



2022 ANNUAL REPORT AND MEMBERSHIP DIRECTORY



COLORADO RIVER BASIN

BACKGROUND

The Colorado River Water Users Association (CRWUA) is a nonprofit, nonpartisan organization providing a forum for exchanging ideas and perspectives on Colorado River use and management with the intent of developing and advocating common objectives, initiatives and solutions.

MISSION & RESOLUTIONS

CRWUA is an organization made up of nearly 1,000 members from throughout the upper (Colorado, New Mexico, Utah and Wyoming) and lower (Arizona, California and Nevada) basins and serves as an annual forum for openly discussing important issues on the river. The cooperative efforts that emerge from these meetings reflect the successful history of CRWUA members working together to create solutions for Colorado River challenges. CRWUA annually updates and adopts a comprehensive set of resolutions addressing the major issues affecting the sharing, use and further development of the Colorado River Basin's water supply. Resolutions can be viewed at [CRWUA.org](https://www.crwua.org).



OASIS RESERVOIR

PRESIDENT'S MESSAGE

2022 is the year of conversation, and the talk is centered on what is happening to and around the Colorado River. New Mexico's participation in the Colorado River story takes us to the 24th day of November 1922, the signing of the Colorado River Compact at Bishops Lodge in Santa Fe, New Mexico. This act divides the water of the "Mighty Colorado" between the Upper and Lower Colorado River Basins, and establishes the cornerstone of the "Law of the River." This compact is a part of the Colorado River story that has brought within its writings a reflection of past thoughts and actions, and a continual review of its reasonings for the past 100 years. We acknowledge the efforts of those who gathered during their time in history, I also recognize that we are in the here and now, with present talents to meet the challenges that lay before us.

The impacts of the Colorado River Basin's 22-year drought pattern range from extremely severe drought to megadrought and have been labeled as the most extreme megadrought in the last 1,200 years. We've experienced how ongoing drought conditions have brought about environmental and lifestyle changes. Our common goal as stewards of the Colorado River is to protect and preserve what we are given.

We are fortunate to have in our reach dedicated individuals with diverse talents and resources that will be drawn upon to develop Upper and Lower Basin strategies for Water Conservation Measures, and Drought Resilience Projects to improve and protect the Colorado River System. The Colorado River is a force all to itself "so everything will live where the river goes."

I hope you will be inspired by what you will glean as you participate in the 2022 Colorado River Water Users Annual Conference. I share with you that this is not a coincidence, we are here for a reason. We are the Colorado River Water Users Association and the voice in the Colorado River Conversation.



AARON CHAVEZ

New Mexico,
CRWUA President

PROFIT & LOSS

APRIL 2021 THROUGH MARCH 2022
ORDINARY INCOME/EXPENSE

INCOME

Interest Income	\$9,740.95
Program Income	
Conference Registrations	437,872.00
Exhibits - Conference	21,000.00
Membership Dues	27,930.00
Sponsorship	20,290.00
Total Program Income	507,092.00

TOTAL INCOME **\$516,832.95**

EXPENSE

Contract Services	
Admin Fees	22,621.01
Total Contract Services	22,621.01

Travel and Meetings	
Conference, Convention, Meeting	446,266.20
Exhibits Committee	14,504.00
Program Committee	14,809.23
Public Affairs Committee	6,544.70
Spouses Program Committee	381.99
Total Travel and Meetings	482,506.12

TOTAL EXPENSE **\$505,127.13**

NET INCOME **\$11,705.82**

BALANCE SHEET

AS OF MARCH 31, 2022

ASSETS

Current Assets	
Checking/Savings	\$447,036.34
US BANK	
Total Checking/Savings	447,036.34

TOTAL CURRENT ASSETS **\$447,036.34**

Other Assets	
Trona Valley FCU CD	358,917.75
Total Other Assets	358,917.75

TOTAL ASSETS **\$805,954.09**

LIABILITIES & EQUITY

Equity	
Opening Balance Equity	448,383.61
Unrestricted Net Assets	345,864.66
Net Income	11,705.82

TOTAL EQUITY **805,954.09**

TOTAL LIABILITIES & EQUITY **\$805,954.09**

SUMMARY OF ASSETS AND ASSET CHANGES

APRIL 2021 THROUGH MARCH 2022

US Bank Checking Account (Includes interest of \$38.03)	\$447,036.34
Trona Valley Community FCU CD (Includes interest of \$9,702.92)	\$358,917.75

TOTAL ASSETS AS OF 3/31/22 **\$805,954.09**

OFFICERS & TRUSTEES

OFFICERS

President

Aaron Chavez

Vice President

Gene Shawcroft

Secretary-Treasurer

Jacqueline Allcorn

Assistant Secretary-Treasurer

Mitch Bishop

TRUSTEES

Arizona

Tom Buschatzke
Ted Cooke
Elston Grubaugh

California

Bart Fisher
Glen Peterson
John Powell

Colorado

Jim Broderick
Stanley Cazier
Steve Wolff

Nevada

Priscilla Howell
Sara Price
Greg Walch

New Mexico

Aaron Chavez
Doug Echols
Keith Lee

Utah

William Merkley
Zach Renstrom
Gene Shawcroft

Wyoming

Keith Burrton
Al Harris
Bryan Seppie

Ten Tribes Partnership

Crystal Tulley-Cordova
Rosa Long
Daryl Vigil

Immediate Past President

John Entsminger



COMMITTEES

Audit

**Glen Peterson,
California, Chair**

Andy Belanger, Nevada
Keith Lee, New Mexico
Richard Mathey, Wyoming

Budget

**Al Harris,
Wyoming, Chair**

Jim Broderick, Colorado
Jay Burnham, New Mexico
Benjamin Cowboy,
Ten Tribes Partnership
Leslie Meyers, Arizona
John Powell, California

Exhibits

**Greg Gould,
Nevada, Chair**

Kevin Bergschneider, Colorado
Mark Davidson, Wyoming
Douglas Mason, Arizona
Nelson Ross, Arizona

Housing and Arrangements

**Andy Belanger,
Nevada, Chair**

Aaron Chavez, New Mexico

Membership

**Jim Broderick,
Colorado, Chair**

Jacqueline Allcorn,
New Mexico
Keith Burrton, Wyoming
Irene Cuch, Ten Tribes
Partnership

Nominations

**Leslie Meyers,
Arizona, Chair**

Andy Belanger, Nevada
Charles Blassingame,
New Mexico
Stanley Cazier, Colorado
Alan Harris, Wyoming

Program

**Bart Leeflang,
Utah, Chair**

Mitch Basefsky, Arizona
Amy Best, Nevada
Doug Bonamici, Ten Tribes
Partnership
Jim Broderick, Colorado
Jordan Bunker, Nevada
Keith Burrton, Wyoming
Aaron Chavez, New Mexico
Doug Echols, New Mexico
Bart Fisher, California
Taylor Hawes, Colorado
Jeanine Jones, California
Edalin Koziol, Colorado
Jessica Rodriguez, Arizona
Jack Scott, New Mexico
Crystal Tulley-Cordova, Ten
Tribes Partnership

Public Affairs

**Crystal Thompson,
Arizona, Chair**

Michelle Helms, Bureau of
Reclamation
Teresa Brevik, New Mexico
Becki Bryant, Bureau of
Reclamation
Bruce Hallin, Arizona
Scott Huntley, Nevada
Robert Kirk, Ten Tribes
Partnership
Bob Muir, California
Karry Rathje, Utah
Bryan Seppie, Wyoming
Jeff Stahla, Colorado

Resolutions

**Wade Noble,
Arizona, Chair**

Steven Anderson, Nevada
Joanne Curry, Ten Tribes
Partnership
Morgan Drake, Utah
Sandra Fabritz, Arizona
Charlie Ferrantelli, Wyoming
Jeff Gray, Arizona
Gary Hathorn, New Mexico
Tom Maher, Nevada
Lee Miller, Colorado
Peggy Montano, Colorado
John Morris, California
Cindy Murray, New Mexico
Bridget Schwartz-Manock,
Arizona
Jessica Newland, Arizona
Meghan Scott, Arizona
Bruce Whitehead, Colorado



RECLAMATION

COLORADO RIVER

In 2022, Reclamation celebrated its 120th Birthday (July) and the 100th commemoration of the signing of the Colorado River Compact (November). As we recognize these foundational milestones, we look to continue working together with our partners to protect the Colorado River system for future generations.

Both Lake Powell and Lake Mead – the two largest reservoirs in the United States and the largest storage units in the Colorado River system – are at their lowest levels since initial filling and ended the 2022 water year (Sept. 30, 2022) with a combined storage of roughly 25% of total capacity, down from 39% at the same time in 2021.

2023 OPERATIONS

Consistent with the 2007 Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead (2007 Interim Guidelines), Reclamation’s August 2022 24-Month Study set the operational parameters for Lake Powell and Lake Mead for 2023.

Lake Powell is operating in the Lower Elevation Balancing Tier in water year 2023 (Oct. 1, 2022, through Sept. 30, 2023). The August study projected Lake Powell’s Jan. 1, 2023, water surface elevation to be 3,521.84 feet – 178 feet below full pool (3,700 feet) and 32 feet above minimum power pool (3,490 feet).

Lake Mead will operate in its first-ever Level 2a Shortage Condition in calendar year 2023 (Jan. 1, 2023, through Dec. 31, 2023). The August 24-Month Study projected Lake Mead’s Jan. 1, 2023, operating determination elevation to be 1,047.61 feet, with required shortage reductions and water savings contributions for Arizona, Nevada and Mexico in the amounts of 592,000 acre-feet, 25,000 acre-feet, and 104,000 acre-feet, respectively.

In October, Reclamation published a Notice of Intent (NOI), initiating efforts to revise Glen Canyon and Hoover dam operations in 2023 and 2024 in order to address the potential for continued low-runoff conditions in the Colorado River Basin.





GLEN CANYON DAM SPILLWAY, 2007 (left) and 2021 (right)

DROUGHT RESPONSE OPERATIONS

In May 2022, two separate drought response operations to protect Lake Powell were implemented.

Under a Drought Contingency Plan adopted in 2019, an additional 500,000 acre-feet of water will come from Flaming Gorge Reservoir to Lake Powell (from May 2022 – April 2023). Also in 2022, for the first time in history, the annual release from Glen Canyon Dam was reduced from 7.48 MAF to 7.0 MAF Combined, these actions will add approximately 1 MAF of storage to Lake Powell, which is equivalent to approximately 16 feet in elevation.

Reclamation, the Upper Colorado River Commission, Upper Division States, and Upper Basin Tribes are developing a drought response operations plan for the 2023 DROA year (May 1, 2023 – April 30, 2024), which could result in additional releases from Upper Basin reservoirs to help enhance Lake Powell’s water surface elevation.

LOWER BASIN “500 PLUS” PLAN

On December 15, 2021, water users from the lower division states signed a memorandum of understanding known as the 500 Plus Plan. The plan targets an additional 1 MAF of conservation in 2022 and 2023, in addition to the requirements in the 2007 Interim Guidelines and Lower Basin DCP.

As of October 2022, agreements have been signed to conserve nearly 500,000 acre-feet of water through 2023.

LOWER COLORADO RIVER BASIN SYSTEM CONSERVATION AND EFFICIENCY PROGRAM

Additional conservation will come from this newly created program, which is funded with an initial allocation through the Inflation Reduction Act and managed through Reclamation. Projects will be selected for funding by Colorado River water delivery contract or entitlement holders that mitigate drought, protect important natural resources, and ensure a reliable source of water and power for those who live in communities across the West.

PROTECTION VOLUME ANALYSIS

Reclamation’s 2022 Protection Volume Analysis detailed that, depending on future snowpack and runoff, a range of actions will be needed to stabilize elevations at Lake Powell and Lake Mead over the next four years (2023-2026). The analysis showed, depending on Lake Powell’s inflow, that the additional water or conservation needed ranges from 600,000 acre-feet to 4.2 MAF annually, and this additional conservation would need to start in 2023.

In summer 2022, Reclamation called on the seven Colorado River Basin states of Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming to take action to conserve between 2 and 4 MAF of additional water in 2023.



LAKE POWELL WAHWEAP MARINA, 2008 (left) and 2021 (right)

POST-2026 OPERATIONS

The 2007 Interim Guidelines, Drought Contingency Plans and Minute 323 expire in 2026 and their successors will need to be developed before that time.

A pre-scoping Request for Input resulted in more than 2,000 submittals. The comments received provide a strong foundation for developing the post-2026 operations with the beginning of the formal scoping process anticipated to begin in early 2023 with a Notice of Intent to Prepare an Environmental Impact Statement in the Federal Register.

FUNDING RESOURCES

The Colorado River Basin is facing unprecedented risks, but the Department and Reclamation are addressing conditions in the Basin with unprecedented investments.

The Bipartisan Infrastructure Law (BIL) includes an \$8.3 billion investment in Reclamation's programs over the next five years. This funding will be used to repair aging water delivery systems, secure dams, complete rural water projects, and protect aquatic ecosystems.

In addition to BIL funding, the Inflation Reduction Act includes \$4 billion specifically for water management and conservation efforts in the Colorado River Basin and other areas experiencing similar levels of drought.

Additionally, Reclamation's WaterSMART Program continues to invest in water management throughout the Western United States. The major

investment in 2022 was for water reclamation and reuse projects where it invested \$310.8 million for 25 projects. These projects are expected to save about 213,000 acre-feet of water a year.

HYDROPOWER

Reclamation owns and operates 12 hydropower plants in the Colorado River Basin.

Western Area Power Administration (WAPA) markets hydropower from eight of those powerplants, including Hoover, Parker, Davis, the Aspinall units (Crystal, Blue Mesa and Morrow Point), Flaming Gorge and Glen Canyon. Prior to the ongoing drought, generating capacity at the eight powerplants averaged about 4,150 megawatts, and they had generated an average of about 10.4 billion kilowatt-hours of hydropower each year. Since the beginning of the drought (2000), total Basin hydropower generation has been reduced by about 24%.

About 200 wholesale utilities and other entities receive power from WAPA under long-term contracts, mostly in rural and underserved communities. The hydropower from the Colorado River Basin supports the energy needs of more than 13 million customers in seven states.

Revenue from the sale of hydropower repays the costs of operations and maintenance of the powerplants, dams, transmission infrastructure, and other program obligations including non-power programs such as salinity control, endangered species recovery and adaptive management.

ENVIRONMENTAL PROGRAMS

Reclamation is committed to the environmental protection of the Colorado River Basin.

The Upper Colorado and San Juan Recovery Programs have built, operated and maintained many fish passages, fish screens and fish-entrainment barriers and have stocked millions of razorback suckers, Colorado pikeminnow and bonytails to help reestablish populations. Reclamation and the Upper Basin Recovery Programs work together to ensure spring flows connect with floodplain wetlands to enhance entrainment of razorback sucker larvae into these productive rearing habitats, including flow and on-the-ground floodplain wetland management. This summer's Macroinvertebrate Production Flow, or Bug Flow, conducted at Glen Canyon Dam under the Long-Term Experimental and Management Plan concluded a four-year research and data set. The experiment is designed to improve egg-laying conditions for aquatic insects that are the primary food source for fish in the Colorado River.

Lake Powell's elevation dropped to historically low levels in March and April 2022, adversely impacting federally listed and native populations of fish below Glen Canyon Dam. Smallmouth bass and warmwater invasive fish live in the warm upper water layer of the reservoir. As that warmer water reaches the dam's water intakes, these nonnative predatory fish are more likely to pass through the dam alive, threatening the native fish in the Colorado River below the dam. Smallmouth bass were detected throughout the Lees Ferry stretch of the Colorado River below Glen Canyon Dam in summer 2022.

Supplemental water deliveries from Flaming Gorge to Lake Powell provided an opportunity for Reclamation, through coordination with the Flaming Gorge Technical Working Group, to benefit listed fishes and maximize power generation at the Flaming Gorge Powerplant, while meeting obligations of the Upper Colorado Basin's Drought Contingency Plan. With the extra



water being released, the U.S. Fish and Wildlife Service requested to conduct three approved experiments that have previously benefitted listed fish: a larval trigger study plan for razorback sucker, a smallmouth bass flow spike and an elevated summer and fall base flows for Colorado pikeminnow.

In 2022, the Lower Colorado River Multi-Species Conservation Program added 208 acres of new riparian habitat, bringing the total area managed for native species to about 7,048 acres since the program began in 2005. This year, more than 20,000 native fishes were raised and stocked below Davis Dam, bringing the totals to about 273,000 razorback suckers and 129,000 bonytail stocked in those river reaches since the program began. Experts believe that actions taken under the program benefit other species in the Colorado River Basin and may prevent them from becoming endangered.



These actions also keep Reclamation operations in compliance with environmental regulations.

Under the BIL for endangered species recovery and conservation in the Colorado River Basin, \$8.45 million will modify the current water intake system at the Lake Mead State Fish Hatchery and help reduce the impacts to the environment and endangered fish species that are caused by operation, maintenance and rehabilitation of water diversion facilities.

COLORADO RIVER WATER QUALITY

To address Colorado River salinity, a funding opportunity announcement will be posted fiscal year 2023 with an estimated \$40 million to be awarded for new projects to reduce salinity. Water quality sampling and analyses in the LCBR

continued with long-term monitoring of biological and water quality conditions. Reclamation collaborated with Southern Nevada Water Authority and others to make data available for water quality management decisions, studies and modeling.

On June 1, 2022, the Paradox Valley Unit temporarily resumed limited operations to gather additional data to help guide future operational decisions. During the operational six-month test, extracted brine groundwater was injected into the 16,000-foot-deep well at a reduced rate of 115 gallons per minute (67% of past operations). Injection operations were initially suspended March 4, 2019, immediately after a 4.5 magnitude earthquake (the largest to date). A seismic hazard analysis and risk analysis are underway and expected to be complete in 2023.

Additionally, lower reservoir levels at Lake Powell contributed to dangerously low dissolved oxygen levels below Glen Canyon Dam, causing concern for the health of the trout fishery located near Lees Ferry. Reclamation works with the U.S. Geological Survey to closely monitor water quality conditions and is working with partners and stakeholders to better understand potential effects of low dissolved oxygen. Fish native to the Colorado River, such as humpback chub and razorback sucker, are generally located farther downstream where low dissolved oxygen levels are remedied by riffles and runs, which aerate the water.

CONTINUED COLLABORATION

The Department of the Interior and Reclamation are committed to addressing the challenges of climate change in the Colorado River Basin by utilizing science-based, innovative strategies and working cooperatively with the Basin States, Tribes, other federal agencies, and with the diverse communities that rely on the Colorado River.



ARIZONA

SALT GILA PUMPING PLANT

Arizona began 2022 in the first-ever declared Tier 1 shortage for Colorado River

operations. This resulted in a substantial cut to Arizona's share of the Colorado River – about 30% of Central Arizona Project's (CAP's) normal supply; nearly 18% of Arizona's total Colorado River supply; and less than 8% of Arizona's total water use.

Nearly all the reductions within Arizona have been taken by CAP water users. These reductions are implemented pursuant to the CAP priority system – the result being less available Colorado River water for central Arizona agricultural users. The rapidly deteriorating conditions on the Colorado River have made this an eventful year with the announcement regarding risks to infrastructure at Glen Canyon Dam.

This year, Glen Canyon Dam is releasing about 500,000 acre-feet less than was anticipated to Lake Mead. The Lower Basin will still have the ability to recover this water, but it is being left in Lake Powell to protect the ability to move water past Glen Canyon Dam.



CENTRAL ARIZONA CANAL

In June, Bureau Commissioner Touton gave Senate testimony regarding the fact that an additional 2 – 4 MAF – in addition to 2007 Guidelines and DCP reductions – would be necessary to protect the system. The Arizona Department of Water Resources (ADWR) and CAP were prepared to take additional reductions, but thus far this additional volume has not been realized. Arizona has demonstrated its commitment by leaving 800,000 acre-feet in Lake Mead during 2022, which includes contributions made under the 500 Plus Plan announced during last year’s Colorado River Water Users Association conference. Since 2014, it has left more than 2.5 MAF, equating to approximately 37 feet of increased elevation in Lake Mead.

The U.S. Secretary of the Interior announced in August, that the Lower Colorado River Basin would be operating in a Tier 2a shortage for 2023. This was based on the effective Lake Mead elevation on Jan. 1, 2023, of 1047.61 due to operational neutrality. The actual projected level of Lake Mead is projected at 1040.78.

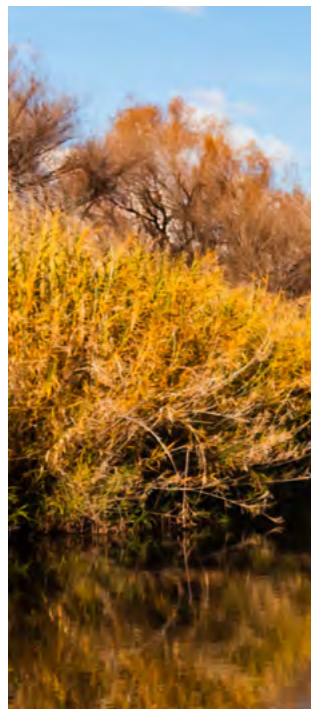
The Tier 2a shortage will result in an additional 80,000 acre-foot reduction over a Tier 1 shortage reduction for Arizona – for a total of 592,000 acre-feet – which represents 34% of CAP’s normal supply, 21% of Arizona’s Colorado River supply and about 9% of Arizona’s total water use. Joint ADWR/CAP communications efforts, similar to those employed with the Tier 1 reduction, are ongoing.

Representatives from the ADWR and CAP have fielded media calls from local, regional, national – and even international – media outlets. Communications efforts regarding shortage have included a fact sheet, FAQ, stakeholder briefings, infographics and community presentations.



As we look toward the 2007 Guidelines expiring in 2026, ADWR and CAP have been meeting with the Arizona Reconsultation Committee (ARC) with members representing Arizona’s diverse water interests, including elected leaders, tribes, cities, farms, industry and environmental groups. The ARC’s purpose is to provide input to Arizona’s negotiating team on the reconsultation of these guidelines using hydrologic information provided and vetted by a subcommittee referred to as the Modeling & Analysis Work Group.

No one individual state, sector, or water provider can protect the Colorado River system. Collaboration has been a hallmark in Arizona and across the Basin. Now, more than ever before, it will be essential to work together as we take action to address the effects of drought and climate change throughout the Colorado River Basin system.





ARIZONA'S SALT RIVER PROJECT (SRP)

Salt River Project (SRP) continues to work collaboratively with local stakeholders from the tribal, agricultural, and municipal and industrial sectors to investigate and implement operational and water augmentation projects to improve the resiliency of the water supply in central Arizona. In December 2021, Reclamation published the Verde Reservoirs Sediment Mitigation Study, an appraisal study conducted in partnership with SRP to evaluate options to restore storage capacity lost to sedimentation and mitigate future sediment accruals at the Verde River reservoirs. Through this appraisal study, recommendations were made to conduct a feasibility study to evaluate options to modify Bartlett Dam on the Verde River by raising the existing dam between 62 and 97 feet. The concept would increase conservation storage capacity on the Verde River between 150,000 acre-feet and 350,000 acre-feet, with an expected average annual yield of 36,000 and 91,000 acre-feet per year. This water would be made available for use outside of SRP's water service area to support water users in central Arizona. The feasibility study, which is being supported by 22 water providers in the Phoenix Metropolitan Area, was authorized in the Bipartisan Infrastructure Law (P.L. 117-58) and is expected to kick-off in October 2022.

In addition, SRP, the Army Corps of Engineers, Reclamation and 14 partners from the tribal, agricultural, and municipal and industrial water sectors are partnering in a five-year project to temporarily modify the operating rules in the flood control space (FCS) at Theodore Roosevelt Dam on the Salt River. The project would extend the evacuation period of the FCS from 20-days to 120-days for 110,000 acre-feet of the FCS, improving the ability to put to beneficial use the flood waters of the Salt River inside and outside of SRP's water service area. After the five year period, SRP will work with the federal agencies and partners to determine whether the temporary deviation should be made permanent.

VERDE RIVER





ARIZONA'S SALT & VERDE RIVER SYSTEM - WATER YEAR 2022

While water year 2022 started with wet conditions following a near record wet 2021 summer monsoon season, the winter turned dry resulting in runoff that was 48% of median. Precipitation was 229% of normal across the watersheds in December 2021 with January 1 snowpack registering 150% of normal. However, from January 1 through March 31 only a few small precipitation events occurred throughout the rest of the winter. Total winter precipitation (December to March) on the Salt and Verde watershed was 86% of normal. Roosevelt Lake saw a small increase in storage during the winter overall going from 68% full to 73% full between October 1 and May 1. Horseshoe and Bartlett Reservoirs on the Verde started the water year at a combined 52% full and declined to 33% capacity by May 1.



BARTLETT DAM

The 2022 monsoon season has produced above normal precipitation across the SRP watersheds. August precipitation was 150% of normal resulting in inflows to the reservoirs that were 391% of median. The Salt River produced the third highest August inflow ever recorded. For the monsoon season overall (July through September) inflows to the system were approximately 200,000 acre-feet or 212% of median.

Total inflow for the 2022 water year was below normal (77% of median) while total water year precipitation was near normal. As of late September, total storage on the system is 65% (1,480,000 acre-feet) compared to 71% at the same time last year. Climate predictions for the upcoming winter indicate a continuation of a weak La Nina (greater chance of dry conditions) to start the winter but may transition to more neutral conditions (more favorable for wet) later in the winter.



CALIFORNIA

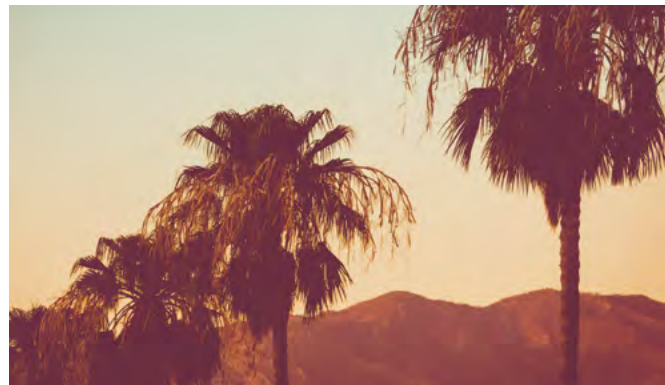
COPPER BASIN



In response to the unprecedented, climate change-driven drought that has stretched over two decades in the Colorado River Basin, in October California outlined voluntary actions it plans to take to help stabilize storage in the Basin's major reservoirs.

California water agencies that use Colorado River water supplies proposed to conserve up to an additional 400,000 acre-feet of water in Lake Mead each year, from 2023 through 2026. This water, which would otherwise be used by California's communities and farms, will meaningfully contribute to stabilizing the Colorado River reservoir system.

In its letter to Commissioner Touton, the state identified a collection of proposed water conservation and water-use reduction opportunities to fulfill this plan. California's Colorado River water agencies also are prepared to create and store additional quantities of Intentionally Created Surplus water supplies in Lake Mead pursuant to the 2007 Interim Shortage Guidelines, under future favorable hydrologic and water supply conditions. These actions are in addition to California's commitments under the 2019 Drought Contingency Plan, in which the state will have to reduce its use by up to an additional 350,000 acre-feet if Lake Mead continues falling.



At Coachella Valley Water District (CVWD), the board approved the Colorado River Water Conservation Program, a voluntary and temporary program that would compensate customers who conserve water for the benefit of the river system. The program focuses on fallowing or transitioning to lower water use crops.

CVWD also enhanced domestic water conservation efforts by adopting Water Shortage Contingency Plan actions to reduce water usage up to 20 percent. CVWD increased its turf rebate from \$2 to \$3 per square foot and developed partnerships with local cities to provide matching rebates, which increased the turf conversion rebates to \$6/sf – among the highest in the nation. CVWD committed \$6 million toward conservation funding that is projected to remove 2 million square feet of turf with matching rebates of \$4 million committed by city partners.



In addition, through a low-interest, \$60 million loan from Reclamation, CVWD plans to replace 10 irrigation laterals that will ensure reliability of service and improve water conservation. As a result of past canal lining projects, adoption of an asset management program, and proactive maintenance of its closed pipeline irrigation distribution system, the district's Colorado River water loss rate was 5.8 percent in 2021.

The Imperial Irrigation District (IID) and its growers in 2022 continued to apply on-farm and system efficiency conservation programs, generating nearly 500,000 acre-feet of conservation to provide water supply reliability to its California water agency partners and bringing its cumulative water conservation total to more than 7.2 million acre-feet since 2003.

To aid in the management of its available water supply, IID implemented a mid-year Equitable Distribution Plan, retroactive to Jan. 1, 2022, that assigns what amounts to a water budget for every

water user. The district's agricultural water users stepped up to manage their apportionments, eliminating an upward-trending overrun projection that exceeded 93,000 acre-feet at one point, all while continuing to farm to ensure the nation's food supply needs are met.

The first full year of a short-term agricultural land fallowing program funded by Reclamation, Metropolitan, Central Arizona Project and Southern Nevada Water Authority with Palo Verde Irrigation District conserved more than 50,000 acre-feet of water in 2022. Under the three-year program, PVID farmers are paid to fallow a portion of their land, with the conserved water being added to Lake Mead.

Metropolitan initiated a new seasonal land fallowing program with the Quechan Tribe of the Fort Yuma Indian Reservation that will conserve Colorado River water and make it available to Southern California cities so they can leave more water in Lake Mead, while supporting the Tribe's



IMPERIAL VALLEY

agricultural economy. Under the two-year seasonal fallowing pilot program, patterned after a similar program with Bard Water District, Metropolitan pays interested farmers to not grow crops on a portion of their lands between April and July in 2022 and 2023.

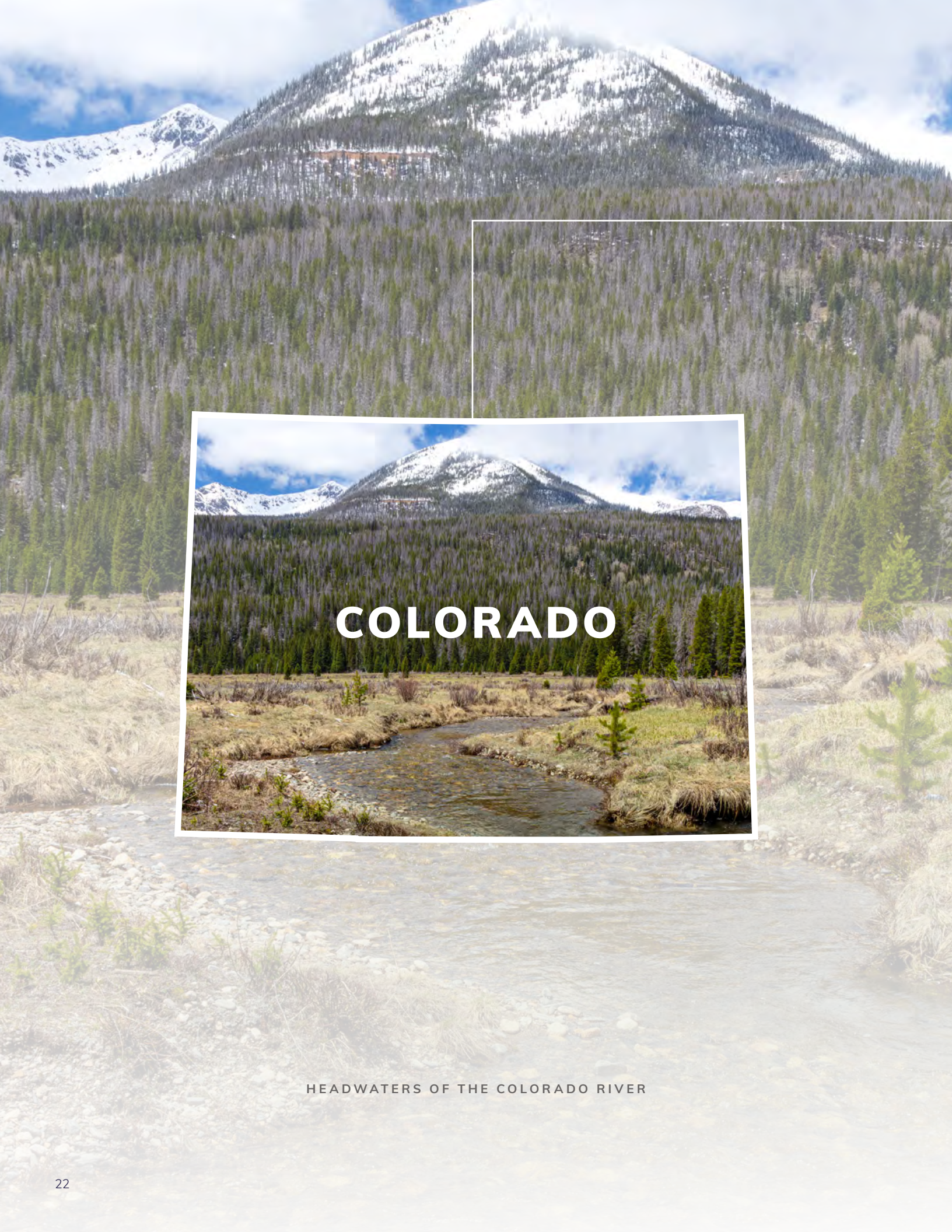
Along with the Colorado River drought challenges, Metropolitan dealt with the supply impacts from the third year of severe drought in the state. Deliveries from the State Water Project to Southern California in 2022 were at a record low, a result of limited snowpack and reservoirs depleted by drought. In response, Metropolitan's board adopted an Emergency Water Conservation Program that required member agencies that depend on water from the State Water Project to implement one-day-a-week watering restrictions, or live within volumetric limits, starting June 1.

Metropolitan also called on other Southern California residents and businesses to reduce water use by 20 percent to help ensure the region has the

water it needs in 2022, raising drought awareness through a \$10.5 million, three-year expanded advertising and outreach campaign.

In June, the new, large-scale water recycling project being developed by Metropolitan in partnership with the Los Angeles County Sanitation Districts was renamed Pure Water Southern California. The project, which for years was known as the Regional Recycled Water Program, will take cleaned wastewater and purify it to produce a new, drought-proof source of high-quality water for Southern California.

In October, Adán Ortega was elected chairman of Metropolitan's 38-member board, succeeding Gloria D. Gray, who had served two terms as chair. Ortega, a water policy and strategic communications consultant who has represented the city of San Fernando on the board since March 2021, is the first Latino chairman to be elected to the post and will serve a two-year term beginning Jan. 1, 2023.



COLORADO

HEADWATERS OF THE COLORADO RIVER



From the headwaters of the Colorado River to the Four Corners, cooperation

in the face of continued dry conditions brought together stakeholders from across Colorado to address important projects for the river's diverse users.

Like other states in the Colorado River Basin, the state of Colorado's water users had to contend with reduced water availability in the main stem of the river and its tributaries. In addition, dry soil conditions meant the available snowpack did not yield predicted streamflows in many portions of the state. Despite those conditions, however, several initiatives got underway during 2022 for the benefit of water users and the river itself.

A multi-agency effort to restore critical elements of the Colorado River's headwaters ecosystem received support from agencies throughout the state. The Kawuneeche Valley Ecosystem Restoration Collaborative, named after the valley where the Colorado River begins in Rocky Mountain National Park, received funding to improve the wetlands that are woven into the river's ecology. Aided by funds provided through the Colorado River District's Accelerator Grant Program, the agency partners are exploring ways to improve areas affected by decades of human use, resource management choices and climate change. Other partners in the project include Grand County, Rocky Mountain National Park, U.S. Forest Service, The Nature Conservancy, Northern Water, Colorado River District, Town of Grand Lake and Colorado State University.



GRAND LAKE



EAST TROUBLESOME MULCHING INSPECTIONS

Just downstream from the Kawuneeche Valley, a large group of partner agencies, nonprofit organizations and corporate partners gathered on Aug. 23 to celebrate the start of construction on the Colorado River Connectivity Channel. That one-mile channel, just below the confluence of the Colorado and Fraser rivers, will direct the river around a current diversion on the main stem of the river that forms Windy Gap Reservoir. The creation of the channel will allow fish and macroinvertebrates to move up and down a stretch of river that was previously blocked. In addition, sediment that previously had been blocked by the on-channel reservoir will be able to move downstream. Construction on the \$30 million project began in August and will continue into 2024.

Many areas in the Colorado River headwaters continue to recover from devastating wildfires in 2020. Local agencies were able to use federal funding to continue their work to address the affects of the wildfire not only to infrastructure but to the watersheds themselves. Crews continued to drop mulch on hillsides to reduce the movement of sediment during the monsoon season, and they also built sediment control structures to capture debris and ash that the mulching could not address. Watershed recovery work in the Colorado River Basin likely will continue for years.



KVERC LEADERSHIP TOUR



Several water development projects continued to make progress in 2022. Along Colorado's Front Range, construction of Chimney Hollow Reservoir west of Loveland and Gross Reservoir west of Boulder continued. Both will provide increased resilience for the millions of water users who live in the corridor between Denver and Fort Collins.

The Southeastern Colorado Water Conservancy (District) and Reclamation continue to make progress toward construction of the Arkansas Valley Conduit (AVC). A three-party contract signed in March between the District, Reclamation and the Pueblo Board of Water Works will allow Pueblo Water to convey, treat and transmit water to a point 15 miles east of Pueblo Reservoir. Reclamation issued the first construction contract for AVC in September. The District is in the process of designing delivery lines. A plan is in place to use federal infrastructure funds to accelerate completion by 2028, seven years ahead of the original schedule. When complete, the AVC will provide fresh drinking water to 50,000 people served by 39 separate water systems, resolving issues of radionuclide contamination and laying a foundation for future growth of the Lower Arkansas Valley.



NEVADA

LAKE MEAD

Southern Nevada— already a global leader in water conservation—has launched some of its most aggressive and innovative conservation programming to date to help shore up Lake Mead levels, which have dropped more than 170 feet amid climate change and a decades-long megadrought.

As a result of sinking lake levels, a tier-two federally imposed shortage will reduce Southern Nevada’s Colorado River allocation to 275,000 acre-feet beginning in 2023.

Although the reductions are considerable, our community has demonstrated it can conserve through shortage even while continuing to grow and thrive economically.

Already proactively using less than its annual allocation, Southern Nevada is moving forward on multiple water conservation initiatives to reach a newly established community conservation goal of 86 gallons per person per day (GPCD) and to prepare for a hotter, drier future.



BOULDER HARBOR



LAKE MEAD

To achieve the new GPCD, the Southern Nevada Water Authority (SNWA) Board of Directors and local municipalities enacted ordinances and additional water restrictions over the last year for all sectors of the community, including business, industry, community associations and residents.

The restrictions include prohibiting new golf course construction as well as all new water features on the Las Vegas Strip. Pool-size restrictions limit the maximum surface area of all newly constructed residential pools to 600 square feet.

Additionally, non-functional turf located in median strips, HOA entrances and other decorative uses is being removed to comply with a new state law, prohibiting irrigation of nonfunctional grass by Jan. 1, 2027. The SNWA Board completely banned turf in all new development except for schools, parks and cemeteries, ensuring our community grows sustainably and water use is maximized.

The Las Vegas Valley Water District is the first of the municipalities to introduce an excessive use charge, which encourages the largest residential water users to conserve or pay significantly more for their excessive water use, beginning in 2023. Throughout the Las Vegas Valley, water waste patrol units are out in force as part of an amplified effort to identify, fine and correct water waste.

In addition to enforcements, the SNWA increased incentives to up to \$500,000 to help businesses and industrial facilities upgrade their evaporative cooling units to more efficient dry-cooled systems. Evaporative cooling represents the second-largest use of water in our community—this program enhancement is projected to save millions of gallons of water annually.

For this reason, the SNWA is working with other municipalities to enact a local ban on evaporative cooling on all new construction.



Participation in existing conservation incentive programs remains strong—2022 was a record year for the Water Smart Landscapes Rebate Program, which realized more than 2.5 million square-feet of turf conversions and an estimated 135 million gallons of annual water savings. Residents have replaced more than 200 million square-feet of grass with water-smart landscaping, saving more than 160 billion gallons of water since the program began in 1999.

In addition, the regional school district has replaced more than 2.4 million acres of grass with artificial turf at playing fields across the Las Vegas Valley, projected to save more than 135 million gallons of water annually.

While 2022 was a banner year for local conservation programming, more will need to be done across the Colorado River Basin to help preserve the river system and in response to a federal mandate calling for an additional 2-4 MAF in reductions systemwide.

In August, SNWA General Manager and CRWUA Immediate Past President John Entsminger sent a letter to the Interior Secretary outlining steps toward achieving that goal and to preserve the long-term sustainability of the Colorado River. In the letter, Entsminger called for more federal legislation and collaboration among Colorado River partners to judiciously allocate water resources across the entire Colorado River Basin and preserve the hydrology of the river. To this end, the SNWA Board approved funding to participate with Metropolitan Water District in the development of a large-scale regional recycled water program in Southern California. The program has the potential to treat and reuse up to 168,000 acre-feet of treated wastewater, extending local water supplies and reducing demands on the Colorado River and Lake Mead.



NEW MEXICO

SAN JUAN RIVER

In 2022, the majority of New Mexico counties continue to experience drought conditions, with 90% of the state experiencing extreme to exceptional drought conditions, and current drought patterns that show no signs of changing course.

On Nov. 9, 1922, delegates from the seven Colorado River Basin states negotiated the Colorado River Compact that defined the relationship between the Upper Basin states of Wyoming, Utah, Colorado, and New Mexico and the Lower Basin states of Nevada, Arizona, and California.

These negotiations led to the signing of the Colorado River Compact on Nov. 24, 1922, at the Palace of the Governors in Santa Fe, New Mexico. New Mexico recognizes this 100-year historic achievement as being the first agreement in U.S. history that more than three states negotiated among themselves to apportion the waters of a stream or river. Forward 100 years in time on the same living earth that continues to move through its rhythm of change, be it environmental or population. As we live within what is given, through the seasons of abundance or scarcity, this water supply from the Colorado River still remains an integral part of what is New Mexico.



NAVAJO DAM AND RESERVOIR



SAN JUAN RIVER BELOW NAVAJO DAM

While monsoon conditions have applied moisture, the state is still experiencing the effects of a long-term drought. This ongoing drought not only stresses the human population but has shown to have a devastating effect on our beloved New Mexican ecosystem.

New Mexico's San Juan, Animas and La Plata Rivers started year 2022 with less than 70% of the historical average with the spring flows ranging between 14% to 42%, and summer flows ranging from 36% to 46% of the historical average. Navajo Dam began the year at 51% of full capacity and by late spring increased by 6% due to snowmelt runoff. As of late summer, Navajo Dam was at 58% of capacity. As part of the Drought Response Operations Agreement, Navajo Dam was to release a supplemental delivery of 20,000 acre-feet of water to Lake Powell from November to December 2021. Due to poor hydrology forecasts, the release was canceled. Reclamation is projecting that Navajo Reservoir, which is located on the San Juan River and is part of the Colorado River's watershed, could dip below critical levels next year. Some models show a 10% chance that the lake's levels could go below 5,990 feet in August of next year making





it hard for Reclamation to deliver water to the Navajo Indian Irrigation Project. At the same time, states like New Mexico, which rely on the Colorado River, are working in conjunction with federal partners to try to prevent Lake Mead and Lake Powell from dropping to levels where the hydroelectric plants at the respective dams would not be able to generate power.

On April 6, 2022, the largest wildfire in New Mexico history began as a result of the Las Dispensas prescribed fire on the Pecos/Las Vegas Ranger District of the Santa Fe National Forest. Forecasted weather conditions were within parameters for the prescribed fire, but unexpected wind in the late afternoon caused multiple spot fires that spread outside the project boundary. Named the Hermits Peak Fire, the wildfire began approximately 12 miles northwest of Las Vegas, N.M. at the base of Hermits Peak in the Pecos Wilderness. The Calf Canyon Fire was caused by a pile burn holdover from January that remained dormant under the surface through three winter snow events before reemerging in April. The Hermits Peak and Calf Canyon fires were managed as one fire, and after more than four months the federal government declared it the largest wildfire in New Mexico's recorded history with more than 530 square miles of the Rocky Mountain Foothills burned, hundreds of homes were destroyed and water supplies were contaminated. The second largest wildfire in New Mexico history began on May 13, 2022 in the Gila National Forest, 31 miles northwest of Truth or Consequences, N.M. The fire

burned 508 square miles of the Aldo Leopold and Gila Wilderness areas. This fire appears to be human-caused and is under investigation. The Santa Fe and Gila National Forest are experiencing post-fire conditions such as loss of groundcover and stabilizing vegetation, decreased soil absorbency, and an increase in water repellency in soils, which are all factors that can increase the magnitude, frequency and volume of stormwater runoff and produce debris-flows. Post-fire water flows have greater energy with which to damage resources downstream of the burn area and threaten life, safety and property than do regular rainfall-runoff events.





SAN JUAN RIVER BELOW NAVAJO DAM

The Office of the Governor authorized the State Engineer to form a Water Policy and Infrastructure Task Force (Water Task Force) of water and natural resources experts and scientists, senior state agency staff and stakeholders from around New Mexico who have experience in all aspects of water and related infrastructure management. Water Task Force members represent agriculture, municipal and domestic water users; Tribes, Pueblos, and Nations; Acequia communities, environmental advocates; oil and gas interests; philanthropy, and academic and research institutions. The goal of the Water Task Force is to provide input and support the 50-Year Water Plan and to develop consensus recommendations to improve water policy and infrastructure. The Water Task Force brings together knowledgeable individuals from every water use sector to

the table to craft recommendations for action related to and preparing for continued drought and climate change impacts on water resources; implementing the 50-Year Water Plan, and reviewing current water policies to address both regional and statewide water management goals. The Water Task Force will work closely with and determine appropriate avenues to incorporate input from representatives from the New Mexico state legislature so as to ensure the development of viable policy. The Water Task Force will look at funding policies and programs in order to develop recommendations for the utilization of available state and federal funding for all types of eligible infrastructure projects.

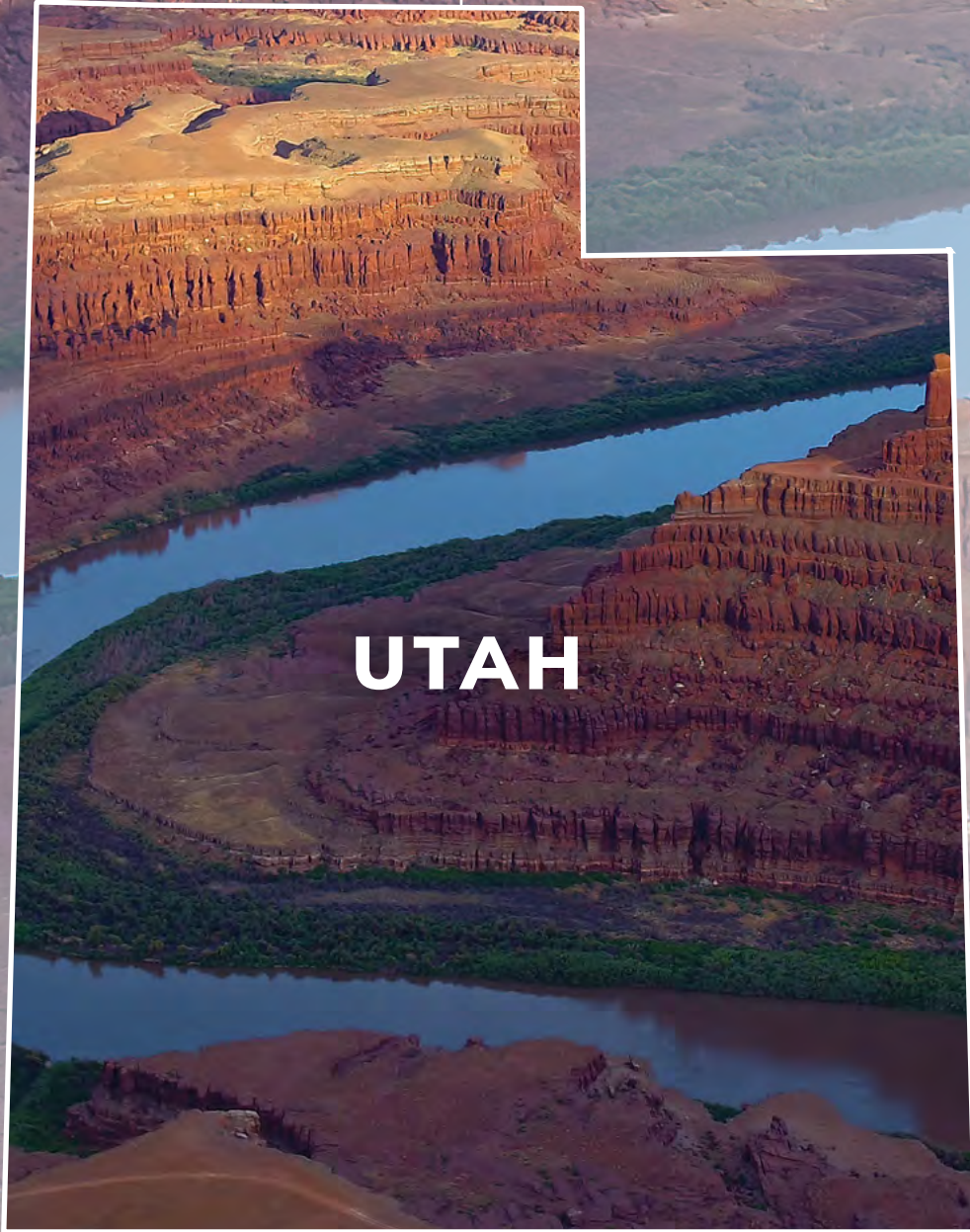


The New Mexico Interstate Stream Commission has completed Phases 1 through 4 in its 50-Year Water Plan. Phase 5 is in review and upon completion, Phase 6 will be prepared for public view. The end goal is the adoption of the 50-Year Water Plan by the Interstate Stream Commission. The draft Water Plan compiles findings from scientific papers and reports, guidance from planning and agency partners, and input from a wide array of stakeholders to describe and plan for climate change and its impacts on water supplies in New Mexico over the next 50 years. The draft 50-Year Water Plan assesses increasing aridity, outlines expected changes and likely vulnerabilities and identifies recommendations for policymakers, stakeholders and agency partners.

The San Juan Basin Recovery Implementation Program was established to resolve conflicts among conservation and four endangered fish species, and water development and management in Upper Colorado and San Juan River Basins. As of December 2021, the programs have provided ESA compliance for approximately 2,500 water projects in Upper Colorado and San Juan River basins, including every Reclamation project upstream of Lake Powell. The status of the species recovery shows the humpback chub and razorback sucker are two of the four species that have been brought back from the brink of extinction, to be reclassified or proposed for reclassification from endangered to threatened.

The Colorado pikeminnow and the bonytail are listed as endangered but have been conserved and are benefiting from recovery program actions. The Cooperative Agreements that implement both programs will sunset in 2023. As outlined in PL 116-9, program partners are committed to working with the Secretary of the Interior to submit a Report to Congress on recommendations for the program post-2023. The Report to Congress will describe the programs, with the current listing status of the four listed species and their projected status in 2023, total program expenditures through fiscal year 2021, and projected expenditures through 2023. The report will also contain an identification of recovery activities and projected costs for the program beyond 2023.





UTAH

COLORADO RIVER

Utah's 2022 legislative session concluded with a record number of water conservation bills and appropriations totaling nearly \$500 million in spending.

Utah's conservation bills are designed to help bolster water levels in reservoirs throughout the state by reducing demand via a variety of conservation efforts, including required metering of secondary water, agricultural optimization, the nation's first statewide grass removal rebate program and watershed enhancement efforts. Statewide water storage is at a dismal 42% of capacity.

Water is also the focus of Utah's executive leadership, with Governor Spencer J. Cox undertaking a coordinated action plan with various state agencies focusing on infrastructure investments, vibrant communities, productive agriculture and healthy waters and watersheds.

At the local level, water districts are implementing a variety of drought mitigation measures including additional infrastructure investments, aggressive conservation programs, reuse projects and municipally mandated water efficiency standards for new construction. Communities in southern Utah have banned non-functional grass in all new commercial, institutional and industrial developments.



COLORADO RIVER FROM HIGHWAY 128

In 2020, Utah's Statewide Water Infrastructure Plan estimated the state needs to invest \$13 billion in water conservation, \$21 billion in the repair and replacement of aging infrastructure and more than \$15 billion in new infrastructure and water supplies to meet the water demands of Utah's expanding economy and growing population through 2070. Utah boasts the top-rated economy in the nation and continues to rank as one of the nation's fastest growing states. Since 2000, Utah's population has increased 50% while its per capita water use has decreased more than 25%.

The Colorado River is a vital source of both municipal and agricultural water for Utah, supplying more than a quarter of all water used in the state.

In April, the Colorado River Authority of Utah (Authority) approved an ambitious five-year management plan to accomplish its statutory mission to "protect, use, conserve and develop Utah's waters of the Colorado River system." The management plan focuses on three priority areas including expanding water measurement capabilities and data acquisition; improved understanding of hydrologic conditions to enhance planning, policy and resource management; and drought mitigation and response measures.

In response to critically low elevations at Lakes Powell and Mead and rapidly declining hydrology, in 2022, the state of Utah, through the Authority, worked in collaboration with the other Upper Division states and Reclamation to develop a Drought Response Operations Agreement Plan and an Upper Basin 5-Point Plan.



VIRGIN RIVER





COLORADO RIVER

In May, the Navajo Utah Water Rights Settlement Act was finalized by the Navajo Nation, state of Utah and the Department of the Interior. Navajo Nation Council members were joined by Secretary of the Interior Deb Haaland, Governor Cox and others for a historical signing ceremony to execute the agreement, which was approved by Congress in 2020. The settlement confirmed the Navajo Nation's right to deplete 81,500 acre-feet of water per year from Utah's Colorado River Basin apportionment and authorized approximately \$220 million for water infrastructure projects.

In June, Governor Cox appointed Joel Ferry as the executive director of the Department of Natural Resources. Previously, Ferry served in the Utah House of Representatives beginning in 2019.

¹Economy Rankings, US News, 2021

²US Census Bureau

³Utah Division of Water Resources





WYOMING

HIGH SAVERY DAM

As we all know, the continued poor hydrology and low storage volumes in the Colorado River Basin’s main reservoirs has brought additional attention and pressures up and down the Colorado River System in 2022.

Because of these conditions, the State of Wyoming has been utilizing its Governor appointed “Colorado River Working Group” (Working Group) to facilitate communication with Wyoming’s water users. With all water use sectors represented within the Working Group, it is a key focus group that has brought the concerns from each sector into one common discussion.

The Working Group has conducted meetings and outreach across the Green and Little Snake River Basins in Wyoming.

The Working Group not only accurately informs the state’s water users of the current issues, but acts as a conduit to understand the concerns, needs and ideas of the state’s users moving forward.



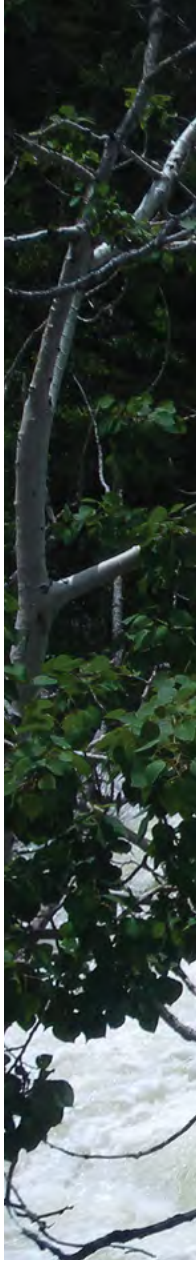
FLAMING GORGE RESERVOIR



WOLF LAKE

As a headwater state, Wyoming must rely on mother nature to dictate its water supplies. Thus, that supply can vary significantly from year to year or even spatially across the sub-basins. To monitor this, recent projects have focused on increasing the state’s ability to measure and collect data within the Green and Little Snake River Basins. Future programs are being planned to install even more measurement devices in individual watersheds, to give the state a better understanding of the real-time conditions that affect streamflow and consumptive use. Of course, Wyoming continues to invest in weather modification projects that help augment snowfall and create additional system water in both river basins.

In 2022, Wyoming continued to implement the Upper Basin Drought Contingency Plan. Wyoming worked with the other Upper Basin States and the UCRC to continue the Demand Management investigation. Additionally, Wyoming spent much time developing and finalizing a framework under DROA for releases in 2022. The state continues pressing Reclamation to consider the potential futility, transit losses, recovery and accounting of these and any additional releases.



MIDDLE PINEY LAKE



Dec. 1, 2021, the State of Wyoming named a new State Engineer, Brandon Gebhart had previously served as the director of the Wyoming Water Development Office and brings more than 20 years of water resource experience to his new role. In the summer of 2022, he replaced Pat Tyrrell, P.E. as the Wyoming Commissioner to the Upper Colorado River Commission. Tyrrell had graciously served as Wyoming's Commissioner long after his retirement from state office in 2019. Not only do we thank Tyrrell for his 18 years as Wyoming's top water official, but also for his continued contributions to the State of Wyoming and its water users.

An aerial photograph of a vast, rugged river valley, likely the Colorado River basin. The terrain is characterized by deep, winding canyons and a prominent, light-colored river meandering through the center. The image is overlaid with a white outline that defines the geographical area of the Ten Tribes Partnership. The text 'TEN TRIBES PARTNERSHIP' is centered within this outlined area in a bold, white, sans-serif font.

**TEN TRIBES
PARTNERSHIP**

COLORADO RIVER

The Colorado River Basin Tribes Partnership, also known as the Ten Tribes Partnership (Partnership), is an organization formed in 1992 by 10 federally recognized tribes with reserved water rights in the Colorado River Basin.

The member tribes are: Ute Indian Tribe, Ute Mountain Ute Tribe, Southern Ute Indian Tribe, Jicarilla Apache Nation, Navajo Nation, Chemehuevi Indian Tribe, Colorado River Indian Tribes (CRIT), Fort Mojave Indian Tribe, Quechan Indian Tribe and Cocopah Indian Tribe. These tribes formed the Partnership for the purpose of strengthening tribal influence among the seven Basin States over the management and utilization of Colorado River water resources.

The Partnership assists member tribes in the development and protection of tribal water resources and addresses technical, legal, economic and practical issues related to the management and operation of the Colorado River. The

Partnership formally joined the Colorado River Water Users Association in 1996 with the goal of actively participating with the seven Basin States in negotiations relating to the Colorado River. In 2018, the Partnership, along with Reclamation, completed the Tribal Water Study, which included information regarding each Partnership tribe's water rights, current water uses, future demands and likely impacts to the system of future development of tribal water. As documented in the Tribal Water Study,

Partnership tribes collectively have water rights in the Upper and Lower Basin to roughly 20% of the mainstream flow.

Water rights for the Chemehuevi Indian Tribe, CRIT, the Fort Mojave Indian Tribe, the Quechan Indian Tribe, and the Cocopah Indian Tribe, whose reservations are located on the lower reaches of the mainstream of the Colorado River, were decreed in *Arizona v. California*, 574 U.S. 150 (2006). In that case, the Supreme Court found that the Secretary of the Interior had a statutory duty to respect existing present perfected rights as of the date the Boulder Canyon Project Act was passed.



PLATORO DAM

Water rights of the five Indian reservations are among those present perfected rights and are entitled to priority based on the establishment date of each reservation and dates of boundary adjustments thereto.

In 2022, Arizona Senators Kelly and Sinema introduced S. 3308, the Colorado River Indian Tribes Water Resiliency Act and it was heard by the Senate Indian Affairs Committee. Chairman Grijalva included a modified version of the legislation as Title III of the Wildfire Protection and Drought Relief Act as passed by the House. As of this writing, the CRIT legislation is being reconciled between the two houses of Congress with hopes for passage this year.

During 2022, CRIT is completing the third and final year of a multi-year system conservation agreement entered as part of the Arizona mitigation program for the Drought Contingency Plan. This program is funded with appropriated funds from the State of Arizona and by NGO and corporate partners. The 55,000 acre-feet per year left in Lake Mead required the fallowing of approximately 11,000 acres of productive farm land on the Reservation in Arizona.

The Tribal Council approved a Diversion Management Plan in 2022 to guide the water diversions and deliveries by the Bureau of Indian Affairs. The CRIT also received a Reclamation Water & Science grant to work toward an integrated water ordering system among the CRIT farmers, the BIA and Reclamation. Both the DMP and the improved process for water orders should increase the efficiency of the water ordering and delivery process at CRIT.

In cooperation with the Central Arizona Project and the private company N-Drip, CRIT expanded the acreage and the types of crops using the N-Drip system as part of a pilot study to determine the effectiveness of the N-Drip system over multiple years of use.

Leadership and staff of the CRIT continue to participate in and serve on committees and councils in Arizona that are addressing the hydrologic conditions in the Basin.

A portion of the Ute Indian Tribe's reserved water rights was decreed in *United States v. Cedarview Irrigation Company et al.*, No. 4427 (D. Utah 1923), and *United States v. Dry Gulch Irrigation Company, et al.*, No. 4418 (D. Utah 1923), with a senior priority date of 1861, the establishment date of the Uintah Valley Reservation, pursuant to the reserved water rights doctrine first articulated in *Winters v. United States*, 207 U.S. 564 (1908). In 1965, the United States, the Central Utah Water Conservancy District, the State of Utah (by joint resolution of the Legislature) and the Ute Indian Tribe agreed to the quantification of the rest of the Tribe's reserved water rights by contractual agreement. In March 2018, the Tribe commenced litigation against the United States for the mismanagement, misappropriation and diminishment of the Tribe's reserved water rights and related resources. The Tribe is seeking declaratory and injunctive relief, as well as damages, to compensate the Tribe for past harms, including mismanagement of the Uintah Indian Irrigation Project.

The 1988 Colorado Ute Settlement Act, as amended by 2000 amendments and Colorado state court consent decrees, quantified the water rights of the Southern Ute Indian Tribe and the Ute Mountain Ute Tribe in the state of Colorado. The Southern Ute Indian Tribe has been implementing rehabilitation efforts on the Pine River Indian Irrigation Project (PRIIP). The Rehabilitation efforts completed in 2021 by the Tribe was the \$2.4 million dollar rehabilitation of 21 major irrigation structures on the PRIIP. The work will improve irrigation delivery to approximately 5,132 acres or irrigable land. On April 15, 2022, the U.S. EPA approved the Southern Ute Indian Tribe's water





SUMMER DAM RESERVOIR

quality standards. The Tribe's water quality standards are intended to protect public health and welfare, enhance the quality of water, and serve the purposes of the federal Clean Water Act. The Ute Mountain Ute Tribe also has not resolved its water rights in the states of New Mexico and Utah.

The 1992 Jicarilla Apache Tribe Water Rights Settlement Act resolved future use water rights claims of the Jicarilla Apache Nation in the Colorado River system. Since 1992, the Jicarilla Apache Nation has been actively engaged in efforts to put this water to use. The Jicarilla Apache Nation currently subleases a portion of its settlement water to support residential communities, endangered species, and resource development. The Jicarilla Apache Nation, the New Mexico Interstate Stream Commission and The Nature Conservancy recently designed an innovative water transaction that will allow the State of New Mexico to lease up to 20,000 acre-feet of water from the Jicarilla Apache Nation to benefit threatened and endangered fish and wildlife and provide water security for communities. This transaction demonstrates how tribal and state governments and conservation organizations can work together to find collaborative solutions that benefit multiple

interests and users. The Jicarilla Apache Nation, along with the Navajo Nation, is also a project participant for the Navajo Gallup Water Supply Project, which will deliver treated drinking water to the southern portion of the Jicarilla Apache Nation's reservation in 2023.

In 2009, Congress ratified the Navajo Nation – New Mexico Water Rights Settlement Agreement for the San Juan River Basin. The Omnibus Public Land Management Act of 2009 (P.L. 111-11) also authorized construction of the Navajo-Gallup Water Supply Project (NGWSP).

More than 30% of Navajo families haul water to meet their daily water needs. The NGWSP began providing a clean, reliable drinking water supply to meet the current and future population needs of approximately 250,000 residents of Northwest New Mexico and Northeast Arizona.

Two laterals, the San Juan Lateral and the Cutter Lateral, will serve Navajo communities. The NGWSP currently has three active construction contracts. On Sept. 23, 2022, Reclamation awarded a \$73,056,845 contract to Archer Western Construction of Phoenix, Ariz., to construct the Tsé Da'azkání Pumping Plant and Tó Ałts'íísí



Pumping Plant on the San Juan Lateral. In December 2021, Reclamation awarded a contract for \$76,113,868 to SJ Louis Construction of Rockville, Minn., for construction of the Navajo Code Talkers Sublateral. The work will be located along New Mexico Highway 264, between Yah-Ta-Hey, N.M. and Window Rock, Ariz., and will consist of the installation of approximately 17 miles of 24- to 30-inch diameter pipe and one water storage tank. Work under this contract began in January 2022 with a completion date of approximately two years. The construction of the Tooh Haltsooi Pumping Plant near Sheep Springs, N.M. and Bahastl'ah Pumping Plant near Twin Lakes, N.M. are also underway. Contractor Archer Western began construction in January 2021 with a completion date of 2024.

The Financial Assistance Agreements with Reclamation allowed the Navajo Nation to construct portions of the NGWSP. For example, the Cutter Lateral was completed in 2020, with historic water deliveries in October 2020 and full water deliveries by summer 2023. The BBN9 Sublateral is in final design and is scheduled to start construction in 2023. All efforts are meant to meet the congressionally mandated NGWSP completion deadline of December 2029.

The Navajo-Utah Water Rights Settlement Act is included as Section 1102 of the Consolidated Appropriations Act (P.L. 116-94), approved by Congress on Dec. 21, 2020, and signed by President Donald Trump on Dec. 27, 2020. The Navajo Nation is actively working to secure its water rights in other basins within the states of Arizona and New Mexico.

In 2022, the Quechan Indian Tribe implemented the first year of a seasonal fallowing pilot project in partnership with the Metropolitan Water District. The Quechan Tribe also continues to conduct a system optimization review to identify opportunities for efficiency improvements and other water conservation measures on the Indian Unit of the Yuma Project Reservation Division, which is located on the Tribe's Fort Yuma Indian Reservation.

Among the Partnership's key goals are ensuring that, within the next decade, each Partnership tribe: has been able to successfully settle or otherwise resolve its reserved water rights claims; has the ability to maximize its on-reservation use of water as well as the flexibility to explore, facilitate and implement off-reservation use and transfers; can benefit from water infrastructure projects promised or obtained through settlements or negotiations with state and federal governments and other partners in a timely fashion; and is fully supported by the United States' exercise of its trust responsibilities to protect the tribes' water rights in all of its management.

NAMBE FALLS RESERVOIR





THE TEN TRIBES PARTNERSHIP RECENTLY DEVELOPED AND APPROVED THE FOLLOWING PRINCIPLES TO GUIDE ITS WORK ON RIVER POLICY GOING FORWARD:

- » As indigenous people, we are closely connected to the land and natural resources and take seriously our obligation to protect and defend the Colorado River, as well as the plants, animals, people and ecosystems that rely on the river.
- » Continued drought has created extreme uncertainty for users of Colorado River water and concerns about the health of the river itself.
- » Insufficient water availability will have drastic consequences for our tribes, who rely heavily on the river for commercial, domestic, cultural and spiritual purposes.
- » Collectively, the Ten Tribes hold rights to more than 20% of the Colorado River's current estimated flow, and tribal water, therefore, plays an important role in supply and demand.
- » The Ten Tribes must be included in a meaningful way in shaping river policy going forward.
- » Part of this policy must be an acknowledgment of the extent of tribal water rights, a recognition of tribes' rights to use that water, and a commitment to assist tribes in benefitting from those water rights.
- » It is time to stop thinking about tribal water rights as a problem to be solved and start thinking about tribes and tribal water rights as integral to solving the basin's problems.
- » For the Ten Tribes, compensated forbearance, off reservation marketing, and protection of future rights to on-reservation development, will be necessary components of any future river management system.
- » We must acknowledge that the water supply in the Colorado River was overestimated to start with and is shrinking year by year.
- » We must take steps to address supply/demand imbalances while protecting tribal water rights, the river, the reservoirs, and the plants, fish, birds and other species that depend on the river system for survival.





CRWUA.ORG

 [@CRWUWater](https://www.instagram.com/CRWUWater)

 [@CRWUWater](https://twitter.com/CRWUWater)