COLORADO RIVER PROJECT

River REPORT

Summer 2017

A project of the Water Education Foundation

Keeping System Conservation Going on the Colorado River

By Gary Pitzer

Maintaining the Colorado River as a water supply source for about 40 million people and 6,300 square miles of farmland requires strength in numbers – physically and financially.

As the Lower Basin states of Arizona, California and Nevada continue to work to stabilize the water elevation of Lake Mead, there are several ongoing issues to consider – a possible Drought Contingency Plan, negotiations with Mexico on a continued binational agreement and the fate of the Pilot System Conservation Program.

Launched in 2014, the conservation program is unique in that it's a collective effort by the federal government and major urban water suppliers to pay for water-saving measures strictly designed to create "system water" for the benefit of everyone – from those in the Upper Colorado River Basin who need it to protect the water elevation of Lake Powell for hydropower production to those in the Lower Basin who want to avoid mandatory cutbacks should Lake Mead reach a critically low level.

"I think we have learned and proven that we can go out and get voluntary conservation from entities in the Lower Basin and put water in Lake Mead," said Steve Hvinden, manager of the Bureau of Reclamation's (Reclamation) Boulder Canyon Operations Office. Typically, districts undertake conservation programs to save water to use within their service area – not to leave it in a reservoir for all to benefit.

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Lake Mead

Dear Readers

Over the past two decades, water conservation has evolved from a drought-time response into an everyday practice for water users throughout the Southwest. Low-flush toilets, low-flow showerheads, drip irrigation and water-efficient appliances have become the norm in many cities in the Colorado River Basin. Many crops are now on drip irrigation and there is increased use of tailwater return systems, laser land leveling and precise irrigation scheduling on farms throughout the region.

At the system level, water recycling, conjunctive use of surface water and groundwater, and water banking projects are more and more common as water providers work to stretch limited supplies to meet demands. Banking water in Lake Mead through a variety of programs in recent years has helped maintain that reservoir's crucial elevation – avoiding an official shortage declaration that once seemed imminent.

In this issue of River Report, Writer Gary Pitzer looks at one such program, the Pilot System Conservation Program. Through this innovative program funded by the federal government and four water agencies in the Lower and Upper Colorado River basins, water conserved by any single entity was designated "system water" for the benefit of everyone. In total, some 98,000 acre-feet is expected to be in Lake Mead by the end of this year – equal to one foot of elevation. Although there is no federal funding currently available to continue with the program, stakeholders believe much has been learned through the development of the pilot projects that can be applied to future efforts to continue to reduce water use to help meet demand. •

– Sue McClurg

River Report *is a project of the Water Education Foundation*

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WATER EDUCATION
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The program has averaged $155 per acre-foot of water conserved in the Lower Basin.

Half of the projects funded under the program are completed with others in progress, including a 10-year program of golf course turf replacement in Needles, Calif., located in the Mohave Valley at the California-Arizona border. Reclamation "is in a bit of a holding pattern" regarding any additional funding in 2017, Hvinden said.

People in the lower and upper basins believe the program has helped provide the means to stabilize the Colorado River system's two largest reservoirs.

"I do think the program has been a success on multiple different accounts," said Colby Pellegrino, director of water resources for the Southern Nevada Water Authority (SNWA). "When we initially started, it was to determine if voluntary, compensated conservation with the system as a beneficiary was a viable option for responding to future drought and low lake levels and we have shown over the last three years that it is viable."

Voluntary, compensated, temporary conservation "has been reasonably well accepted in the Upper Basin and we have been able to properly predict the conservation that would occur on a particular site and are getting what we pay for," said Don Ostler, executive director of the Upper Colorado River Commission, which administers the program in the Upper Basin. Nongovernmental organizations that track Colorado River issues praised the results of the program.

"This Pilot System Conservation Program has really been one of the tools that is allowing us to re-balance use and supply," said Drew Beckwith, water policy manager with Western Resource Advocates in Boulder, Colo. "There needs to be a next generation of the program to make it permanent."

The Pilot System Conservation Program has funded, among other things, farmland fallowing, a project to inject treated wastewater into an aquifer and turf removal. In all, it's expected that 98,000 acre-feet of additional water will be in Lake Mead by the end of 2017 because of the program, Hvinden said, adding that about 80 percent of that arrived in 2015 and 2016.

> *"This has really been one of the tools allowing us to re-balance use and supply. There needs to be a next generation of the program to make it permanent."*
>
> *– Drew Beckwith, Western Resource Advocates*

Hvinden said the 98,000 acre-feet of water equates to a little more than 1 additional foot of water in Lake Mead, "but when you look at the water conserved under this pilot program along with the water conserved under similar programs such as Minute 319 and the drought Memorandum of Understanding, there is about 10 feet in Lake Mead that has helped keep us out of shortage," he said.

The 2007 Lower Basin shortage guidelines established reservoir levels in Lake Mead that could trigger shortage declarations in the Lower Basin, with Arizona and Southern Nevada to take the first cuts if the Secretary of the Interior, in the role as watermaster, were to issue a shortage determination. Underlying the need to ramp up conservation is what's known as the structural deficit of more than 1 million acre-feet between the demand and available supply of water from Lake Mead. For years water agencies have been attacking the deficit through a variety of methods that have added thousands of acre-feet of water to the lake.

Water "developed" through these pilot projects, banked water under another program called Intentionally Created Surplus, water stored in Lake Mead by Mexico and a wet winter are all credited with helping to push back concerns of a potential shortage determination to about a 30 percent chance in 2019, Hvinden said.

Participation in the program by water users in the Upper Basin states of Colorado, New Mexico, Utah and Wyoming occurred despite the perception by some that the effort was little more than a way to get water to the Lower Basin. Eventually, the need to protect Lake Powell's elevation combined with the financial incentive won out.

"Even though the politics were saying this could be a Lower Basin grab on the water, it was really to protect the junior users in the Upper Basin," said Bill Hasencamp, manager of Colorado River Resources for the Metropolitan Water District of Southern California (MWD).

Once the program was up and running "the interest outstripped the available funding in both the Lower Basin and the Upper Basin," Hasencamp said.

The program was funded by Reclamation, Denver Water, SNWA, MWD and the Central Arizona Project (CAP). About $20 million has been invested since 2014 in voluntary water conservation and reductions in use throughout the two basins. For example, the Tohono O'odham Nation in Arizona received more than $2 million to conserve more than 10,000 acre-feet of its water in Lake Mead instead of storing it underground.

Beckwith believes the program has merit and should continue. "It's unfortunate the funding for it is coming to a close," he said. "It's been a really valuable tool and I think we need to figure out what the next iteration of it is."

Should there be another phase, "we may need to sharpen how conserved water in the Upper Basin is accounted for," Ostler said, adding that while most people would agree the Pilot Program has been very successful in furthering learning and generating market interest in temporary, voluntary, compensated conservation, "there still remain a number of issues that need to be resolved before a full-scale program could become operational."

Successfully shepherding water into Lake Powell past many legal users with valid rights for diversion "creates a very significant, different and dynamic problem from what is faced in the Lower Basin," he said.

In the Lower Basin, when an agreement is reached to conserve water it often times is simply not released from Lake Mead and remains in the reservoir available for future use. In the Upper Basin, water conserved in the tributaries is left in the stream and must make its way past other legal diverters until it arrives at Lake Powell where it can protect against falling below critical elevations. But the water itself cannot be used by the Upper Basin users.

"What it also means is that the conserved water upon making it to Lake Powell is no longer available for future use in the Upper Basin because Powell sits below our current users. It's gone," Ostler said. "The only use it has is to provide continued power generation, compact protection and release to the Lower Basin."

Voluntary, compensated, temporary conservation has been reasonably well accepted in the Upper Basin and "we have been able to properly predict the conservation that would occur on a particular site and are getting what we pay for," he said.

Creating System Water

Including side flows, Lake Mead receives about 9 million acre-feet of water annually from Lake Powell. After delivering water to Arizona, Nevada, California and Mexico, and after evaporation and other subtractions, Lake Mead loses about 10.2 million acre-feet each year.

In its 2017 report, *Arizona's Water Future: Colorado River Shortage, Innovative Solutions, Living Well with Less*, Western Resource Advocates said a declining Lake Mead means trouble for the Grand Canyon state.

"If water management actions do not change and water levels in Lake Mead continue to fall, progressively larger reductions will be required that eventually will impact Arizona's cities and towns," the report said. "As the law is written today, cuts to central Arizona cities could happen before 2020, but proposed additional cutbacks currently being negotiated may impact cities even sooner."

A Lake Mead elevation of less than 1,075 feet above sea level would trigger an initial shortage determination by the federal government. Should the elevation fall below 1,025 feet, Arizona, which is allocated 2.8 million acre-feet of water annually from the river, would see its supply drop by 480,000 acre-feet.

For decades, Arizona has undertaken activities to bank any unused portion of its Colorado River allocation in preparation for an eventual shortage. Officials there have been working on creating "protection volumes" through the Pilot Drought Response Action Memorandum of Understanding (MOU), a companion of the Pilot System Conservation Program that involves agricultural districts, cities and CAP.

"We have shown we can implement programs to conserve water in Lake Mead that have a meaningful impact on elevations and help us avoid and forestall shortage," said Suzanne Ticknor, CAP's director of water policy. "To address the structural deficit you can reduce demand or increase supply."

More than 500,000 acre-feet of CAP water will have been conserved in Lake Mead by the end of 2017 through the MOU, according to Ticknor.

Leveraging water conservation through federal and non-federal investment is generally viewed as a worthwhile pursuit.

"I absolutely think [the Pilot System Conservation Program] has been a success and I think everyone would agree," said Taylor Hawes, Colorado River program director with The Nature Conservancy. "The only difference might be we still haven't finished learning all we hoped to learn from the process. I think there's still some synthesis that needs to occur and I think that is more applicable in the Upper Basin than the Lower Basin since this is a brand new program in the

One pilot project provided funds to Coachella Valley Water District to help farmers convert more than 600 acres from flood to drip irrigation. Above, a date orchard.

Upper Basin whereas the Lower Basin has experience running the Intentionally Created Surplus program prior to the SCPP."

SNWA, CAP and MWD have jointly funded various projects to benefit the Colorado River system over the past 20 years, including construction of Brock Reservoir in Imperial County, pilot runs of the Yuma Desalter and water conservation projects in Mexico. SNWA alone has committed $3.5 million to the Pilot System Conservation Program.

"While the commodity created is system water, the true value to the entities is higher lake elevations," Pellegrino said.

In 2007, in the midst of a multi-year drought, the "Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead" were adopted, launching a 20-year agreement designed to ease tensions about water deliveries and creating the means by which some additional water could be made available for use.

Market forces are regularly used for water management. Often, water rights holders are paid not to use a set amount for a designated period, with the water transferred to another use.

"The costs are higher but you are willing to pay more because there is a direct correlation," Hasencamp said.

In 2013, as drought was pulling down Lake Powell, the groundwork was established for the Pilot System Conservation Program. In 2014, Reclamation and four urban water agencies – Denver Water, SNWA, CAP and MWD – agreed to a total funding package of $11 million ($3 million from Reclamation and $2 million each from each water agency).

"It was an historic agreement involving entities from both basins coming together along with Reclamation to pool their funding," Hvinden said.

The agreement allocated $2.75 million for conservation projects in the Upper Basin and $8.25 million in the Lower Basin. Two years later an additional $100 million was appropriated for drought, with Reclamation receiving $3.5 million for Lower Basin activities, which was essentially matched by the water agencies.

Implementing the program in the Upper Basin was contingent on convincing people it was not merely a water grab by Lower Basin interests, Hasencamp said.

"It took some time and optics to get past the politics and then it turned out to be a very successful program," he said.

The Pilot System Conservation Program is anchored by selection criteria that include geographic and water sector diversity, cost, ease of implementation, minimal third-party impacts and the opportunity to test new approaches and new ideas.

Unanimous decision-making was required "every step along the way," Hvinden said, noting the task was sometimes "difficult logistically."

"It took us a while to figure out forbearance (water users agreeing to not use

As viewed from the Landsat 8 satellite, Lake Mead reached a record low point on May 23, 2016.

the conserved water) within the states," he said. "There is a different approach needed in California versus Arizona. It wasn't like we had a manual on the shelf. We had to improvise and figure things out as we went along."

Going into the program, MWD, SNWA and CAP knew that groundwork had been established for cooperative agreements.

"In the Lower Basin, we knew more about projects so we knew we could do this," Hasencamp said. "We just weren't sure of the cost and the participation level, and I think were pleasantly surprised by both." The program focused on funding a variety of municipal and agricultural projects in all seven states.

The scope of the program went beyond the well-known "buy and dry" approach in which water is acquired at the expense of idled farm acreage. One project saw more than $500,000 awarded to the city of Bullhead City, Ariz. to construct injection wells in which treated wastewater is deposited into the aquifer for two years, producing more than 4,000 acre-feet of water.

The project "started out as kind of an interesting, a little bit crazy, idea that we would be able to take water that we are currently evaporating from our ponds and be able to inject that in the water ... little did we know it was going to be over a half million dollars," City Manager Toby Cotter told the Mojave Valley *Daily News* when the money was awarded in 2015.

Pellegrino said the intent was to make the Pilot System Conservation Program well-rounded in its application.

"There was a whole list of [selection] criteria included in the original agreement," she said. "We were willing to take a little broader look than just cost in making those determinations and we were able to find cost-effective projects across all the criteria that we were interested in evaluating."

Not all the proposals for funding were of the kind Reclamation and its partners were looking for. "One thing we discovered was that some projects that came to us were more of the research or experimental variety," Hvinden said. "They might be interesting projects but if the cost per acre-foot is several thousand dollars, we didn't think the pilot program was the appropriate vehicle for funding those kinds of projects."

Some projects were more successful than others. The Coachella Valley Water District in Southern California secured a $1 million grant to help farmers convert more than 600 acres from flood to drip irrigation.

"The big problem we ran into was reservoirs," said Katie Evans, Coachella's conservation manager. "In order to get off flood irrigation and on to drip irrigation, you need a reservoir. While our program was paying enough for the actual conversion, the upfront cost of the reservoir was a hindrance. It was more of hurdle than we expected because the reservoir costs were so high."

To date, two projects have been completed, converting 54 acres from flood to drip irrigation. An additional 90 acres are currently approved to move forward.

"I do think this is a really good program and a good effort," she said. "We are proud of the success we have seen so

Agencies to Continue Conservation Programs

Water conservation programs for the benefit of one or several water agencies will continue as they seek to protect water levels at Lake Powell and Lake Mead. MWD for years has pursued agreements with agricultural irrigation districts along the river in which farmers have been compensated to fallow land or alter their harvesting practices.

"They are not making that much money off [the forage crops] so we pay them to skip that summer planting," Hasencamp said. "I think it is a win-win program that could be moved out to a broader region."

Beckwith said the method is an innovative approach to improved water supply management.

"Some of the split season leases have a lot of promise and have found a lot [of] benefit for not only water supply but for the farmers themselves," he said. "It's not a full fallowing of the whole year but maybe not a third cutting of alfalfa when it's 100 degrees outside in August."

CAP has employed compensated rotational fallowing in the Yuma-Mesa Irrigation and Drainage District with the idea that "you don't permanently dry up the land," Ticknor said, adding "in terms of affordability and in terms value, it was a good deal for both parties."

In another undertaking, MWD has purchased 12,000 acres in the Palo Verde Irrigation District in an effort to promote increased water use efficiency. Under the agreement, farmers receive reduced rent payments if they demonstrate they are using 30 percent less water through measures such as drip irrigation, low-water crops and deficit irrigation during the summer.

"Historically, the rest of the valley is close to 5 acre-feet of water per acre of land so if we can get them down from five to three and a half … they get about a 40 percent reduction in rent," Hasencamp said.

Conversely, the inability to reduce water means higher lease rates.

"The concept is like a tiered pricing system," Hasencamp said, adding the idea is something that could be used on a broader scale.

"Right now, he said, "there's no incentive for the higher priority water users to be more efficient so we have to figure out ways to incentivize that." •

far and excited for the projects that are still in the works, but this was the first time we tried to do a rebate program related to irrigation of agricultural land and we had a bit of a learning curve."

Making System Conservation Work in the Upper Basin

There are similarities and differences in the creation of system water in the two basins. "The Upper Basin program is a drastically different animal than the Lower Basin," said Ostler. "There is a whole different set of issues and problems."

For one thing, there is the geography. In the Lower Basin, Lake Mead sits above the big cities and farms and is the bank where conserved water is stored. Not so in the Upper Basin where Lake Powell sits below the majority of water users. For the Upper Basin states, it is the projects associated with the Colorado River Storage Project Act (CRSP), approved by Congress in 1956, which provide their share of the Basin's Colorado River allocation. These Upper Basin projects include the Central Utah Project and nine others in Wyoming (including Flaming Gorge Dam), Colorado and New Mexico.

Conserved water stored in Powell cannot be used and cannot be returned to its user, making the benefits of saving water – mainly the protection of Lake Powell and its valuable hydropower production – not as apparent as the necessity of maintaining Lake Mead's elevation. There is the matter of precedent as well. The major urban water providers have for years sought ways to achieve the greatest benefit from a Colorado River supply system besieged by drought, a logical progression that led to the Pilot System Conservation Program.

"In the Lower Basin, this program expands and scales up these kinds of projects but because they already have the [Intentionally Created Surplus] program, this is not that new to them but it is new to the Upper Basin," Hawes said. "There are very big differences between the Upper Basin and the Lower Basin, and we are learning so much right now in the Upper Basin, but I feel like we still have a lot more to glean from the Pilot System Conservation Program."

Administration of the program in the Upper Basin has sometimes been "very challenging because of the requirement for all five funders to be directly involved in most decisions and financial transactions," Ostler said. "This has at times resulted in delays that have not been satisfying to project recipients."

"The delays, timing and the red tape – our view is that future programs need to address that," he said. "It can be done differently if there is a will."

A major factor in the Upper Basin is honing the means for accounting for the reduced water use upstream of Lake Powell and perfecting the process by which the water makes its way to the lake when it's needed.

"In order to meet a conservation objective we have to anticipate that need and begin all these activities well in advance to contract and get everything worked out," Ostler said. That also increases the risk that hydrology may suddenly get wet making the advance conservation not needed.

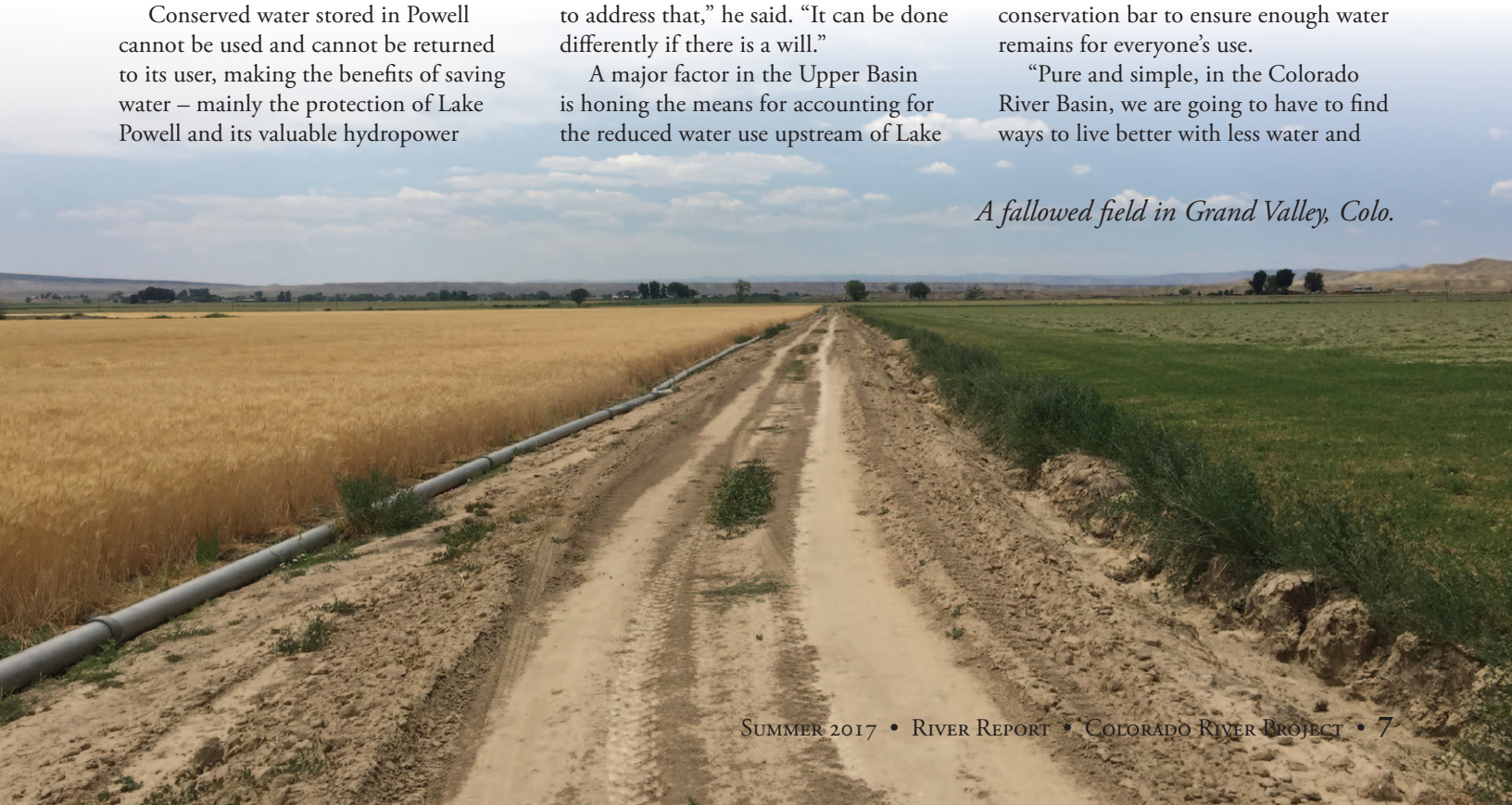
"We want to look at more of a banking and storage program that might store water higher and would still allow Upper Basin users to benefit from the water at a later time when it's not needed at Lake Powell," he said. "If it's needed, it can get there in a shepherded way and a timely way. There is study and research that need to be done to figure out how that may work."

Finding an Equitable Solution

Reclamation is required to provide a report to Congress in 2018 evaluating the effectiveness of the pilot projects and whether the overall program should be continued.

Regardless, it is clear Colorado River water users will have to raise the conservation bar to ensure enough water remains for everyone's use.

"Pure and simple, in the Colorado River Basin, we are going to have to find ways to live better with less water and



A fallowed field in Grand Valley, Colo.

that's especially true in the Lower Basin where … we are using 1 million more acre-feet each year than what comes into Lake Mead," Beckwith said.

Facing many challenges, Colorado River water users will continue to wring every drop of conservation from the system possible while preserving the legacy of the river's beneficial uses.

"Certainly there are ways to keep agriculture productive but to tighten up the belt … and there are definitely opportunities in the future," Hasencamp said. He noted that all the programs used to create system water "have their pluses and minuses." Fallowing "is very easy to implement; it's quick but it's only one year and it's done."

Beckwith said he believes water users will have to agree on further compensated conservation measures as they negotiate the next iteration of shortage guidelines, beginning as soon as 2020.

"My hunch is we are going to need to figure out how to keep the program going before 2027," he said. "It's going to be needed and it's going to be useful and I don't think we can put it off another 10 years."

Paying for further system conservation could remain within the Reclamation/water agency partnership or could emerge through a new, more encapsulating basin-wide fee, according to Beckwith. "For everyone that uses the Colorado River, maybe they chip in a couple of pennies," he said. "It seems to me that would be one of the equitable ways to fund this solution."

While maintaining adequate elevation at Lake Mead, it is equally important that resources exist to protect water levels in Lake Powell should the need arise.

"Ultimately, if we use it for the tool we need it for – to respond to low reservoir conditions at Lake Powell – development of additional funding sources out of the Upper Basin would become important," Ostler said, noting that "the administrative efficiency of the program needs to be addressed in the future."

"We are winding down this effort and I think we will take a pause and see what worked well and how we want to maybe roll out a longer-term program."

– Bill Hasencamp, MWD of Southern California

People in the Lower Basin "are probably going to need to find a long-term way to do this to reduce the structural deficit" while those in the Upper Basin seek a clearer definition of what system conservation means and how it's achieved, Hawes said.

"In the Upper Basin, we are several years behind the Lower Basin when it comes to this kind of program," she said. "There is still a lot more socializing that's required to get farmers comfortable with this – to establish a market, to ensure that we have the right governance, and we need accounting protocols in Lake Powell – so there's a lot more work to be done. Our hope is that by having a wetter year this year it takes a little pressure off though we need to keep the foot on the pedal to ensure that we continue to answer these questions as quickly as possible because there are a lot of them."

A continuation of the Pilot System Conservation Program would require the financial commitment by the major water suppliers and most likely Reclamation. Whether more money is coming to fund another round of projects remains to be seen. "It wasn't intended to be a long-term continuous deal," said Hasencamp. "We are winding down this effort and I think we will take a pause and see what worked well and how we want to maybe roll out a longer-term program."

Despite the apprehension of some users, the Pilot System Conservation Program has been well-received. "There is a pretty significant appetite in the agricultural community to participate voluntarily with compensation," Ostler said. "We have had a relatively smaller amount of dollars but a large number of projects."

While the system conservation pilot programs have not specifically targeted areas that could use the ecological benefit of having more water in the river, Beckwith said he would "certainly like to see" that be a focused part of the next iteration of the System Conservation Program. "There have to be ways to benefit the stability of water users and benefit the environment at the same time," he said.

Reclamation is poised to continue the program if additional funding emerges.

"We are prepared if more funds from either our partners or the U.S. were to happen," Hvinden said. "We have the ability to continue the program and there are a couple of projects that could be extended."

Hawes said she believes the program "will continue in some form," though it will be necessary to ensure it's designed to achieve its goals in the most effective manner.

"We want to make sure we learn as much as possible from the existing program before we set off on a long-term program," she said. "There are questions around how we pay for a long-term program that haven't been answered; there are questions around making sure that we can protect the water down to the water user and past others water users' head gates."

A future version of the program could include "two types of programs," Hawes said. A "proactive" program would feature continued investment in shortage avoidance measures while a "reactive" side, likely during a "crisis" scenario, would occur if Lake Powell is in danger of not meeting its delivery obligation to the Lower Basin or if its hydropower production capability is threatened.

"We are going to have to find ways to fund a program like that," she said. "I don't think it can rest solely on the

cities' shoulders. It's going to need to be a basin-wide funding stream."

Part of the fate of the Pilot System Conservation Program rests with the Upper Colorado River Commission. "My commission indicated their desire to understand some of the policy questions and lessons learned, and make a thoughtful, reasoned decision about what the future might be and how such a program would be run if there is a desire to have one," Ostler said. "We will look at this during the summer and come to an appropriate conclusion."

The response to the Pilot System Conservation Program in the Lower Basin was encouraging, according to Hvinden. "I feel good about the fact we got projects across all three states and that we got a wide variety of projects from all classes of users," he said.

Investing in future programs to boost Lake Mead means ensuring the cost-effective approach, said Hvinden, adding that methods such as desalination projects for groundwater fell beyond the scope of what funders of the Pilot System Conservation Program were after.

"Those might be good ideas to explore but I think ultimately the pilot program was about getting the most water in Lake Mead with the limited budget we had," he said. "I think we learned that ultimately, although there were a number of considerations in selecting proposals I think that probably getting the biggest bang for the dollar and the cost per acre-foot ended up being pretty important criteria for selecting projects."

Estimates are that a shortage declaration will not occur in 2018 but its eventual likelihood means the imperative of further system conservation will increase.

"I do see the ability to extend it to the future given funding," Ticknor said. "We have had success and there will be a continued need for this important tool to continue to manage and mitigate the risk of Lake Mead dropping in elevation."

Keeping the program going with funding from the major players remains

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Calendar

August

8-10 **Western Water Seminar**
Sponsored by National Water Resources Association, Santa Fe, NM
http://www.nwra.org/2017-wws.html

22-24 **Summer Conference**
Sponsored by Colorado Water Congress, Steamboat Springs, CO
http://www.cowatercongress.org/summer-conference.html

24-25 **Arizona Water Law**
Sponsored by CLE International, Scottsdale, AZ
http://www.cle.com/product.php?proid=1672&src=Featured&page=Arizona_Water_Law

September

6-9 **Arizona Hydrological Society Annual Symposium**, Flagstaff, AZ
https://azhydrosoc.org/for-members/annual-symposium

11-12 **New Mexico Water Law**
Sponsored by CLE International, Santa Fe, NM
http://www.cvent.com/events/new-mexico-water-law-conference/event-summary-8e8558e6e7ef40d98ccd02c9532d4de0.aspx

October

4-6 **WaterSmart Innovations 2017 Conference and Exposition**, Las Vegas, NV
https://www.watersmartinnovations.com

18-20 **Fall Council Meeting**
Sponsored by Western States Water Council, Albuquerque, NM
http://www.westernstateswater.org/wswc-fall-185th-council-meetings-albuquerque-nm

November

15-17 **National Water Resources Association Annual Conference**, Tucson, AZ
http://www.nwra.org/upcoming-conferences-workshops.html

December

13-15 **Colorado River Water Users Association Conference**
Sponsored by Colorado River Water Users Association, Las Vegas, NV
https://www.crwua.org/conferences/future-annual-conferences

Check out the Foundation's online calendar for more events. And contact Susan Lauer with your calendar items from January 2018 through June 2018 for inclusion in the Winter issue of River Report, slauer@watereducation.org or 1401 21st Street, Suite 200, Sacramento, CA 95811

IID Seeks Firm State Commitment on Salton Sea Rescue

California's Salton Sea, fast approaching a terminal condition, could see help coming soon through the combined efforts of the state and local agencies.

On July 10 *The Desert Sun* in Palm Springs reported that the Imperial Irrigation District (IID), Imperial County and San Diego County Water Authority (SDCWA) are working toward a "consensus" agreement with the state that would satisfy IID's concern about the deteriorating conditions at the Salton Sea, a large, saline body of water located in the Imperial and Coachella valleys in the state's southeastern corner.

IID receives an annual allocation of more than 3 million acre-feet of water from the Colorado River, the most of any user. The agency has long pleaded with the state to come up with a plan for the Salton Sea that deals with air quality and environmental impacts of the receding waterline, with a special focus on the restoration plan that was promised as part of the 2003 Quantification Settlement Agreement.

"At the end of the day, what we really want to see – I think what everyone wants to see – is projects built on the ground," IID General Manager Kevin Kelley told the paper.

The state has offered an initial plan for the Salton Sea that would construct projects to create habitat and minimize dusty emissions. In a statement, Secretary for Natural Resources John Laird said the plan would provide the "backbone infrastructure we need to limit airborne dust and create lower-salinity zones that sustain tilapia."

IID welcomed the overture and wants to make sure the state follows through on the plan by making it an order of the State Water Resources Control Board, according to The Desert Sun report, which noted that IID's participation in a Colorado River Drought Contingency Plan could be in jeopardy in the absence of state action.

Bruce Wilcox, assistant secretary for Salton Sea policy with the state's Natural Resources Agency, told the paper that the effort by IID, Imperial County and SDCWA shows "everyone [is] pretty much on board with a plan moving forward" and that "minor details" remain to be resolved.

California's largest lake, the 35-mile long, 15-mile wide, Salton Sea has been shrinking for 13 years as less agricultural runoff reaches it because of the 2003 water transfer from IID to San Diego. According to the Pacific Institute, windblown dust emissions from as much as 100,000 acres of exposed lakebed will worsen the already poor air quality in the Imperial and Coachella valleys.

The late June heat wave in the Southwest increased the amount of decaying organic matter at the Salton Sea and the resulting hydrogen sulfide caused a rotten egg stench that locals are all too familiar with.

In 2015 Gov. Jerry Brown formed the Salton Sea Task Force to meet the short-term goal of creating as much as 12,000 acres of habitat and dust suppression projects and a medium-term plan to construct 18,000 acres to 25,000 acres of habitat and dust suppression projects. In March, the Natural Resources Agency released the 10-year, $383 million Salton Sea Management Program, which aims to cover about 60 percent of the exposed playa.

The document noted that "over the last 40 years numerous ideas and plans have been proposed by various entities to restore the Salton Sea [but] none have been implemented for a variety of reasons, including lack of a shared vision, funding constraints and reduced inflows."

The first phase of the 10-year plan is designed "to expedite construction of habitat and to suppress dust on areas of playa that have been or will be exposed at the Salton Sea by 2028."

There is $80 million available for funding the first four years of the plan. After that, it's estimated the annual funding need will range between $30 million and $40 million.

"In essence, the current plan provides clear habitat and public health benefits over the next four years and then defines the funding needs on an annual basis to continue to meet future needs," according to an analysis by the Assembly Water, Parks and Wildlife Committee. "The plan identifies some funding options, but falls short of identifying the entire funding gap."

State Sen. Ben Hueso, D-San Diego. is carrying SB 701, the Salton Sea Obligations Act of 2018, which would place a $500 million bond before voters in the November 2018 general election to fund the projects in the Natural Resources Agency's 10-year plan.

"The state made a commitment almost 20 years ago to undertake the restoration of the sea and has spent million on studies and plans, which have yielded few results," Hueso said in a statement. "These issues have greatly elevated the concerns at the sea and have made this a statewide matter that requires everyone's cooperation. I am hopeful that the funding provided by this bond, will set in motion the first phase of the Natural Resources Agency's 10-year plan at the sea by providing the necessary funding to see it through." •

– Gary Pitzer

FEATURE

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a possibility depending on the desire of the various boards of directors. Then there is the question of what a new set of Colorado River operating guidelines looks like once the existing ones end in 2026. The Lower Basin states are pursuing a Drought Contingency Plan to take voluntary cuts to stave off a federal shortage declaration.

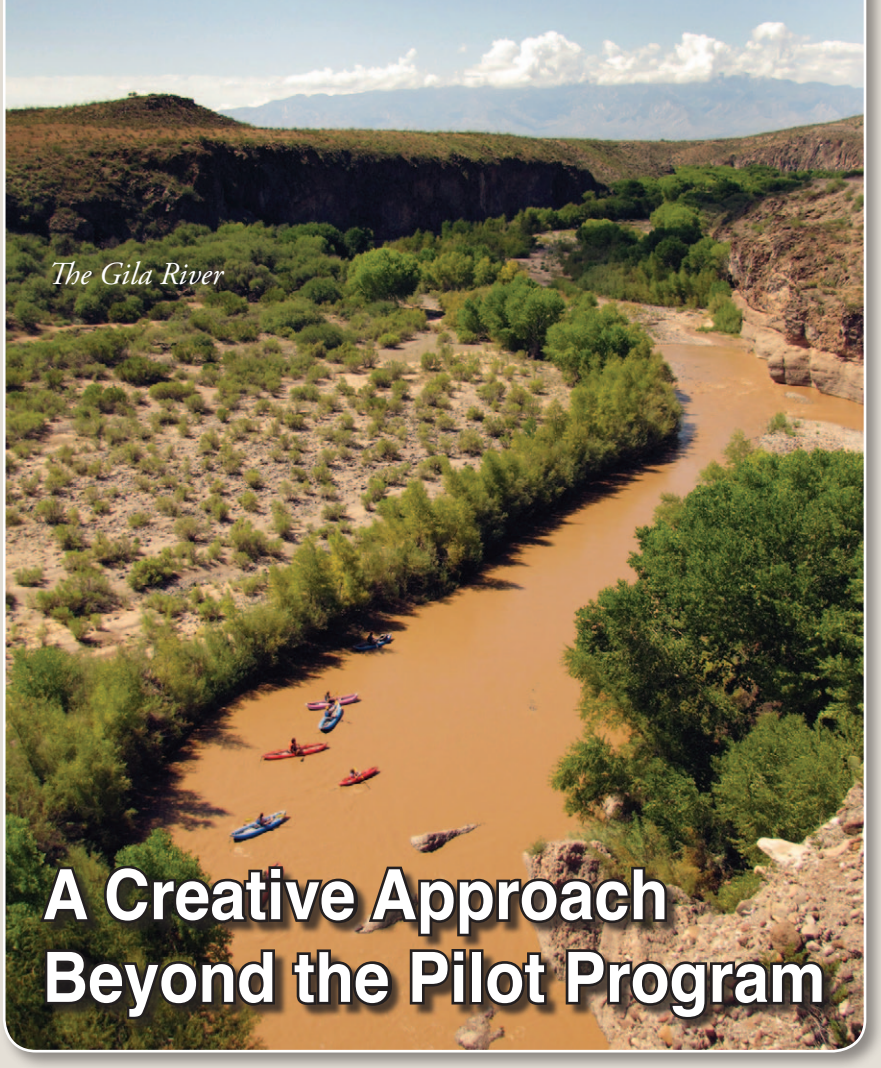
"Assuming we approve it, the Drought Contingency Plan is an overlay of those guidelines to help stabilize the river in the short run but we have to decide what the river is going to look like after 2026," Hasencamp said. "There are going to be a number of tools and I think system conservation is going be a part of it. Who is going to fund it and where the money coming from, that is a big question."

It doesn't seem likely that the individual water agencies would fund a continuation of the program without federal financing.

MWD "is not really interested in spending a lot of money on this because I don't think that's a good model," Hasencamp said. "But if there's other ways to generate funding through a water user fee, a hydropower charge, there are any number of ways to get money that would help establish a long-term program and that's something I think we need to explore."

Pellegrino with SNWA said her agency is "agnostic" about the type of projects funded under a future program "as long as they are cost-effective and meet the needs of getting water into Lake Mead."

Getting water into Lake Mead and protecting the elevation of Lake Powell remain in the interest of water users in both basins. Whether that means a continued Pilot System Conservation Program or some other means, Colorado River water users know there is little time for respite. •



The Gila River

A Creative Approach Beyond the Pilot Program

Beyond the Pilot System Conservation Program are other efforts to creatively manage the Colorado River supply. In March, the Gila River Indian Community, Arizona Department of Water Resources, city of Phoenix and the Walton Family Foundation announced a partnership that allows the city to store some of its water in the Community's expanding groundwater storage facility.

"The good news is that there is a shared sense of urgency – among the seven river basin states, local communities, tribal governments, the federal governments of the United States and Mexico, and conservation groups – to tackle the myriad challenges facing the river," wrote Ted Kowalski, senior environment program officer with the Walton Family Foundation, after the agreement was announced. "This program allows water users to temporarily, voluntarily and in a compensated manner conserve water for the benefit the system, and we are proud to support the future of this type of program."

The plan calls for Phoenix to store as much as 3,800 acre-feet of the water it gets from the Colorado River in the Gila River Indian Community's Olberg Dam Underground Storage Facility. Phoenix would pay the Community a storage fee to maintain and expand the facility.

The Gila River Indian Community controls the largest share of water delivered by the Central Arizona Project.

Water stored underground could be recovered, and in exchange, the Community would provide Phoenix with Colorado River water during times of shortage.

"This agreement is an important step to continue cooperative efforts to help slow the falling elevations at Lake Mead," Stephen R. Lewis, governor of the Gila River Indian Community, said in a statement. "Having the largest entitlement of Colorado River water delivered through the CAP system, the Community recognizes that it can make its supply available in times of need." •

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