# MONTHLY REPORT TO THE COLORADO RIVER BOARD OF CALIFORNIA

June 15, 2022

#### **ADMINISTRATION**

## Proposed Fiscal-Year 2022/2023 Budget for the Colorado River Board of California

The State budget submitted by Governor Gavin Newsom in January 2022 and through the May revised budget process reflects a proposed budget for the Colorado River Board of California (Board) in Fiscal-Year 2022/2023 (FY-22/23) of \$2,514,000. The FY-21/22 Accomplishments & FY-22/23 Planned Activities Report has been distributed with the Board meeting materials and provides information regarding the accomplishments over the past year, and previews anticipated Board and staff activities in the upcoming fiscal year. Supplemental Board budget information has also been included in the materials distributed for the Board meeting.

<u>Consideration of Application for Water Subcontract from the Lower Colorado Water Supply Project (Action)</u>

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 (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 which enables eligible water users to subcontract for the use of Colorado River water subject to Project availability. In the subcontract, the U.S. Bureau of Reclamation (Reclamation) and the City of Needles periodically

re-examine the subcontractor's reasonable and beneficial use of water at 5-year intervals beginning 10 years after the effective date of the subcontract and reduce as necessary the amount of water that may be diverted pursuant to the subcontract. The Board reviews applications for use of Project water supplies and then provides 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 Project water and has recommended approximately 5,900 acre-feet of current or future water uses for subcontracting with the City of Needles. This includes approved current uses of 797 acre-feet and approved future uses of 5,097 acre-feet.

# Staff Recommendation for Board Consideration

The Board packet includes proposed Board Resolution 2022-2 recommending a subcontract for Lower Colorado Water Supply Project water in San Bernardino County, California, be offered to the applicant and directs the executive director to forward the application to Reclamation. Mr. Chad Hill 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 2022-2 during its meeting on June 15, 2022.

#### COLORADO RIVER BASIN WATER SUPPLY CONDITIONS REPORT

As of June 13<sup>th</sup>, the surface water elevation of Lake Powell was 3,536.20 feet with nearly 6.64 million-acre feet (MAF) of storage, or 27% of capacity. The surface water elevation of Lake Mead was 1,045.57 feet with 7.37 MAF of storage, or 28% of capacity. As of June 12<sup>th</sup>, the total System storage was 20.71 MAF, or 35% of capacity, which is about 4.3 MAF less than the total System storage at this same time last year.

As of June 8<sup>th</sup>, storage in the Upper Basin reservoirs, excluding Lake Powell, included the following volumes: 54% of capacity at Fontenelle Reservoir in Wyoming; 75% of capacity at Flaming Gorge Reservoir in Wyoming and Utah; 94% of capacity at Morrow Point and 43% of capacity at Blue Mesa Reservoir in Colorado; and 55% of capacity at Navajo Reservoir in New Mexico.

As of June 3<sup>rd</sup>, the May observed inflow into Lake Powell was 1.38 MAF (67% of normal) and the June forecasted inflow is 1.2 MAF (49% of normal). The preliminary forecasted unregulated inflow into Lake Powell for Water Year (WY) 2022 is 5.61 MAF (58% of normal). The forecasted April through July 2022 unregulated inflow into Lake Powell is 3.5 MAF (55% of normal). To date, WY-2022 precipitation is 91% of normal.

## 2023 Colorado River Reservoir System Annual Operating Plan—First Consultation

The first consultation meeting for the development of the 2023 Annual Operation Plan (AOP) was held on June 1<sup>st</sup> via webinar to provide an overview of the draft 2023 AOP and accept initial comments from stakeholders. The 1968 Colorado River Basin Project Act (P.L. 90-537) requires that the Secretary of the Department of the Interior prepare a report documenting the actual operations for the previous water year and the projected operations for the upcoming water year. Based on the operating criteria established within the 2007 Interim Guidelines, the August 24-Month Study Report projections for January 1<sup>st</sup> elevations in the following year sets the operational tiers for the coordinated operations of Lakes Powell and Mead.

Based on the May 2022 24-Month Study Report Study, which incorporates a release of 7.0 MAF from Glen Canyon Dam for WY-2022 as part of the Drought Response Operations Agreement, the projected operational tier for Lake Powell in WY-2023 is the Lower Elevation Balancing Tier, with the most probable release of 7.58 MAF from Glen Canyon Dam.

It was determined that the most probable operational tier for Lake Mead is the Level 1 Shortage Condition. However, as mentioned above, it is the August 2022 24-Month Study that will determine the official operating tiers for both Lakes Powell and Mead, and this will be updated and documented in the final version of the 2023 AOP. Finally, the draft 2023 AOP currently projects a delivery to Mexico, pursuant to the 1944 Water Treaty, of 1.43 MAF; but this delivery amount may be adjusted based upon Mexico's utilization of its Water Reserve and obligations under Minute No. 323. The Draft 2023 Annual Operating Plan for Colorado River Reservoirs can be accessed and viewed online at the web sites maintained by Reclamation's Upper and Lower Colorado Basin Regions. The link for the Lower Colorado Basin Region is the following:

https://www.usbr.gov/uc/water/rsvrs/ops/aop/AOP23 draft.pdf

## **COLORADO RIVER BASIN PROGRAM UPDATES**

## Lower Colorado River Basin States Near-Term Drought Response Actions

Even with the implementation of the 2022 Upper Basin Drought Response Operations Plan and WY-2022 reduction in release from Glen Canyon Dam from 7.48 MAF to 7.0 MAF, storage in the reservoir system continues to decline. In fact, System reservoir storage has declined nearly 5.0 MAF over the last twelve months, and more than 10 MAF over the past three years. The current Most Probable (median) projection for Lake Mead indicates that at some point in 2023, Lake Mead will reach or decline below elevation 1,025 feet (5.8 MAF of live capacity). Over the past

few weeks, Reclamation has reached out to the Basin states and expressed significant concern regarding the ability to continue to protect critical elevations at both Lakes Powell and Mead. Recent preliminary modeling prepared by Reclamation indicates that significant reductions in basinwide uses of Colorado River water would be necessary to protect an elevation of 3,500 feet at Lake Powell and an elevation of 1,000 feet at Lake Mead.

Reclamation has also recently indicated that it believes additional Upper Basin drought response operations and reduced releases from Glen Canyon Dam may be required in WY-2023, and potentially beyond in order to assist in protecting these critical elevations at both Lakes Powell and Mead. Toward this end, Reclamation has initiated a series of focused technical working group meeting with representatives of the Basin states and water users in determining what additional actions can be developed for implementation during the period 2023-2026. Reclamation believes that these actions must be identified and agreed upon by the time of the release of August 2022 24-Month Study Report in order to provide specific operational clarity and guidance for inclusion in the 2023 Annual Operating Plan (AOP). Absent development of a consensus-based plan for reductions in water uses, water conservation programs, recycling and reuse, and water supply augmentation, Reclamation has indicated that it will take actions appropriate to protect and manage System infrastructure and maintain some level of water supply availability in the Basin.

Reclamation Commissioner Camille Touton testified before the U.S. Senate's Energy & Natural Resources Committee on Tuesday, June 14, 2022, at a hearing to examine short- and long-term solutions to extreme drought in the western U.S. Other panel witnesses included: Southern Nevada Water Authority's General Manager John Entsminger; Pat O'Toole of the Family Farm Alliance; Charlie Stern of the Congressional Research Service; and Maurice Hall of the Environmental Defense Fund. Six of the seven Basin states have Senators who are members of the Committee. The overarching message is that immediate action is required, and Reclamation is looking to develop a consensus-based plan with the states by mid-August. As soon as the testimony is available on the Committee's website, Board staff will ensure that copies are distributed.

Finally, Dr. James Prairie, of Reclamation's Upper Colorado Basin Region, is providing an in-depth modeling presentation at the Getches-Wilkinson Symposium on June 16-17, 2022, in Boulder, Colorado. The purpose of this presentation is to highlight the continued, and increasing, risks to protection of critical elevations in both Lakes Powell and Mead associated with the continuing drought and the impacts of climate change on precipitation and water supply. Board staff will also distribute this presentation as soon as it becomes available.

## Colorado River Basin Salinity Control Program Implementation

## Colorado River Basin Salinity Control Forum and Work Group Meetings

The Salinity Control Forum and Work Group held scheduled hybrid in-person/virtual meetings on May 9-12, with in-person participation in Moab, Utah. The Salinity Control Advisory Council Meeting was postponed to July 7, 2022. In addition to the working meetings, the week included tours of the Paradox Valley Unit salinity control project located in Montrose County, Colorado, Atlas uranium tailings removal project located outside of Moab, and the Intrepid Potash facilities located outside of Moab. Key topics under discussion during the working meetings included updates from Reclamation, the U.S. Geological Survey, and Natural Resources Conservation Service on program funding, research, and implementation. The Forum and Work Group also discussed salinity control scenarios and data to be used to develop the 2023 Triennial Review of Water Quality Standards for Salinity in the Colorado River System. Section 303 of the Clean Water Act amendments to the Federal Water Pollution Control Act require that water quality standards are reviewed every three years by the Forum.

## Paradox Valley Unit

Forum and Work Group members toured the PVU facilities on Tuesday May 10<sup>th</sup>, which included stops at the surface treatment facilities and collection wells, brine injection well facilities, and Dolores River monitoring facilities. During the meetings Reclamation announced the approval of a test injection plan to restart brine injection at the PVU facility beginning on June 1, 2022. 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. Under the test injection plan, PVU will restart injection of brine at a rate of 115 gallons per minute, equivalent to approximately 5500 tons of salt



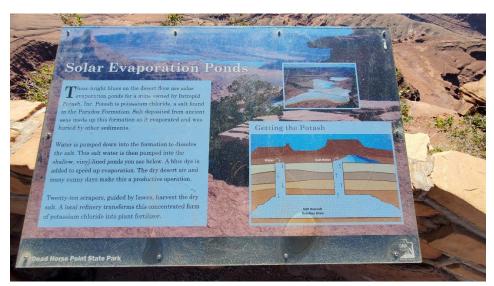
Water Quality Monitoring Location for Dolores River

control per month (about 66% of the most recent injection capacity) and will operate for at least 6 months provided no new significant seismic activity is observed.

During the meeting, the Forum expressed its interest in pursuing a long-term replacement for salinity control operations in Paradox Valley. This will require rethinking concepts that were developed and rejected by Reclamation in the December 2020 Final Environmental Impact Statement (FEIS), particularly those alternatives that included development of an onsite landfill. One such option could be to partner with a private entity that could use the salt generated at Paradox for commercial purposes. The Forum toured one such entity, Intrepid Potash, on Wednesday, as described below.

## Intrepid Potash Facilities

On Wednesday May 11<sup>th</sup>, Forum and Work Group members toured the Intrepid Potash facilities. Intrepid Potash operates a mining and solar evaporation pond facility outside of Moab, Utah. Potash and salt are supplied through underground solution mining of the Paradox Formation and are used to generate commercial products including agricultural fertilizers, animal feed ingredients, and various salt products. For the Moab operations, Colorado River water is pumped into the mine and dissolves the potash, after which the brine solution is pumped to evaporation ponds and dried. Intrepid Potash has expressed some interest in harvesting salt generated at PVU.



Intrepid Potash Solution Mining and Solar Evaporation



Salt harvesting scraper at Intrepid Potash



Solar evaporation ponds at Intrepid Potash



Solar evaporation pond at Intrepid Potash

## Atlas Uranium Tailings Removal

Forum and Work Group members received an update on the Atlas Uranium Mill Tailings clean-up project from Department of Energy staff. Known officially as the Moab Uranium Mill Tailings Remedial Action (UMTRA), the project to date has removed more than 12.4 million tons of tailings from 130 acres adjacent to the Colorado River. Seventy-eight percent of the mill tailings have been removed from the site and transported by rail to an engineered waste disposal site located near Crescent Junction, Utah. The clean-up also includes remediation of groundwater at the mill site. The project is estimated to be completed in the 2030s.



Moab Uranium Mill Tailings Remedial Action Project

#### 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 May 16.

The AMWG received a report on the risk of non-native species establishment below Glen Canyon Dam. Smallmouth bass are a greater risk to native fish and rainbow trout than any other non-native fish currently identified in the system. Reservoir conditions are changing to support increased entrainment and establishment of smallmouth bass below Glen Canyon Dam. Research indicates that once smallmouth bass are established, eradicating or controlling the population will be difficult and expensive, with limited likelihood of success. At the direction of Wayne Pullan, the Secretary's Designee for the GCDAMP, the Technical Work Group (TWG) will be

evaluating options to prevent the establishment of smallmouth bass and tools to control their population if necessary. The TWG will report to the AMWG at its August meeting.

A 2022 macroinvertebrate flow experiment ("bug flows") is being implemented and is authorized to continue through August. Reclamation made the determination to implement bug flows after significant stakeholder discussion about the outcomes of previous bug flows (summer 2018-2020) and the potential challenges and impacts of conducing the flows during a summer with unusually low flows. The experimental planning team has been meeting bimonthly to assess the conditions in Glen and Grand Canyons and can terminate the experiment early if significant negative impacts are detected.

The Western Area Power Administration provided a report on the status of the Basin Fund. In FY-2023 the GCDAMP environmental programs will be funded through the federal budget.

Finally, the Technical Work Group (TWG) is scheduled to hold a virtual meeting on June 15-16 and the AMWG is scheduled to hold a virtual meeting on August 17-18.

## <u>Lower Colorado River Multi-Species Conservation Program</u>

The Lower Colorado River Multi-Species Conservation Program (LCR MSCP) held a Work Group meeting on May 11–12. The meeting focused on a review the Draft Implementation Report, Fiscal Year 2023 Work Plan and Budget, Fiscal Year 2021 Accomplishment Report. Bureau of Reclamation staff provided updates on conservation area development and management, the wildlife program, adaptive management, the fisheries program, and program administration and budgeting.

The program made much progress during FY-2021 while continuing to operate safely during the COVID-19 pandemic. 152 acres of cottonwood-willow habit and 145 acres of honey mesquite habitat were established in FY-2021. The LCR MSCP has created or restored a total of 6,840 acres of habitat over the life of the program (table below).

Land Cover Type	Required Habitat (acres)	Established Habitat (acres)
Cottonwood-Willow	5,940	4,274
Honey Mesquite	1,320	2,046
Marsh	512	362
Backwater	360	158
Total	8,132	6,840

As of the end of FY-2021, 385,083 native fishes have been stocked through LCR MSCP efforts, including 259,112 razorback suckers and 125,971 bonytail. The goal of the LCR MSCP Fish Augmentation Program is to provide the effort to stock 660,000 subadult razorback suckers and 620,000 subadult bonytail for reintroduction into the Lower Colorado River. This rate of stocking is expected to meet augmentation program goals. In addition, 150,323 razorback suckers have been stocked in Lake Mohave towards the goal of maintaining a population of 50,000 adult razorback suckers as a genetic refuge.

Monitoring for covered species continued in FY-2021. The oldest known summer tanager, initially captured in 2011, was captured and released in Beal Lake Conservation Area. Migratory southwestern willow flycatchers were detected at all eight monitored conservation areas; however, no breeding southwestern willow flycatchers were detected. Yellow-billed cuckoos are regularly detected at numerous conservation areas, and three yellow-billed cuckoos banded in previous years were positively resighted at the same conservation areas where they were originally banded.

The next meeting of the LCR MSCP Steering Committee will be held virtually on June 22.

#### **GENERAL ANNOUNCEMENTS AND UPDATES**

<u>The California Department of Water Resources welcomes New Director of the National Weather</u>
<u>Service and urges the National Weather Service to improve S2S efforts</u>

On June 9<sup>th</sup>, the California Department of Water Resources issued a congratulatory welcome letter to Mr. Ken Graham for his appointment as the new Director of the National Weather Service (Service). While the letter expressed the need for continued collaboration, it also communicated the severity of the drought in California and the Colorado River Basin and urged the Service to collaborate with the National Oceanic and Atmospheric Administration's (NOAA's) Office of Atmospheric Research (OAR) to improve sub-seasonal to seasonal (S2S) precipitation forecasts, including collaborating on a pilot project for the western U.S. to improve winter precipitation forecasts to support water management.

DWR has funded S2S forecast improvements for the OAR's Earth System Research Laboratory and the Service's Climate Prediction Center (CPC) to supports its drought work, but it needs further support from NOAA to improve global dynamical weather models, which are key to improving forecasting. A copy of the letter will be included as a handout at the June meeting.

## Washington, D.C. Report

## House Natural Resources Committee Legislative Hearing

On May 12<sup>th</sup>, the House Natural Resources Committee Subcommittee on Water, Oceans, and Wildlife held a legislative hearing on several water bills including Congressman Levin's bill, H.R. 7612 The Desalination Research Advancement Act. The Bureau of Reclamation testified at the hearing, stating that the agency "supports the goal of advancing desalination research and is willing to work with the sponsor and Subcommittee to make any technical changes that might be required." The San Diego County Water Authority also testified in support of the legislation.

# Senate Energy and Natural Resources Committee Legislative Hearing

On May 25<sup>th</sup>, the Senate Energy and Natural Resources Subcommittee on Water and Power held a legislative hearing on western water bills. Camille Touton, the Commissioner of the Bureau of Reclamation, testified on behalf of the Administration.

Senator Feinstein's STREAM Act was one of the bills included in the hearing. The Bureau of Reclamation walked a fine line of supporting the intent of the bill but conveying concerns with the way that the bill is drafted, stating "the Department would like to continue working with the sponsor and the Committee on technical assistance to ensure that authorities within this bill are implementable, effective, can be integrated with existing laws recently passed, and would achieve intended goals."

## Other bills in the hearing include:

S.4232, To address the recovery of certain costs with respect to certain Reclamation facilities in the Colorado River Basin, and for other purposes (Sen. Kelly) — prohibits the Bureau of Reclamation from allocating operations and maintenance costs to any preference hydropower contractors in the Colorado River Basin during the period in which an applicable hydropower facility is not able to generate electricity because of drought. It also prohibits the collection of construction costs from preference hydropower contractors if no power is produced for a period of 180 days. It authorizes funding from the Treasury to cover the costs of O&M and construction in the event that this prohibition is applied.

During the hearing, Commissioner Touton testified that the Department of the Interior supports the goal of the bill but the current drafting "could introduce unintended complexities into the hydropower program." She indicated that Interior is happy to work on edits to the legislation.

S. 2693, Salton Sea Projects Improvements Act (Sen. Padilla) — authorizes the Bureau of Reclamation to partner on projects to improve air quality, fish and wildlife habitat, recreational

opportunities, and water quality in the Salton Sea area and authorizes \$250 million to do so, which would be an increase from the current \$10 million authorization.

Commissioner Touton testified that the Department of the Interior supports this bill.

S. 2334, Large Scale Water Recycling Project and Drought Resiliency Improvement Act (Sen. Cortez Masto) – Authorizes a competitive grant program within the Department of the Interior for large-scale water recycling projects and authorizes \$750 million for the program through Fiscal Year 2027. This bill could help fund the large-scale regional recycling project that Metropolitan and the Southern Nevada Water Authority are currently planning.

Commissioner Touton noted that the legislation was introduced prior to passage of the Infrastructure Investment and Jobs Act (IIJA) which directed the Secretary of the Interior to develop and implement a Large-Scale Water Recycling Program (IIJA also provided funding). Commissioner Touton noted that the program is currently in the process of implemented.

## Senate Energy and Natural Resources Committee Oversight Hearing

On June 14th, the Senate Energy and Natural Resources Committee with hold a full committee hearing to examine short- and long-term solutions to extreme drought in the western U.S. Opening Remarks will be presented by Chairman Joe Manchin and Ranking Member John Barrasso. Witnesses include Commissioner Camille Touton, John Entsminger, Maurice Hall, Patrick O'Toole, and Charlie Stern from the Congressional Research Service.

## Senate Agriculture, Nutrition, and Forestry Committee Legislative Hearing

On June 7th, the Senate Agriculture, Nutrition, and Forest Subcommittee on Conservation, Climate, Forestry, and Natural Resources held a legislative hearing on "The Western Water Crisis: Confronting Persistent Drought and Building Resilience on our Forests and Farmland." Witnesses included Andy Mueller, Earl Lewis, Courtney Schultz, Tom Willis, and Ellen Herbert.

## New Legislation

On May 19<sup>th</sup>, Senator Padilla, along with Congressman McNerney, introduced bicameral legislation called the *Water Efficiency, Conservation, and Sustainability Act of 2022.* 

The bill has three main components, including:

- 1. Water Efficiency and Conservation Grant Program
  - a. Authorizes \$25 million per year for grants to entities that carry out water efficiency programs for purchase, installation, or use of efficient fixtures, appliances, and landscaping.

b. 50% of funding must go to drought-stricken areas and 40% of funds must go towards disadvantaged communities

## 2. Sustainable Water Loss Control Program

- a. Creates a grant program authorized at \$20 million per year for grants and technical assistance to public water systems to conduct an annual audit and establish a water loss control program this is already required in California.
- 3. Grants for Water Efficient Plumbing Code Adoption
  - a. Creates a grant program authorized at \$20 million per year to help local governments adopt plumbing codes that meet or exceed water use efficiency standards.

The bill has garnered support from NGOs and water users as shown by the joint press release that included supportive quotes from groups like NRDC and Metropolitan.

### Waters of the United States (WOTUS)

The U.S. Environmental Protection Agency (EPA) is in the process of reinstituting a definition of protected waters that existed prior to a series of rulemakings beginning in the Obama administration. The EPA's advisors published a draft report evaluating technical documents and noted that the agency is justified in using groundwater connections to determine whether the water bodies qualify for Clean Water Act protections and could more deeply examine the role that groundwater plays in connecting streams and wetlands.

However, any agency action could be altered by another case that the nation's high court will hear later this year: Sackett v. EPA, which focuses on the legal definition of wetlands.

## California's Hydropower Forecast

Energy Information Administration forecasters expected California's hydropower share for June through September 2022 in the drought scenario would be 8% of California's total electricity generation, compared to 15% under normal water conditions. Due to drought and low reservoirs, expected hydropower output is 48% lower than under normal conditions.

#### Water Resources Development Act (WRDA)

The Senate Environment and Public Works Committee (EPW), along with the House Transportation and Infrastructure Committee (T&I), have both marked up their respective versions of WRDA 2022.

In the T&I bill section 223 authorizes a comprehensive study at Corps owned, operated, or managed reservoirs in arid Western states to evaluate opportunities to improve water management, supply, and preparedness for changes in hydrological conditions. The EPW bill

gives the Corps authorities to carry out projects to support watershed conservation efforts or otherwise respond to drought conditions – an authority that they did not previously have.

## Department of the Interior

Last week, the Biden-Harris Administration released the Drought Resilience Interagency Working Group's (IWG) Summary Report outlining the actions taken to date to improve drought-stricken communities' longer-term resilience to drought through financial and technical assistance. Summarized in the press release, key actions since the Drought Resilience IWG creation include:

- In fiscal year 2021, the Bureau of Reclamation and USDA coordinated drought relief efforts in some of the most drought-stricken areas in the West. This included a collective investment of \$38 million (\$23 million from Reclamation and \$15 million from USDA) in the Klamath Basin to help farmers and Tribes.
- In January 2022, Secretaries Haaland and Vilsack, National Climate Advisor Gina McCarthy
  and Federal Emergency Management Administration Administrator Deanne Criswell met
  with the Western Governors' Association and signed a Memorandum of Understanding
  to launch a Task Force as a forum for federal, state, and territorial representatives for the
  collaborative response to land, water, and wildlife challenges facing western landscapes
  and people.
- The Interior Department, USDA, and the National Oceanic Atmospheric Administration actively participated in listening sessions, drought webinars, and roundtables to disseminate important drought information, discuss the current crisis, and explain the investments in water and drought resilience that will be made possible from the BIL. These efforts will continue throughout 2022.
- FEMA assembled with stakeholders, decision makers, and drought experts to exchange information regarding federal drought response and innovative ideas to build long-term drought resiliency.
- In the Upper Colorado Basin, a federal advisory committee, the Adaptive Management Work Group (AMWG), continues to address key issues associated with the operation of Glen Canyon Dam, pursuant to the Grand Canyon Protection Act. The AMWG consists of the Hualapai Tribe, the Hopi Tribe, the Navajo Nation, the Pueblo of Zuni, the Southern Paiute Consortium, the San Juan Southern Paiute Tribe, the Interior Department, the Bureau of Indian Affairs, the National Park Service, USFWS, the seven basin states (Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming), environmental interests, the recreational industry, federal power purchase contractors, Arizona Game and Fish Department, and the Western Area Power Administration.
- The USDA Climate Hubs continue to focus on drought and are working closely with regional partners including <u>NOAA's National Integrated Drought Information System</u> and

their <u>Drought Early Warning System</u>, the <u>National Drought Mitigation Center</u>, and the <u>National Weather Service</u> through the <u>Community Collaborative Rain</u>, <u>Snow and Hail Network</u>.

In addition to the Drought Resilience IWG, the Biden- Harris Administration revitalized the collaboration of the National Drought Resilience Partnership (NDRP). The NDRP, formed in 2013, leverages multiple federal agencies, including developing innovative science-driven actions to address water supply challenges.

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