lays out where to find the money and when applications will be accepted. At 465 pages, the guidebook can be found here: [link](#). Updated timelines and application information will be housed on a separate website where there is a search feature: [link](#).

With respect to EPA implementation, the Local Government Advisory Committee, which provides the EPA with a ground-level view of the agency’s work, submitted recommendations ([link](#)) which EPA adopted ([link](#)). The committee members are mostly mayors, council members, and city officials. They urged the EPA to consider climate change and environmental justice when it doles out infrastructure money. They also asked that smaller communities without large staff receive technical help to navigate the application process.
