Land Letter
THE NATURAL RESOURCES WEEKLY REPORT

1. WATER: Idled desalination plant to pump again in southern Ariz. (10/01/2009)

April Reese, E&E reporter; **http://www.eenews.net/Landletter/print/2009/10/01/1**

The planned restart of a mothballed desalination plant in southern Arizona could boost critical water supplies for parts of the water-starved Southwest. But questions linger about the long-term viability of the Yuma Desalting Plant and the fate of an important wetland south of the U.S.-Mexico border that relies on water that will be diverted to feed the facility.

The Bureau of Reclamation approved a plan last month that involves running the Yuma plant at one-third of capacity for 365 days to determine whether it eventually could be brought back to full capacity. While an earlier 90-day run at 10 percent capacity was conducted in 2007, the upcoming trial run will be the plant's biggest yet, said Jennifer McCloskey, manager for Reclamation's Yuma, Ariz., area office.

"We have a need to get much sharper in understanding our capability and what costs would be involved" in restarting the plant permanently, McCloskey said.

The trial run will produce about 19.8 million gallons of desalinated water per day. The treated water will be discharged to the Colorado River near the U.S.-Mexico border to meet delivery requirements to Mexico. The additional water generated by the plant will allow Reclamation to hold back more water upstream for domestic uses, officials said. California will receive most of the additional water, with Nevada and Arizona also receiving portions.

The Bureau of Reclamation is preparing to launch a trial restart of the Yuma Desalting Plant (above), which has operated only twice since construction was completed on the facility in 1992. Photo courtesy of Reclamation.

But the pilot run, which would begin early next year, would require siphoning water from the ecologically important Santa Clara wetland, which lies about 90 miles downstream from the plant in Mexico. The 40,000-acre Ciénega de Santa Clara is fed by the same agricultural runoff that would be diverted to the Yuma plant, and environmental groups are concerned that the yearlong run would choke the wetland, part of the Colorado River Delta Biosphere Reserve, of much of its water source.

To address those concerns, the United States, Mexico and a Mexican water trust recently finalized an **agreement** aimed at protecting the wetland during the pilot run by funneling water to the wetland from various sources to make up for the reduction in primary flows. The 29,000 acres of replacement water

would come from temporary leases from the Mexicali Irrigation District in Mexico, and from improving efficiencies in Reclamation's distribution system, McCloskey said.

"We can monitor our gauges and see when we're a little over and adjust a little and send it down to the ciénega," she said.

Reclamation issued a **finding** this week concluding that the pilot run will have "no significant impact" on water resources in the United States. The agency is not legally required to examine the effects across the border, but the joint environmental agreement adequately addresses concerns about the ciénega, according to the Reclamation document.

The agreement is the first of its kind, said Jennifer Pitt, a senior resource analyst for the Environmental Defense Fund who has been working on the ciénega issue for years and urged officials to find replacement water for the wetland during the test run. "For the first time, the U.S. and Mexican governments have committed to setting aside water for the environment," McCloskey said. "So this is precedent-setting."

The agreement could also provide a model for resolving other water disputes in the Colorado River Basin, such as keeping enough water in the mainstem Colorado River for environmental needs, McCloskey added.

"When you get an agreement that provides water from three separate sources, including two nations as well as the NGOs, it's a big step forward," added Bob Walsh, a spokesman for Reclamation's Lower Colorado River regional office.

But Kieran Suckling, executive director of the Center for Biological Diversity, based in Tucson, Ariz., said he is skeptical of the agreement.

"This water that they're going to provide just this year, they didn't buy the right [to subsequent years], so it might not be there next year," Suckling said.

While acknowledging that the agreement provides only a short-term solution, Pitt said the additional water should protect the wetland while the pilot run is carried out and could lay the foundation for longer-term agreements if the
plant is restored to full-time operation.

"We're very concerned about the ciénega, the bird population that's there and protecting the viability of the habitat, and we saw this as the best option for making sure that happens now," Pitt said.

The restart of the mothballed Yuma Desalting Plant in Arizona will allow federal water managers to hold back more water from the the Lower Colorado River for domestic uses. The United States is required to send a portion of the river's water to Mexico. Photo courtesy of Reclamation.

Renewed interest

The $211 million Yuma plant -- the world's largest reverse osmosis desalting facility -- was completed in 1992 to treat Colorado River water to help meet salinity requirements for water delivered to Mexico. But Reclamation mothballed the plant shortly thereafter because of flooding damage and a series of unusually wet years that allowed the river's water to be diluted by precipitation, rendering the plant unnecessary at the time (*Land Letter*, Oct. 16, 2008).

Now, with population growth and climate change stretching water supplies thinner than ever before, and low river flows resulting in increased salinity, water managers are showing renewed interest in the facility.

"The chickens are really coming home to roost on the overallocation of the Colorado River," Suckling said. "We're starting to hone in on these little pockets of water we previously ignored."

The plant will treat agricultural runoff that is too salty to be used as drinking water. But no one is really sure whether the 17-year-old plant will achieve full capacity.

"A lot of work still remains on the Yuma Desalting Plant," McCloskey said. "It's an old plant, so the piping needs to be replaced, there are some other maintenance things that need to be addressed. So you've got the technical aspect, and obviously there's the bigger aspect of doing the environmental compliance. Any kind of long-term sustained operation is going to take years."

It also remains unclear whether bringing the plant back online permanently would require a full environmental impact statement, McCloskey added.

But even if the plant remained offline, water security for the ciénega remains uncertain, Pitt said. As cities look to agricultural water, which accounts for most of the rights on the Colorado River, to meet future demand, the irrigation runoff that now feeds the Santa Clara wetland could eventually go to quench the thirst of water consumers in Phoenix and other urban areas, she said.

"If they decide they don't move forward with the plant, we still don't know flows to the ciénega are secure," Pitt said. "Arizona will continue to grow, and there will be additional water needs, and there will be added pressure on agriculture for water."

Pitt said she is holding out hope for a long-term alternative that could use local groundwater as part of the solution for keeping water in the ciénega.

April Reese writes from Santa Fe, N.M.