

*A project of the Water Education Foundation*

## An Interview with Reclamation Commissioner Mike Connor

Michael L. Connor was confirmed Commissioner of the U.S. Bureau of Reclamation by the United States Senate on May 21, 2009. Connor has more than 15 years of experience in the public sector, including having served as Counsel to the U.S. Senate Energy and Natural Resources Committee since May 2001. At the committee, Connor managed legislation for both the Bureau of Reclamation and the U.S. Geological Survey, developed water resources legislation and handled Native American issues that are within the Energy Committee's jurisdiction.

From 1993 to 2001, Commissioner Connor served in the Department of the Interior, including as deputy director and then director of the Secretary's Indian Water Rights Office from 1998 to 2001. In this capacity, Connor represented the Secretary of the Interior in negotiations with Indian tribes, state representatives, and private water users to secure water rights settlements consistent with the federal trust responsibility to tribes.

Foundation Executive Director Rita Schmidt Sudman interviewed Commissioner Connor in late May; he was a speaker at the Border Governors' Binational Desalination Conference

cosponsored by the Water Education Foundation. Held in San Diego, the conference brought together representatives from international, federal, state, and local agencies on both sides of the border and from industry to share information about projects now underway or in various stages of planning; financing approaches for such projects; and new developments in desalination technologies and project design.

**Rita Schmidt Sudman:** *When you leave this job what are some of the goals you want to have accomplished?*

*Continued on page 4*



## Dear Readers

*News came to us suddenly in May about the death of our dear friend, Chips Barry. Chips was on our Colorado River Project Advisory Committee and had helped us plan many of our biennial Colorado River Symposia. I first met him in the early 1990s when he became Manager of Denver Water. He was all the things that were attributed to him upon his death – an early proponent of conservation, an advocate for the use of recycled water, and a superb negotiator. I know he improved relations with his Colorado neighbor water districts, but he also saw the bigger picture. He was a founder of the Western Urban Water Coalition, which represents all the major water utilities in the West.*

*His most important role to me, however, was as a fellow member of Water For People – the international nonprofit organization dedicated to safe drinking water and sanitation worldwide. Out of college in the '60s, Chips had been a VISTA volunteer in rural Alaska. I know he never forgot the need for clean drinking water as a way to raise the local standard of living. We served on the Water For People board together for about six years and I always admired his dedication. He thought and lived beyond our Western water issues and tried to improve the water situation for those in the developing world. I often followed his wise counsel.*

*Before Chips died, Jim Lochhead, also our friend and advisor, able lawyer and former head of the Colorado Department Natural Resources, was appointed CEO and Manager of Denver Water. I know that Chips looked forward to showing Jim the ropes. And I know Chips' spirit is with Jim.*

*Rita Schmidt Sudman*

### Colorado River Project Advisory Members

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Herb Guenther, Arizona Department of Water Resources  
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The mission of the Water Education Foundation, an impartial, nonprofit organization, is to create a better understanding of water resources and foster public understanding and resolution of water resource issues through facilitation, education and outreach.

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# Basin Briefs

## Science Symposium Proceedings Now Available

The proceedings from the 2008 *Coming Together: Coordination of Science and Restoration Activities for the Colorado River Ecosystem Symposium* held in Scottsdale, Ariz., is now available on line: <http://pubs.usgs.gov/sir/2010/5135>. The proceedings features 41 peer-reviewed scientific papers by experts on a variety of topics related to Colorado River Basin resource management, including overviews

of the four Colorado River restoration programs, water-management actions aimed at restoring native fish habitat, climate change, assessments of the status of native and nonnative fish populations, and Native American perspectives.

The Water Education Foundation organized the symposium, which was sponsored by the U.S. Geological Survey – Southwest Biological Science

Center; Glen Canyon Dam Adaptive Management Program; U.S. Fish and Wildlife Service; Upper Colorado River Endangered Fish Recovery Program; Lower Colorado River Multi-Species Conservation Program; U.S. Bureau of Reclamation; National Park Service; Colorado River Fish and Wildlife Council; and the San Juan River Basin Recovery Implementation Program. •

## Upper Basin

### Agreement Funds New Studies on Desalting Brackish Groundwater

In February, the U.S. Bureau of Reclamation (Reclamation) and New Mexico State University signed onto a new plan to study new treatment technologies at the Brackish Groundwater National Desalination Research Facility. Under terms of the \$5 million agreement, research will focus on affordable, low-maintenance and reliable treatment methods for small brackish groundwater treatment facilities.

Reclamation Program Manager Kevin Price said a main goal of the new research program will be to find out how to use renewable energy sources, such as solar, to power small reverse osmosis treatment systems that can be used to treat brackish groundwater in rural areas. Other research goals include finding ways to dispose of the brine left over after the salt is removed from the source water.

The joint Reclamation-New Mexico State program will use the Brackish Groundwater National Desalination Research Facility as a laboratory to study research, demonstration, education and outreach opportunities with brackish water. •

## Lower Basin

### New IBWC Agreement Promotes Binational Cooperation

The United States and Mexican sections of the International Boundary and Water Commission (IBWC) signed a new agreement, Minute 317, in June to create a process in which the two countries can develop programs to improve the binational management of the Colorado River. The “Conceptual Framework for U.S.-Mexico Discussions on Colorado River Cooperative Actions” was signed by U.S. Commissioner Edward Drusina and Mexican Commissioner Roberto Salmón and subsequently approved by both governments.

The Minute notes the interest of the Commission in exploring opportunities for binational projects that conserve water, minimize the impacts of potential

Colorado River shortage conditions, and generate additional volumes of water using new water sources by investing in infrastructure such as desalination facilities. The agreement also notes interest in the possibility of permitting Mexico to use U.S. infrastructure to store water.

The two commissioners agreed to form a binational consultative council. The U.S. and Mexican governments, Colorado River basin states and IBWC representatives would make up the council. The Minute formalizes the meetings stakeholders and governmental officials on both sides of the border have already been holding to discuss to water conservation, new water sources, system operations and the environment. •

**Now Available!**

### **2009 Colorado River Symposium Proceedings**

This 160-page book can be ordered on-line at [www.watereducation.org](http://www.watereducation.org) under the Products tab.

## FEATURE

*Continued from front page*

**Mike Connor:** I think some of the goals are conceptual goals that will have practical value in a lot of different places. I've boiled it down to just a couple of simple talking points – certainty and the sustainability. Water users want certainty whether it's resolving any water settlements, whether it's dealing with environmental issues, or whether it's supplementing supply. All of those provide certainty. And the sustainability captures all of the other elements. Whether it's environmental impacts with water use, whether it's the energy implications of water use – all of those things bring in sustainability. So there are opportunities.

There are opportunities to supplement supply with the water reuse projects, and there are certainly increases worthy of Title XVI [funding]. Hopefully, we'll see a new generation of desalination on projects which we're doing through our Title XVI program. But we're also working elsewhere on new [power] generation. These incorporate new technologies that are less energy intensive. There is an opportunity for some big deals in Klamath Basin; when you look at restoring that river, removing the hydro-powered dams that have really run their course as far as their utility. There are long-term benefits there.

**Sudman:** *You came to this job from the Hill with a totally different background than long time Bureau guys who usually get this job. So, has that been an advantage to you or a disadvantage?*

**Connor:** I think the jury's still out on whether it's an advantage or a disadvantage. I had the advantage though of spending seven years at the Department of Interior beforehand. And the last couple of years, when I was running the Indian Water Rights settlement program, I worked very closely with Reclamation so I have a lot of familiarity. I think overall it's an advantage. I think it helps to understand working with Capitol Hill and how



D.C. works. And applying that to prior experience with how the Agency works I think is kind of a benefit – the best of both worlds. And I think it's helped in some of the varying initiatives that we had for the last year.

**Sudman:** *Probably your background has been helpful finding funding for the Bureau's initiatives. Also we now have*

*the (federal) Recovery Act. Has that been helpful to you in funding certain projects in the West?*

**Connor:** Oh, absolutely. The Recovery Act has been very key for some of the progress that I think we're making. For the Bureau of Reclamation the \$950 million that we got in the Recovery Act, we were able to use it for its intended

### Reclamation Projects Funded by Federal Recovery Act

The Department of the Interior received \$3 billion under the American Recovery and Reinvestment Act of 2009 (ARRA) – \$1 billion of that is being distributed by the U.S. Bureau of Reclamation (Reclamation) for a wide variety of projects throughout the 17 Western states. Much of this funding is going to one-time infrastructure projects.

Recovery Act projects in the Lower Colorado River Region include: removal of 1.2 million cubic yards of sediment from behind Imperial Diversion Dam; purchase of a new hydraulic dredge for use in support of Colorado River channel maintenance for the 276 river miles of the Lower Colorado River from Davis Dam to the border with Mexico; upgrading the Yuma Desalting Plant's main outlet; and replacing 21 existing groundwater wells with

new, high-capacity production wells near Yuma, Ariz.

Reclamation also provided \$600,000 toward completion of the \$3.2 million Upper San Gabriel Valley Municipal Water District's Rosemead Extension Pipeline Project – the first Title XVI project constructed in Southern California using Recovery Act funds.

Recovery Act projects in the Upper Colorado Region include: construction of a security fence and vehicle access improvements at the Rio Grande Silvery Minnow Sanctuary located in southwest Albuquerque; construction of 20 miles of effluent distribution pipeline for a Title XVI project in Albuquerque; and construction of a boundary fence that will delineate Reclamation property and assist with land management on the Animas-La Plata Project. •

– Sue McClurg

purpose which is to use it towards projects that would stimulate the economy, that would create jobs whether it be the equipment, the manufacturing of equipment that we need and the construction aspects. So, we were able to apply it directly for its intended purpose. But we were able to deal with a lot of policy with the investments in the Title XVI projects with rural water projects.

**Sudman:** *We're here today on the California border in San Diego discussing desalinization. Border issues have to be important to you because several Reclamation states are on the border with Mexico. What have you come to tell us about desal in the border area today?*



**Connor:** I just want to say that Reclamation is doing and supporting desalination efforts on a whole bunch of fronts. Title XVI will help with some of the issues that dominate the Colorado River landscape. In the desalting plant process and some of the cooperative agreements that we've got, we have to address salinity. So we've got to deal with that in the Colorado River operations. Finally, we've got the brackish groundwater desalination research facility in New Mexico, and we're placing a lot of

*“Desalination is not a silver bullet, but it's an important tool that's going to have an application in a lot areas.”*

— Michael L. Connor

money there which would help develop the next generation of desal projects.

**Sudman:** *So it's something that this Administration really believes in?*

**Connor:** Desalination is not a silver bullet, but it's an important tool that's going to have an application in a lot areas.

**Sudman:** *And what about working with Mexico? One of the ideas is if Mexico puts some desal plants on their side of the border we really could be storing some water in Lake Mead and make some in lieu agreements that the U.S. water users would find attractive. Is this something that Reclamation is interested in supporting?*

**Connor:** Absolutely. First you mentioned the need and the interest in the border. And I'm from the border. I grew up in Las Cruces only about 35 miles from the border so I'm interested personally.

And that marries well with the fact that a lot of issues that we need to deal with are on the border. And so again for all of those reasons, yes, we do want to be involved and we want to be supportive of that process. And it goes to that overall sustainability and certainty and requires more options and flexibility in water management. So, the idea of developing an agreement or a set of agreements with Mexico that enhance our flexibility in the Colorado River are just key for everybody's benefit. So we are interested in this concept.

**Sudman:** *We recently had an earthquake here in California and in the Mexicali area. There were reports that if that had been on the Imperial Fault in California, there could have been much more infrastructure damage. Are you concerned about earthquakes at the border and are we doing anything to help Mexico?*

**Connor:** We're very concerned. The earthquake demonstrated the fragility of our water delivery systems because Mexico has sustained a great deal of damage to their canals which we're trying to deal with. We are talking to them about ways



*To remove sediment buildup behind Imperial and Laguna dams, Reclamation will soon deploy a dredge like this one – both projects are funded by the Recovery Act.*





*The 7.2 Mexicali earthquake in April caused a great deal of damage to the area's water delivery system, prompting U.S. and Mexico officials to discuss holding back some of Mexico's water in Lake Mead until the system is repaired.*



we can help them as they have a problem with taking that level of water that they normally take because of the damage to the canals. So we're looking at holding some of that water back. Those are part of the overall discussions that we're undertaking right now. And once I think it demonstrates again the potential implications on the U.S. side. We need backup systems and the flexibility to help deal

with any of the unknown sudden changes that exist in our water delivery system. So I think what we can do with Mexico in helping them out, demonstrating backup systems, we need to be thinking about on our side.

**Sudman:** *It's also a matter of money.*

**Connor:** It is a matter of money, absolutely. We've got to figure out a way to make the investments and facilitate. We've got to figure out a way to structure these deals to benefit enough folks. There's maybe some private money that we can combine and some government resources.

**Sudman:** *On the Colorado River some of the states in the Upper Basin have seemed nervous because they haven't used their full entitlement. Some states, specifically Wyoming and Colorado, are looking closely at their Colorado River water and wanting to preserve that and their options for the future. There are studies about how much water is really available – possibly for transfer – in those states. Do we really know what water is available in the Upper Basin states?*

**Connor:** Well, we do have collectively an

understanding and we have a hydrologic determination that has basically set the boundaries of what the Upper Basin states can expect under the Colorado River Compact. So it is not the 7.5 million [acre-feet] that was projected in 1922. It is somewhere closer to the 6 million acre-feet. So that hydrologic determination is constantly being looked at. The states understand and are planning to that level. And we'll be supportive of their planning efforts and their evaluations. You know they've still got to stay within the Compact's limitations and they've got to deal with the environmental issues associated with any new water uses. And so we'll help them do that.

**Sudman:** *And so time will tell?*

**Connor:** Time will tell.

**Sudman:** *If drought hits us again hard, it could be a shortage declaration for Lake Mead as early as 2012?*

**Connor:** There is a 20 percent chance.

**Sudman:** *If that did happen, what would keep Arizona and Nevada from effectively being shorted on their water?*



**Connor:** Well, if we get a shortage declaration in 2012, there is now a process to allocate that shortage among the Lower Basin states through the 2007 Record of Decision and Coordinated Operations and Shortage Guidelines. So that'll be the plan – to incrementally reduce uses. When the shortages begin to take place, there are a lot of backup systems that those states have instituted with respect to the banking system on the Colorado River.

Arizona certainly has banking of their water within the Arizona borders. And Nevada has been working with Arizona in providing a supplemental supply. And the whole potentially created surplus opportunities that the states have been working on will give them a buffer. And while they are being shorted in one specific area, their water users may not see that shortage as they rely on those backup systems.

**Sudman:** *These agreements among the Colorado Compact states started in the Clinton Administration, continued in the Bush Administration, and have really given the Colorado River users a flexibility that we don't see in California.*

**Connor:** That's a good point. Water issues should be all about problem solving. It shouldn't be partisan. And when these issues are non-partisan, things tend to work out pretty well.

**Sudman:** *It's amazing how that works. ... We continue to see increased urbanization of the West even though the rapid growth has slowed down a bit because of the recession. Do you still see the West becoming more urban and less agricultural?*

**Connor:** Sure.

**Sudman:** *Does that change your job because Reclamation was set up for the irrigation of the West?*

**Connor:** The Commissioner's job has been changing for quite a while. Basically Congress has demanded that Reclama-

## Drop 2 Storage Reservoir Nearing Completion



Work is nearly complete on a new reservoir designed to improve the efficiency of water deliveries in the Lower Colorado River Basin. The Drop 2 Storage Reservoir, located just north of the All-American Canal in the Imperial Valley, will capture water that farmers don't end up using after it is released from Lake Mead. Currently that water flows across the border, but is not included in the 1.5 million acre-feet 1944 Treaty Colorado River delivery requirements to Mexico.

The new 8,000 acre-feet regulating reservoir will temporarily store the unused water until farmers can use it; whereupon it will be released into the All-American Canal for delivery to the Imperial Irrigation District. Federal officials say the reservoir will save approximately 70,000 acre-feet of water per year; water that will be retained in Lake Mead until it is distributed to the three water agencies – Southern Nevada Water Authority (SNWA), Metropolitan Water District of Southern California (MWD) and Central Arizona Water Conservation District (CAWCD) – that funded the estimated \$172 million reservoir.

“We think it's a really great project. The U.S. will capture water that we haven't been able to use,” said Bruce

Moore, manager of the Colorado River Division for SNWA. SNWA is paying \$115 million of the construction costs and in exchange will receive 400,000 acre-feet of additional Colorado River water (a maximum of 40,000 acre-feet a year) until 2036. (SNWA's current annual Colorado River allocation is 300,000 acre-feet.) MWD and CAWCD each paid \$28.6 million of the construction costs and in return will receive 100,000 acre-feet of water during the 26-year agreement with the U.S. Bureau of Reclamation (Reclamation).

According to Reclamation, since the current drought began in 2000, more than 900,000 acre-feet of non-storable Colorado River water has flowed to Mexico – water that is above and beyond the Treaty requirements. The Colorado River Basin states wanted a way to capture those flows to help offset drought impacts in the U.S.

Drop 2 Project Manager Mike Vandavelde said the reservoir is 98 percent complete, under budget and ahead of schedule. In September, officials will begin filling the canal and reservoir for observation, with the first water available for delivery sometime after October. •

– Sue McClurg



tion respond to the changing mission over time. It's about basic power generation and agricultural water supply too. We get into supply, some water for M & I purposes, new authorizations for projects, and then there's the Title XVI program. Then there's the Rural Water Program and the Indian Water Rights Settlements. And then there's the charge that we get into new areas of water supply such as desalination and more.

So I think all of that is driven, whether expressly or not, by the fact that there's urbanization and that water uses are changing. It's driven somewhat by the fact that we want to address those new urban needs – increasing populations – without totally relying on agriculture transfers to supply 100 percent of those needs. Certainly transfers from agriculture are occurring. But there is, I think, a sense in this country that we still want to support that agricultural mission that food security in food supply is an important issue as we move forward. And so we're trying to balance those new pro-



*Reclamation officials say there is a 20 percent chance they may have to issue a "shortage declaration" in 2012 because of the ongoing drought and low level of Lake Mead, above.*

grams, facilitating some transfers because we need that flexibility in the system.

**Sudman:** *How far is conservation efficiency really going to take us in solving our water future challenges? A lot of people, especially environmental stakeholders, want to see*

*more conservation. What's your philosophy and your practical experience on conservation?*

**Connor:** Well, I think conservation is still the best investment. It's the biggest bang for the buck with respect to generating water supplies from a cost-effective standpoint. I think there's still a lot of (work) that we could be doing in the urban area as well as in the ag sector. And I think we should be pursuing any and all opportunities for water conservation. And our goal should be to be the most water efficient users in the world. And we should also be the most energy efficient users in the world. We will continue to look at all the tools but I do think that water conservation is important.

**Sudman:** *You announced, at the Foundation's Colorado River Symposium in Santa Fe, a Colorado River Basin study. What do you expect to get out of that study?*

**Connor:** Well, the way the Basin Studies are being set up is systematic. We will evaluate supply and demand on a very comprehensive level including the environmental needs, including power uses as well as basic water uses. And we will look at that in the context of changing patterns of use and changing demands. And then we will apply what we know – the best scientific understanding we have. And so



*Salt cedar, or tamarisk, has been the target of removal efforts to conserve water, but that practice may be reconsidered since studies show it does not use more water than native plants.*



# Calendar

the Basin Studies are going to be the first chance to have a collective planning process. And I think Reclamation really got out the planning process and programs a while ago. And we're going to be back into that because a better understanding and planning for those future changes is going to be critical.

I think the Basin Studies are also doing a good job of taking the core of the Colorado River Basin, the seven states, and reaching out to other stakeholders, tribal entities, NGO communities, the ag sector and other water users and really bringing them in the process and engaging them in that effort. And from that there will be options that become available and will be identified as ways to deal with the challenges.

**Sudman:** *Climate change is big to you.*

**Connor:** Absolutely, particularly in the Colorado River Basin. And we will continue to better understand the implications to truth test the models and the projections that are out there to build upon them. But if you look at the science out there right now and the projections – particularly for the Colorado River Basin – we're going to be expected to do more with not just less, but a whole lot less.

**Sudman:** *Speaking about less water, there's been another new study that the Bureau participated in, led by USGS. The study said that the salt cedar being ripped out all along the river, because of its high water usage, really doesn't use any more water – or it uses the same amount of water – as the poplars and the willows that have been replanted for restoration. And the study noted that the salt cedar isn't that bad for habitat. That's kind of turned things around especially because the Lower Basin states are giving some money for Upper Basin states to rip out the salt cedar. Is Reclamation going to assess this situation now in light of this new study?*

**Connor:** Well, I think the study definitely challenges the notion of the simplicity

*Continued on page 11*

## August

### 29-September 2 17th International Conference on Aquatic Invasive Species

Sponsored by the U.S. Bureau of Reclamation, San Diego, CA  
[http://www.icaais.org/html/info\\_intro.html](http://www.icaais.org/html/info_intro.html)

## September

### 3-4 Arizona Hydrological Society Symposium

Tucson, AZ  
<https://www.eventinterface.com/abstract.cfm?eventid=h94d2f9>

### 12-15 Joint Annual Conference

Sponsored by Rocky Mountain Section AWWA/Rocky Mountain Water Environment Association, Keystone, CO  
<http://www.rmsawwa.net>

### 23-24 Western Water Law

Sponsored by CLE International, Seattle, WA  
[http://www.cle.com/product.php?proid=1224&page=Western\\_Water\\_Law](http://www.cle.com/product.php?proid=1224&page=Western_Water_Law)

### 28-October 1 Meeting Irrigation Demands in a Water-Challenged Environment

Sponsored by the U.S. Society for Irrigation and Drainage Professionals  
Fort Collins, CO  
<http://www.uscid.org>

## October

### 6-8 WaterSmart Innovations 09 Conference and Exposition

Las Vegas, NV  
<http://www.watersmartinnovations.com/index.php>

### 21-22 Utah Water Law, sponsored by CLE International

Salt Lake City, UT  
[http://www.cle.com/product.php?proid=1215&page=Utah\\_Water\\_Law](http://www.cle.com/product.php?proid=1215&page=Utah_Water_Law)

### 27-29 Fall Council Meeting

Sponsored by Western States Water Council, San Diego, CA  
<http://www.westgov.org/wswc/meetings.html>

## November

### 8-10 Water Infrastructure Needs and Strategies

Sponsored by Western States Water Council, San Antonio, TX  
<http://www.westgov.org/wswc/meetings.html>

### 10-12 NWRA Annual Conference,

Sponsored by National Water Resources Association, San Diego, CA  
<http://www.nwra.org/upcoming.php>

## December

### 15-17 Colorado River Water Users Association Conference

Sponsored by the Colorado River Water Users Association, Las Vegas, NV  
Web: <http://www.crwua.org>

Contact Sue McClurg with your calendar items from January 2011 through June 2011 for inclusion in the Winter 2011 issue of River Report, [smcclurg@watereducation.org](mailto:smcclurg@watereducation.org) or 717 K Street, Suite 317, Sacramento, CA 95814

## Yuma Desalting Plant Now in Operation

Looking for ways to stretch the water resources of the Colorado River, federal officials and water agencies in the three Lower Basin states initiated a yearlong pilot run of a longtime facility – the Yuma Desalting Plant – in early May. The plant will operate at up to one-third percent capacity for 12 to 18 months to determine its efficiency in desalting water from the Colorado River. The desalted water will be delivered to the Republic of Mexico as part of its 1.5 million acre-feet Treaty water – allowing more water to remain in drought-stricken Lake Mead.

By the end of July, the plant had desalted about 9,000 acre-feet of water. (One acre foot equals about 326,000 gallons, or enough water to cover an acre of land, about the size of a football field, one foot deep. An average suburban household uses between one-half and one acre-foot of water per year for indoor and outdoor use.) The Central Arizona Water Conservation District, Southern Nevada Water Authority and the Metropolitan Water District of Southern California are paying approximately \$14 million of the estimated \$23.2 million pilot run; U.S. Bureau of Reclamation (Reclamation) is paying the remaining share.

“The plant is operating better than expected,” said Michael Norris, plant manager at Reclamation’s Yuma Area Office. “There was a misconception that the plant was obsolete and used old technology. The 90-day test run in 2007 proved that the plant can operate and

operate well and was part of what led to this pilot run.”

Completed in 1992, the Yuma Desalting Plant initially operated at only one-third of its full capacity for approximately eight months; operations were halted when flooding on the Gila River washed out the canal that carries water from the Wellton-Mohawk Irrigation and Drainage District to the plant. The plant has since been maintained by Reclamation while the water from Wellton-Mohawk farms bypassed the plant and flowed to Mexico. Some of that water, which was not counted as part of Mexico’s annual Colorado River allocation, helped to replenish the 14,000-acre Ciénega de Santa Clara

wetlands located in Mexico, just south of the U.S. border.

The wetlands area is important habitat for migrating waterfowl and is also home to several endangered species, including the Yuma Clapper Rail and the Desert Pupfish. There has long been concern among environmentalists on both sides of the border that operating the desalination plant would dry up the flow of water to the Ciénega. Earlier this year U.S. and Mexican government officials signed an unprecedented binational agreement (Minute 316) that during this pilot run, the entities would provide water for the Ciénega during the pilot run – each country is to provide 10,000 acre-feet; a binational coalition of non-governmental organizations is to provide an additional 10,000 acre-feet.

“This agreement marks a new way forward,” Jennifer Pitt, a resource analyst for the Environmental Defense Fund, told the *Arizona Daily Star*. “It’s the first time the two governments have cooperated on something like this, and the first time that either federal government has deliberately sent water to the delta.”

In addition, the three U.S. water districts are financing a \$250,000 environmental monitoring program to study the effect of the plant’s pilot run on the Ciénega. University of Arizona and Mexican researchers are monitoring





water levels and conducting water quality tests and bird surveys to monitor the ecosystem.

The Yuma Desalting Plant was originally intended to annually reclaim between 70,000 and 85,000 acre-feet of irrigation drainage water. Once most of the salt was removed, the treated water would be blended back into the Colorado River upstream of Morelos Dam and be included in Treaty-required water deliveries to Mexico. During this yearlong pilot run, the plant is expected to produce 21,700 acre-feet. The water will be combined with 7,300 acre-feet of untreated irrigation water and the total amount, 29,000 acre-feet, will be discharged into the Colorado River and included in the Treaty obligations to Mexico.

As the desalting plant continues its pilot run, the Water Quality Improvement Center research facility located at the Yuma Area Office is gearing up to determine if the costs to run the plant can be reduced by using different membranes and/or by reducing water pre-treatment costs. Pre-treatment at the plant consists of grit-sedimentation, coagulation, flocculation and filtration. Chemicals are used to assist in this process and one of the questions, said Angela Adams, research coordinator at the Yuma Area Office, is whether newer technologies can help reduce operating costs and improve the water before it reaches the membranes. In addition, researchers will be testing newer generations of membranes to see if they will help the plant reduce its power needs and energy costs.

In addition, the Water Quality Improvement Center will be conducting experiments to see how well the plant would perform desalting the brackish groundwater that underlies much of the Yuma area. The tests are scheduled to begin this fall, and \$1.5 million has been set aside for the research; 50 percent is covered by Reclamation, the three water agencies are paying the remaining half.

No decision has been made whether the Yuma Desalting Plant will permanently be on line. •

– Sue McClurg

## FEATURE

*Continued from page 9*

that removing salt cedar will generate water. And I think the report suggests that we more comprehensively look at how we will manage that, what we replace the salt cedar with, and that has to be very closely managed if you do want to have any effect on water supply. And then, too, I think there are still habitat benefits and other benefits that come from salt cedar removal. So I think we will still look at [removing] salt cedar as one of those tools useful in certain situations for environmental restoration benefits. We will continue to evaluate some water supply aspects of it but it's not what people have traditionally thought.

**Sudman:** *It's difficult to get that certainty you're talking about in water but it seems like on the Colorado River with the MSCP [Multi Species Conservation Plan], the big habitat plan, gave a certainty to the water interests. Is the Colorado River in that way a model for California water users?*

**Connor:** I think it is. I think the commitments made by the state as well as the federal government [created] the MSCP. And the good work that's coming out on the ground I think is a good model for both areas – that's a certainty. It's an adaptive management process. It's the right approach to these difficult species issues. We have an approach now that provides resources and an action plan to deal with these issues to which we have committed to continuing to look at and evolve that plan. And I think that's the best way to deal with these issues. I think it's really the best way to bring people on board to feel like they should deal with these issues. And from that standpoint, I think once again the Colorado River is way ahead of the Bay-Delta in that respect.

**Sudman:** *Now I'd like to ask a question about education. I still see that people don't really know where their water comes from or sometimes care. How important do you think it is that we work on educating young and old about water resource issues as part of understanding our environment and our economic life in the West?*

**Connor:** I think it's very important and I think in a lot of communities it has been mostly a locally driven effort that's been really effective. And I think a lot of communities have done a great job of educating their public. Albuquerque and El Paso are places I'm very familiar with where they've made dramatic changes in their per capita use of water. And I know in California, there have been a lot of those efforts. I think they are very effective in getting public support to deal with these water issues in a balanced way. And I think the public is pretty sharp and they understand the need to invest in water issues, but they also want to see it done in a balanced way.

We want it all. We want our water supply to be available and we want to go down to our rivers and be able to walk, bike, and run by a river system that supports a lot of wildlife. And so that's the demand on water users. And I think most all water users recognize that. And that's why it ends up not being a partisan issue. It's about recognizing that the only way to get public support is through a balanced approach to these water issues. And I think the education process will be key to sending that message.

**Sudman:** *And the public has to understand that there is a cost to keeping our tap water up to the good standards we want. It's not cheap.*

**Connor:** It's not cheap and my sense is that in most cases, and there's always some angst about this, but all across the West in particular, most ballot initiatives dealing with water ultimately do pass because I think the public is usually there preceded by a strong education campaign. •



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