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 which 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/resolutions.

BACKGROUND

Lake Mead at Sunset, Arizona and Nevada
It has been my distinct honor and privilege to serve as president of the Colorado River Water Users Association, particularly during these challenging times in the Colorado River Basin. But challenges also bring opportunities, and in the past 12 months, much has been accomplished for the benefit of us all.

The Colorado River Basin continues to experience prolonged drought conditions over the past 18 years despite a few good years of hydrology. Fortunately, this year the Colorado River Basin experienced an above-average year in both precipitation and runoff; the state of California had the second-wettest year on record. The improved conditions, along with conservation efforts in both the upper and lower basins, increased storage in Lake Powell by nearly 2 million acre-feet and in Lake Mead by nearly 600,000 acre-feet this year. The extraordinary snowpack and runoff in California’s Sierra Nevada and the state’s ongoing efforts to conserve water provided significant opportunities for an additional 400,000 acre-feet of conserved water supplies to remain in storage in Lake Mead.

In late September, the United States, Mexico and the Colorado River Basin states reached a final accord resulting in the execution of Minute No. 323, the successor minute to the highly successful Minute No. 319. Minute 323 extends and expands upon many of the primary elements of Minute 319, including shortage sharing and binational water conservation projects, as well as providing water and funding for additional environmental restoration in the Mexican Delta region. Importantly, the term of the new minute is now consistent with the remaining term of the 2007 Interim Guidelines. Minute 323 also includes a very innovative new feature — the Binational Water Scarcity Contingency Plan — which would become effective upon completion and implementation of the Lower Basin Drought Contingency Plan. Our challenge is to complete the Lower Basin Plan by mid-2018 so that we’ll have another tool in our toolbox to help reduce the likelihood of Lake Mead falling to an elevation of 1,020 feet as well as develop operational flexibility to meet the water supply needs for future generations.

We continue to work collaboratively with all of our partners in the Colorado River Basin, the United States and Mexico through pilot system conservation projects, weather modification programs, Native American Basin Study planning and endangered species management. We also continue to showcase our decades-long tradition of problem solving and finding common ground and new solutions, providing certainty and reliability for us all in the 21st century.

Like preceding years, the annual conference continues to be the culmination of all the hard work and contributions of our CRWUA community. It provides an opportunity for us to come together to connect and discuss these critical issues and work collaboratively in charting our collective path forward.

Finally, I would like to thank my fellow board members, officers, committee chairs and committee members for their time, dedication and efforts. I have been so proud to lead the CRWUA organization during my term, and I look forward to working with all of you in meeting our challenges going forward.

Bart Fisher
CRWUA President 2016–17

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**FINANCIAL HIGHLIGHTS**

**SUMMARY OF ASSETS AND ASSET CHANGES**

April 2016 through March 2017

- Wells Fargo Money Market: $18,354.70
- US Bank Checking Account: $256,671.40 (Includes interest of $190.43)
- Bank of America CD: $300,526.40 (Includes interest of $210.35)

**TOTAL ASSETS AS OF MARCH 31, 2017**: $575,522.50

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*Photo courtesy of Bureau of Reclamation*
TRUSTEES & OFFICERS

OFFICERS
President – Bart Fisher
Vice President – Jim Broderick
Secretary-Treasurer – Jack Seiler
Assistant Secretary-Treasurer – Mitch Bishop

TRUSTEES
ARIZONA
Tom Buschatzke
Ted Cooke
Dave Roberts
CALIFORNIA
Bart Fisher
Glen Peterson
John Powell
COLORADO
Jim Broderick
Stanley Cazier
John Porter
NEVADA
Ken Albright
Jayne Harkins
Priscilla Howell
NEW MEXICO
Aaron Chavez
Mike Greene
Keith Lee
UTAH
Gene Shawcroft
Gawain Snow
Ron Thompson
WYOMING
Al Harris
Bryan Seppie
John Zebre
TEN TRIBES PARTNERSHIP
Lorelei Cloud
Jason John
Herman Laffoon
IMMEDIATE PAST PRESIDENT
David Medear

COMMITTEES CHAIRS
AUDIT
Glen Peterson, California
BUDGET
Al Harris, Wyoming
EXHIBITS
Cory Dow, Nevada
HOUSING AND ARRANGEMENTS
Andy Belanger, Nevada
MEMBERSHIP
Jim Broderick, Colorado
COMMITTEES CONTINUED
NOMINATIONS
Dave Roberts, Arizona
PROGRAM
Christine Finlinson, Utah
PUBLIC AFFAIRS
Crystal Thompson, Arizona
RESOLUTIONS
Wade Noble, Arizona
SPOUSES
Roberta McMulin, Utah

COMMITTEES
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Wade Noble, Arizona
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Roberta McMulin, Utah

BART FISHER, WYOMING
BART FISHER, WYOMING
JIM BRODERICK, COLORADO
JIM BRODERICK, COLORADO
JAY BURNHAM, NEW MEXICO
JAY BURNHAM, NEW MEXICO
BENJAMIN COWBOY, TEN TRIBES PARTNERSHIP
FLORENCE HENDERSON, TEN TRIBES PARTNERSHIP
JOHN POWELL, CALIFORNIA
JOHN POWELL, CALIFORNIA
DAVE ROBERTS, ARIZONA
DAVE ROBERTS, ARIZONA
KEVIN BERGSCHEINER, COLORADO
KEVIN BERGSCHEINER, COLORADO
MARK DAVIDSON, WYOMING
MARK DAVIDSON, WYOMING
CHRISTINE FINLINSON, UTAH
CHRISTINE FINLINSON, UTAH
MICHAEL GREENE, NEW MEXICO
MICHAEL GREENE, NEW MEXICO
KATHLEEN COATES HEDBERG, CALIFORNIA
KATHLEEN COATES HEDBERG, CALIFORNIA
DOUGLAS MASON, ARIZONA
DOUGLAS MASON, ARIZONA
NELSON ROSS, ARIZONA
NELSON ROSS, ARIZONA
JOEL SCALZITZI, CALIFORNIA
JOEL SCALZITTI, CALIFORNIA
JACK SEILER, WYOMING
JACK SEILER, WYOMING
MACOLOTTI, CALIFORNIA
MACOLOTTI, CALIFORNIA
ROBERTA MCMULLEN, UTAH
ROBERTA MCMULLEN, UTAH
DAVE ROBERTS, ARIZONA
DAVE ROBERTS, ARIZONA
KENT BURNHAM, WYOMING
KEN BURNHAM, WYOMING
JOHN ZEBRE, WYOMING
JOHN ZEBRE, WYOMING
MATT WISE, NEW MEXICO
MATT WISE, NEW MEXICO
WILLIAM BLEVINS, COLORADO
WILLIAM BLEVINS, COLORADO
RAY MCGILL, UTAH
RAY MCGILL, UTAH
JACK SEILER, WYOMING
JACK SEILER, WYOMING
ROBERTA MCMULLEN, UTAH
ROBERTA MCMULLEN, UTAH
DOROTHY THOMPSON, UTAH

Photo courtesy of Bureau of Reclamation
Consistent with the 2007 Interim Guidelines, the 2017 August 24-Month Study projects Lake Powell annual release to be 9.0 maf in WY17 and Lake Mead to operate in a normal condition in calendar year 2018 (CY18). Lake Powell’s release in WY17 is dependent on runoff which is highly uncertain this early in the year. While the most probable unregulated inflow into Lake Powell is forecast to be 9.11 maf (90% of average), the inflow forecast for WY18 ranges from about 65% to 80% of average. Because of this hydrologic uncertainty, the projected WY17 release from Lake Powell ranges from 8.23 to 13.5 maf or more.

In CY17, Lake Mead will operate in a normal condition, with full water deliveries to U.S. lower basin water users (in Arizona, California and Nevada) and Mexico. Lake Mead’s elevation is projected to be 1084 feet above mean sea level (msl) at the end of CY17 and 1080 feet msl at the end of CY18. Based on analysis conducted in August 2017, there is about a 15% chance of a lower basin shortage condition in CY19.

Colorado River System storage is projected to be about 32.7 maf, or 54% of capacity, at the end of WY17. The actual storage may vary due to continued uncertainty in seasonal runoff and reservoir inflow. A wet year can significantly increase total system reservoir storage, just as persistent dry years draw down system storage.

BASIN-WIDE DROUGHT RESPONSE ACTIVITIES

For nearly two decades, the U.S. Department of the Interior (Department) and Reclamation have been working with Colorado River Basin (Basin) partners to develop additional water management tools to offset the impact of drought and declining reservoir levels. The 2007 Interim Guidelines, implemented in 2007 and in place through 2026, provide specific guidelines for the coordinated operation of Lake Powell and Lake Mead, lower basin shortages, and a mechanism for water conservation and storage in Lake Mead (known as “Intentionally Created Surplus,” or ICS). Binational agreements with Mexico under the 1944 U.S.-Mexico Water Treaty (Minute 318, Minute 319 and most recently, Minute 323, which is in place through 2026) also allow Mexico to defer delivery of water (effectively storing it in Lake Mead) and to share in reduced as well as surplus deliveries during Lake Mead low and high reservoir conditions, respectively.

These water storage mechanisms have helped bolster Lake Mead’s storage to date. Through 2016, U.S. lower basin water users have created approximately 775,000 acre-feet of “ICS credits,” and water deliveries deferred by Mexico total about 224,000 acre-feet.

Additional steps toward mitigating drought impacts occurred in 2014. A basin-wide Pilot System Conservation Program (PSCP) was implemented to test compensated water conservation concepts that reduce water use and create system water to benefit both Lake Powell and Lake Mead. Also, a Memorandum of Understanding for Lower Basin Drought Response Actions (Lower Basin Drought MOU) to help protect elevation in Lake Mead was executed.

The PSCP began in July 2014 with an agreement among Reclamation, the Central Arizona Water Conservation District (CAWCD), Denver Water, the Metropolitan Water District of Southern California (MWD), and Southern Nevada Water Authority (SNWA). The first three years of the PSCP (2015 through 2017) have resulted in project agreements that will conserve 21,700 acre-feet of system water in the upper basin and 17,000 acre-feet of system water in the lower basin. Participants in the program represent all seven basin states and comprise agricultural, municipal and tribal entities. Reclamation and the funding parties recently initiated the process to continue the program in 2018.

The Lower Basin Drought MOU was signed in December 2014 between Reclamation, CAWCD, MWD, SNWA and the lower division states. The parties agreed to use “best efforts” to implement further voluntary measures designed to add to storage in Lake Mead. The MOU established goals to create 740,000 acre-feet of protection volume for Lake Mead by the end of 2017 and between 1.5 and 3.0 maf in total by the end of 2019. Preliminary estimates indicate that the goal of 740,000 acre-feet will be exceeded by the end of 2017.

In addition to the PSCP activities, additional system water was created in 2017 when two agreements were entered into with the Gila River Indian Community (GRIC) to conserve 80,000 acre-feet of Central Arizona Project water in Lake Mead. In January 2017, Reclamation entered into an agreement with GRIC to fund 40,000 acre-feet of conservation. In July 2017, new partners (the City of Phoenix, the Walton Family Foundation and the Arizona Department of Water Resources) and Reclamation entered into a second agreement with GRIC to fund an additional 40,000 acre-feet of conservation.

While these water conservation and storage activities have been successful, Lake Powell and Lake Mead remain at risk of declining to critically low elevations under sustained and severe drought. The Department and Reclamation continue to work collaboratively with our partners basin-wide to develop consensus-based “drought contingency plans” in both the upper and lower basins to “bridge the gap” until new operational guidelines can be developed by 2026 to ensure sustainable operation of the Colorado River System for the longer term.

The upper basin is developing a drought contingency plan to reduce the risk of losing power generation at Glen Canyon Dam and the potential for a “Colorado River Compact call.” While the probability of Lake Powell dropping below minimum power levels is low, the impacts would be significant. Glen Canyon Dam produces about 80% of Colorado River Storage Project (CRSP) power and is a major contributor to the western power grid. Revenues from the dam support important basin-wide programs, including CRSP facility operation.
and maintenance, the Colorado River Basin Salinity Control Program, the Upper Colorado Endangered Fish Recovery Programs, and the Glen Canyon Dam Adaptive Management Program. The Upper Basin Plan focuses on a Memorandum of Agreement for a drought operations plan focused on consensus, communication and drought response ahead of a crisis. Drought operations would include releasing water from upper CRSP reservoirs if needed and at defined elevation forecast points to protect power generation at Glen Canyon Dam.

The lower basin is developing a drought contingency plan composed of proactive water conservation and system efficiency improvement actions to be taken by water users in Arizona, California and Nevada and by Reclamation that will result in additional water in Lake Mead and a significant reduction in the risk of reaching critically low elevations. These actions will further the implementation of and be in addition to the provisions of the 2007 Interim Guidelines.

NAVAJO-GALLUP WATER SUPPLY PROJECT

On Sept. 15, 2017, Reclamation awarded a $62 million contract for construction of block 9-11 of the San Juan Lateral portion of the project, which is an integral component of the Navajo-Gallup Water Supply Project. When complete, the entire project will consist of approximately 300 miles of pipeline, two water treatment plants, 19 pumping plants, and multiple water storage tanks. The project will convey a reliable municipal and industrial water supply to the eastern section of the Navajo Nation, the southwestern part of the Jicarilla-Apache Nation, and the City of Gallup, New Mexico, via diversions from the San Juan River basin in northern New Mexico. The project is on schedule to be completed in 2024.

FACILITY UPGRADES AT HOOVER DAM

In cooperation with Boulder Canyon Project power contractors, in 2017, Reclamation completed the replacement of five of Hoover Dam’s 17 generating turbines with “wide-head” turbines and enhanced efficiency in some turbines with new stainless steel wicket gates. New turbines allow more efficient generation at a wider range of reservoir levels. This expected improvement in efficiency, particularly at lower reservoir levels, has led Reclamation engineers to revise Lake Mead’s estimated minimum power pool elevation from 1,050 to 950 feet above msl.

COLORADO RIVER BASIN SALINITY CONTROL PROGRAM

Salinity in the Colorado River remains a major concern. Quantified annual U.S. economic damages caused by salinity are approximately $290 million, spread across municipal, industrial and agricultural users. Without the Salinity Control Program, estimates of economic damages could reach about $600 million annually.

Reclamation, the basin states and other federal agencies continue working toward a target of reducing the river’s annual salinity load by 1.85 million tons by 2030. Current program efforts prevent more than 1.3 million tons of salt from entering the river system each year.

Construction of the Paradox Valley Unit was authorized by the Colorado River Basin Salinity Control Act of 1974 to prevent natural brine groundwater from entering the Colorado River system by intercepting and disposing of it by deep-well injection. The 16,000-foot-deep well is located approximately one mile south of Bedrock, Colorado, in the Dolores River canyon.

Reclamation is preparing an Environmental Impact Statement (EIS) to identify and evaluate brine disposal alternatives to replace or supplement the existing injection well of the Paradox Valley Unit, which has a limited projected remaining service life under current operations. Another alternative brine disposal mechanism is needed for continued long-term protection of the quality of water available in the Colorado River for use in the United States and Mexico. Coordination with cooperating agencies on the EIS is ongoing and technical studies are being conducted to further analyze the alternatives. Under the current schedule, a Record of Decision will be issued in 2020.

COLORADO RIVER TEN TRIBES PARTNERSHIP TRIBAL WATER STUDY

The Tribal Water Study, which began in 2014, is being conducted jointly by Reclamation and the Colorado River Basin Ten Tribes Partnership and builds upon the limited assessment of tribal water issues in the 2012 Colorado River Basin Water Supply and Demand Study. The objectives of the Tribal Water Study are to assess current and future water development for tribes of the Ten Tribes Partnership, to assess system impacts resulting from development of tribal water (including impacts to non-tribal water users that rely on unused tribal water), and to identify tribal water development challenges and opportunities. The report for the Tribal Water Study is in the final stages of review.
This past year was a good one for Colorado River runoff. River volume surged to 110% of average, resulting in system storage that is about 3 million acre-feet higher than one year ago. For three years in a row, Arizona has avoided a shortage declaration. As a result, the state’s allocation is at very low risk for shortage in 2019, giving Arizona additional time and capacity to develop creative solutions to potential reductions that make sense for the long term.

Continued, sustained conservation efforts have also served the basin and Lake Mead well. Cooperative efforts to protect Lake Mead began with partnerships led by the Arizona Department of Water Resources and include the Central Arizona Project (CAP), municipalities, agricultural districts, tribal communities and environmental organizations. Arizonans are focused on keeping Lake Mead out of shortage through 2020.

Other cooperative efforts underway this year are designed to create new flexibility and reliability for Arizona’s water users. Arizona will further benefit from the successful negotiation of Minute 323, which is an extension and expansion of the collaborative and cooperative efforts to protect Lake Mead and sustain the shared resources of the Colorado River.

Locally, the runoff from this year’s snowpack benefited Salt River Project’s (SRP’s) system as well. SRP’s reservoirs started the 2017 water year at 47% capacity, or 1,006,539 acre-feet, of total storage. Total runoff from the SRP system within the Salt and Verde watersheds for the 2017 water year was 1,237,542 acre-feet, increasing storage by 36% at Roosevelt Lake. For the first time since 2010, runoff exceeded storage capacity and 110,338 acre-feet of water spilled over the Granite Reef Dam. Additionally, runoff from the East Clear Creek Watershed exceeded C.C. Cragin Reservoir’s capacity in February. The reservoir spilled for nearly two months. Storage within the SRP reservoir system peaked on April 8, 2017, at 76%, or 1,241,473 acre-feet.

The state remains focused on risks of reductions to Arizona’s Colorado River supplies. Gov. Doug Ducey has asked his leadership team to work with the Arizona Department of Water Resources to critically examine the status of Arizona’s water laws and to identify ways to deal with these and other issues.

The governor’s team developed the Governor’s Water Solutions Conversation, a process that has brought together water users and community leaders to improve water management statewide, improve the health of Lake Mead, and ensure that Arizona speaks with a clear, unified voice when addressing Colorado River matters with other states and the federal government.

The governor anticipates that a practical, smart and robust legislative package will soon emerge — one that will improve Arizona’s water future for current and new generations.
Following the driest five-year period in California's history, record rainfall and snowfall in 2017 allowed Gov. Jerry Brown to declare an end to the statewide drought emergency in April. With the end of the California drought, water agencies focused on rebuilding storage reserves this year.

The Metropolitan Water District of Southern California is storing more than 1 million acre-feet of water in 2017, the largest single-year increase in the agency's history. About a third of that water is being stored in Lake Mead as Intentionally Created Surplus supplies, which has helped lessen the severity of drought conditions on the Colorado River. Metropolitan's overall increase in reserves reflected improved supply conditions in California as well as the public's remarkable water-saving response and the districts conservation and outreach programs prior to and during the drought.

The latest round of competitive grants aimed at discovering the next generation of water-saving devices and technologies in the West were awarded this year. Metropolitan partnered with the Central Arizona Project, Southern Nevada Water Authority, the Environmental Protection Agency and the Bureau of Reclamation to help fund 10 projects in the most recent round of Innovative Conservation Program grants. The program, which includes Southern California Gas Co. and the nonprofit conservation group Western Resource Advocates, seeks to advance water-saving efforts by finding new and innovative methods for using water more efficiently.

Metropolitan and Bard water districts completed a groundbreaking two-year pilot seasonal fallowing program in which farmers in the southeastern corner of California voluntarily skipped their spring and summer plantings, making the conserved Colorado River water available to the urban Southland. More than 2,100 total acres of water-intensive field crops in Bard were idled from April to July in 2016 and 2017, providing nearly 3,000 acre-feet of conserved water to Metropolitan.

In January, the Palo Verde Irrigation District (PVID) set the third and final gate on its diversion dam on the Colorado River, completing a three-year project. After 2014 inspections discovered unreparable corrosion, the first river gate was replaced in February 2015 followed by the second in January 2016 as part of the $3.5 million project. Completed on schedule and on budget, the project was PVID's largest investment in water infrastructure in recent years.

Coachella Valley Water District (CVWD) continued to contribute resources to address the long-term drought in the Colorado River Basin. CVWD was among the first agencies approved for funding under the Pilot System Conservation Program. The program provided $1 million to offer rebates to farmers who irrigate with Colorado River water and convert their irrigation technique for permanent crops from flood to drip irrigation. For five years, half of the conserved water — 5,000 acre-feet total — will remain in Lake Mead to help increase its water elevation.

CVWD is also continuing its rebate program to fund the costs of sealing uncontrolled flows from artesian wells and rebates to golf courses to replace turf with desert landscaping.

Since the 2003 implementation of the Quantification Settlement Agreement, Imperial Irrigation District (IID) has generated more than 4.4 million acre-feet of conserved Colorado River water for Southern California. This amounts to more than the state's annual river allocation.

By scale and comparison, IID's water use is a testament to the efficiency within the Imperial Valley farming community, where water users have embraced on-farm conservation practices. The increase in on-farm water conservation yields comes at an opportune time as traditional land fallowing draws to an end and system conservation and on-farm efficiency conservation targets begin to ramp up.

The California Natural Resources Agency (CNRA) released a 10-year plan to protect public health and habitat at the Salton Sea by targeting the implementation of habitat and dust suppression projects on the exposed playa as its shoreline recedes over the next decade.

IID, which has worked closely with Sacramento and key stakeholders, has further urged the State Water Resources Control Board to adopt a Draft Stipulated Order memorializing CNRA's annual acreage commitments.

Believing it represents the most significant advance to date at the Salton Sea, the draft is based on information presented to the state board in the district’s petition of November 2014, subsequent state workshops, as well as information contained in the Salton Sea Action Plan and Salton Sea Management Program that have been proposed by Gov. Brown's administration.
In 2017, Colorado continued to make significant progress with planning and implementing the Colorado Water Plan. Water users, public officials and various stakeholders have been moving forward on the plan and its crucial implementation phase. The Plan includes additional efforts to conserve supplies as well as to build critically important facilities while protecting historical uses within the Colorado River Basin.

Among those projects are Denver Water’s Moffat Enlargement Project and the Northern Water Municipal Subdistrict’s Windy Gap Reservoir Firming Project. Both have received final federal approvals and endorsements by Gov. John Hickenlooper and are moving toward construction.

Other identified projects and processes in the Colorado Water Plan that address water supply and demand needs in the Colorado River Basin continue to move forward, including many smaller projects that endeavor to maintain or improve environmental conditions and recreational experiences across the Upper Colorado River Basin within the state.

The Colorado General Assembly created a new $20 million funding portfolio that expands previous commitments and helps to address high-priority projects as identified in the Plan.

Colorado also experienced a turnover in some of its water ranks during the past year. State engineer Dick Wolfe retired and was replaced by Kevin Rein. Colorado Water Conservation Board Executive Director James Eklund left and was replaced by Becky Mitchell. Both were internal promotions.

In addition, two of the larger water entities will be replacing leaders at the beginning of 2018. The Colorado River District’s longtime General Manager, Eric Kuhn, is retiring in January along with Northern Water’s longtime General Manager, Eric Wilkinson.
Throughout the year, southern Nevada continued its efforts to advance community water efficiency, reinvest in critical water infrastructure and collaborate with our partners along the Colorado River Basin on water resource management initiatives.

To further its nationally renowned water conservation program, in 2017 the Southern Nevada Water Authority (SNWA) initiated new restrictions prohibiting Sunday landscape irrigation, a step projected to save the community an additional 900 million gallons of water annually. The SNWA’s suite of restrictions and conservation incentive programs combined with water reuse have reduced the state’s Colorado River water consumption by approximately 30%, even as southern Nevada’s population and tourism base continue to grow.

Recognizing the importance of reliable water infrastructure, the SNWA has embarked on a multiyear renewal program to maintain its world-class efficiency standard and increase capacity to meet projected demands. With the completion of a new deep-water intake in Lake Mead that will provide access to high-quality water even under critical reservoir conditions, the SNWA is continuing to build a low-elevation pumping facility, recently constructing 34 well shafts which will accommodate submersible pumps capable of meeting the community’s peak water needs.

To help address broader water resource issues along the Colorado River, the SNWA Board of Directors joined several other agencies within the Colorado River Basin in approving a series of agreements in support of Minute 323, the proposed addendum to the 1944 treaty between the U.S. and Mexico. The SNWA board action included authorizing up to $7.5 million in financial commitments for water conservation and environmental initiatives within the country of Mexico.

Beyond the basin, the SNWA spearheaded a national survey through the Water Utility Climate Alliance to assess if and how water utilities are addressing the risk of climate change to their water supplies. Nevada also hosted the Colorado River Hydrology Research Symposium last spring in partnership with the U.S. Bureau of Reclamation and basin states, which convened the nation’s leading water researchers for a discussion on water forecasting and climatology.

Finally, through a partnership with WaterStart, which involves the Nevada governor’s office and a variety of progressive partners committed to investing in water innovation to broaden Nevada’s economic base, the SNWA is field-testing emerging technologies that hold great potential for improving the efficiency of water use and system operations.

Pat Tillman Bridge over the Colorado River, Arizona and Nevada

River Mountain Water Treatment Facility in Henderson, Nevada. Photo courtesy of Southern Nevada Water Authority
In February 2017, the New Mexico Interstate Stream Commission (ISC) invited participants and stakeholders from different planning regions to participate in the Lessons Learned: Bridging the gap between regional and state water planning meeting. The meetings were held to gather feedback on the regional water planning process. It was the hope of the ISC that the participants’ input would help in developing the 2018 New Mexico State Water planning process. Feedback was provided and planning based on watershed boundaries was widely supported. The group acknowledged that the watersheds should not be too big and that the geology and interconnection between watersheds must be considered, along with political practicalities, but that the watershed approach would help bridge the urban and rural divide. It was also suggested that the state consider two tiers of watersheds for defining the planning boundaries: a mid-level region and an upstream-downstream planning region.

In the spring of 2016, the San Juan River Recovery Implementation Program (SJRRIP) and the Bureau of Reclamation released water from Navajo Dam in New Mexico to imitate spring snowmelt. Endangered Colorado pikeminnow responded by producing young. Conditions in the river were so good that they survived into the fall and through the winter. This is the first time in 20 years that biologists have seen such successful response to flows by Colorado pikeminnow. In 2017, pikeminnow are now swimming in the San Juan because of the efforts of the SJRRIP. This program is made up of water users, the Fish and Wildlife Service, the Bureau of Reclamation, and other federal, state, tribal and nongovernmental agencies. The SJRRIP’s goal is to remove Colorado pikeminnow from the endangered species list. The amount of water released from Navajo Reservoir does not happen often. Not only did it help the Colorado pikeminnow, but it also improved habitat in the Special Trout Water recreation fishery below Navajo Dam. The high flows helped remove debris from the river, reducing flooding risks for communities downstream from the reservoir.

As a result of the August 2015 Gold King Mine spill in Silverton, Colorado, into the Animas River in New Mexico, Gov. Susana Martinez created a long-term impact review team to monitor the impacts of the wastewater spill. The Citizens Advisory Committee is a group of 10 citizen volunteers from northern New Mexico, including the Navajo Nation. The committee provides a forum for public concerns while tracking the scientific long-term monitoring of the Gold King Mine spill’s effects in the state. From June 20–22, 2017, the New Mexico Water Resources Research Institute (NM WRRI) hosted a conference at San Juan College in Farmington, New Mexico. The program included oral and poster presentations in addition to plenary talks from some of the region’s leading experts on environmental catastrophes and their impacts on our communities. The San Juan River Basin water year started with a below-average water supply forecast. Runoff totals from April through July were above average, with projected year-end conditions to be slightly above average. As of September, Navajo Reservoir’s elevation is 6,057.12 feet (77% of capacity), with expectation of ending the year at 6,053.00 feet. Forecasts indicate significant probability for above-average precipitation in the San Juan River Basin from late fall of 2017 through early winter of 2018.
In 2016, Utah was named the fastest-growing state in the nation by the U.S. Census Bureau and topped, for the third consecutive year, Forbes’ Best States for Business list. The state’s growing population and economy necessitates the need to protect existing water supplies, use them wisely and develop additional resources to meet future demand.

The state is currently using approximately 70% of its annual reliable water supply from the Colorado River with plans to use more in the future. Additional water would be used to settle reserved water rights for the Ute Indian Tribe and Navajo Nation, the Lake Powell Pipeline (LPP) and other municipal and industrial projects, and for agricultural purposes.

Utah and the Navajo Nation are working cooperatively on a negotiated settlement that was introduced in Congress in 2017. A federal negotiating team has been engaged in evaluating the settlement proposal ahead of anticipated hearings on the bill and addressing congressional pre-conditions to the hearing.

In 2016, Utah filed the final license application to the Federal Energy Regulatory Commission for the LPP as a precursor to obtaining the various authorizations and approvals to construct the approximately 140-mile pipeline that will deliver up to 86,249 acre-feet of water per year from Lake Powell to 13 communities in southern Utah.

The state is actively involved in programs for salinity control, endangered fish recovery, conservation pilot projects and drought contingency planning.

1 Census: Utah is nation’s fastest-growing state, Desert News, December 20, 2016: deseretnews.com/article/865669806/Census-Utah-is-nations-fastest-growing-state.html
Even on the heels of an exceptional snowpack, Wyoming continues to plan for future drought conditions. The State Engineer’s Office (SEO) has been diligently working on a program to enhance and expand the existing State’s Colorado River Consumptive Use Program. Over the past year, the SEO has overseen the installation and commissioning of five new weather stations located throughout the basin(s). These new stations bring the total up to 10 within the Green River Basin alone. Additionally, the Consumptive Use Program is advancing its use of remote sensed data (satellite imagery) to further refine the consumptive use criteria associated with the diverse lands irrigated within the basin(s). Instead of relying on field-collected data gathered by humans, this technology allows for efficient data capture of consumptive use and helps better determine what inputs make for better estimates.

Another major effort in Wyoming has been the topic of drought planning to protect the state’s water users and understand potential impacts to those users downstream. This effort includes refinement of the existing State’s Plan but also extends the Plan by investigating projects that may be of use in future drought periods. One of those studies is being conducted by the Wyoming Water Development Commission — the “Fontenelle Dam and Outworks Infrastructure Completion” study. This study seeks to explore opportunities and the feasibility of gaining access to inaccessible portions of the reservoir pool. This may be accomplished by the addition of armoring to the face of the dam, thus protecting the dam face to a lower pool elevation than it is currently protected to. The project will also investigate power generation components/implications as well as consider the potential environmental impacts and/or benefits.
The Colorado River Basin Tribes Partnership, also known as the Ten Tribes 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, Fort Mojave Indian Tribe, Quechan Indian Tribe and Cocopah Indian Tribe.

The 10 member 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. Specifically, the Partnership intended to assist member tribes to develop and protect tribal water resources and to address 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 in the hopes of actively participating with the seven Basin States in negotiations relating to the Colorado River.

The water rights for the Fort Mojave Indian Tribe, the Chemehuevi Indian Tribe, the Colorado River Indian Tribes, 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 the present perfected rights as of the date the Boulder Canyon Project Act was passed. Water rights of the five Indian reservations were included in those present perfected rights and entitled to priority based on the establishment date of each reservation and dates of boundary adjustments thereto.

A portion of the Ute Indian Tribe’s 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, based on the establishment date of the Uintah Reservation, pursuant to 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 water rights by contractual agreement. The state and federal governments are currently in negotiations with the Tribe to complete the Ute Indian Water Compact, as required by Congress in the Central Utah Project Completion Act of 1992.

The water rights for the four remaining Partnership tribes have been determined to a certain extent through various settlements. However, not all of the water rights have been resolved.