

GOVERNMENT

CO River Shortage-Sharing Agreement Finalized

Two and a half years in development, what was hailed as a historic agreement among the Colorado River Basin states has been signed by Commissioner Robert Johnson of the U.S. Bureau of Reclamation and representatives of the seven states. The agreement, a record of decision (ROD), was signed in December at the opening session of the Colorado River Water Users Association, and took effect in January. It sets forth specific guidelines for determining shortage conditions in the Lower Basin (Arizona, California, and Nevada) and for coordinated operation of Lake Powell and Lake Mead during drought and low reservoir conditions. These guidelines will be used each year through 2026 to develop the annual operating plan for Colorado River reservoirs.

Development of the agreement formally began in June 2005. Frustrated by the inability of the states to reach a shortage-sharing agreement on their own, then-Secretary of Interior Gale Norton initiated a federal process in conformance with the National Environmental Policy Act (NEPA) to develop guidelines for coordinated operation of lakes Powell and Mead during low-water conditions. As part of the federal process, Reclamation began to prepare an Environmental Impact Statement (EIS) to evaluate a range of operating scenarios. The states, wanting input to their water futures, were spurred into action, and by February 2006 had agreed upon a preliminary shortage management proposal. This, together with input from environmental organizations and other stakeholders, became the basis of the “preferred alternative,” one of six operating scenarios (including no action) evaluated by Reclamation in the EIS. The final EIS was released in November 2007, and the preferred alternative quickly became the basis of the ROD. It includes:

- specific water levels in Lake Mead to be used to determine when a shortage condition (the availability of less than 7.5 million acre-feet

of water) would be declared in the Lower Colorado River Basin, and how that shortage would be shared by Arizona, California, and Nevada;

- specific reservoir conditions at lakes Powell and Mead to be used to determine the annual operation of these reservoirs, in a manner that would minimize shortages in the Lower Basin and avoid the risk of water delivery curtailments in the Upper Basin;
- a mechanism to encourage and account for augmentation and conservation of water supplies in Lake Mead to minimize the likelihood and severity of future shortages and to provide additional flexibility to meet water use needs, particularly under low reservoir conditions; and
- a requirement that the Interim Surplus Guidelines established in 2001 be modified and extended through 2026.

Mexico, which holds rights to 1.5 million acre-feet of Colorado River water each year, was not included in the agreement. Thus, if the United States wishes to “share” a future water shortage in the basin with Mexico, further negotiations may be needed.

The Final EIS is available at www.usbr.gov/lc/region/programs/strategies.html.

Ruling: Mine Can't Add to Already-Polluted Waters

An October ruling by the Ninth Circuit Court of Appeals determined that the U.S. Environmental Protection Agency incorrectly issued a National Pollution Discharge Elimination System (NPDES) permit to Carlota Copper Company in Arizona. The permit was invalidated in the ruling because it allows mining-related discharges of copper into Arizona's Pinto Creek, a stream already out of compliance for water quality standards for dissolved copper due to historic mining activity. Pinto Creek is on Arizona's list of impaired waters.

The plaintiffs in the case included Friends of Pinto Creek, the Sierra Club,

Audubon Society, and Citizens for the Preservation of Powers Gulch and Pinto Creek. EPA was the defendant.

The mine's plan, endorsed by EPA through the 2002 NPDES permit, was to clean up discharge coming from an abandoned mine upstream in order to offset pollution that would come from the new mine. The plaintiffs successfully argued that the plan violates the intent and purposes of the Clean Water Act, under which the NPDES program falls. Instead, the mine, as a new discharger, must have a plan to clean up *all* the sources in order to bring the water into compliance with water quality standards. It cannot merely prevent existing levels of violations from becoming worse.

Visit yosemite.epa.gov/oa/EAB_Web_Docket.nsf/.

Compensatory Wetlands Effectiveness is Mixed

California's State Water Resources Control Board recently released a study by researchers at the University of California at Los Angeles and the University of San Francisco that evaluates the effectiveness of the state's Compensatory Wetland Mitigation projects. The projects are required under the federal Clean Water Act for activities and construction projects—ranging from bridges to dams to developments—that affect wetlands, rivers, or other waters. In California, regional water boards issue the wetland permits.

The researchers selected, reviewed, and performed field evaluations for 143 permitted projects distributed across the state from 1991 to 2002. For each project, they assessed the extent to which permittees complied with their mitigation conditions, including acreage requirements; whether the corresponding mitigation efforts resulted in optimal wetland conditions; and if the habitat acreages that were gained through compensatory mitigation adequately replaced those lost through

continued on page 12

GOVERNMENT (continued)

the permitted impacts. They found that permit compliance was generally met and overall wetland acreage was being maintained. However, the biological health of the replacement wetlands was low in more than a quarter of the sites because wetlands functions and effectiveness—hydrology and sediment dynamics, biogeochemistry and nutrient cycling, and habitat and food web support—had been lost.

The evaluation process revealed weakness in the program, primarily relating to how permits for the mitigation projects are written. The researchers found no relationship between compliance with permit conditions and the condition of the wetland mitigation sites, therefore mitigation requirements need improvement to ensure more successful projects. In particular, the study recommended that permits clearly specify the criteria to

be evaluated, along with appropriate conditions for evaluating each criterion.

The 382-page report "An Evaluation of Compensatory Mitigation Projects Permitted Under Clean Water Act Section 401 by the California State Water Resources Control Board, 1991-2002," is available at www.swrcb.ca.gov/cwa401/.

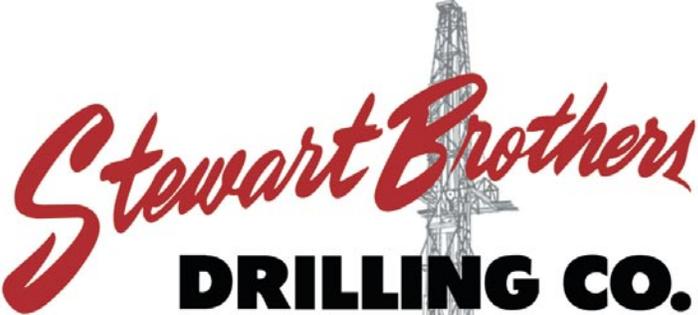
Agencies Coordinate to Improve Water Quality

The U.S. Forest Service (FS) and EPA have signed an agreement to improve water quality on national forests and grasslands, enabling the agencies to increase coordinated efforts to manage, protect, and restore FS lands and accelerate attainment of water quality standards where needed.

Under the Clean Water Act (CWA), states are required to develop lists of impaired waters—those that do not meet applicable water quality standards (WQS). They then must calculate Total Maximum Daily Loads (TMDL) for those waters. TMDLs specify the maximum amount of a pollutant that a body of water can receive and still meet applicable WQS with a margin of safety, and allocate that amount among the pollutant's point and nonpoint sources. However, some water bodies are exempt from the list of impaired waters and do not have to meet the associated TMDL requirement if jurisdictions demonstrate that pollution control requirements of a local, state, or federal authority are stringent enough to achieve applicable state WQS within a reasonable period of time. These alternatives to TMDLs are reported to EPA as Category 4b waters.

The FS manages more than 193 million acres of land. Although most forested watersheds are in satisfactory condition, some do not meet state WQS. Data from 2005 show that over 4,300 water quality impairments in 2,600 water bodies on FS lands in 41 states are included on the lists of impaired waters, representing about eight percent of all water quality impairments nationally. Leading causes

continued on page 14



Providing Quality Drilling Services Since 1945



Services Include:

- Water Exploration
- Mud Rotary
- Air Rotary
- Packer Testing
- Coring
- Mineral Exploration
- Environmental

Stewart Brothers Drilling Company
P.O. Box 2067
306 Airport Road
Milan, New Mexico 87021
(505) 287-2986
<http://www.stewartbrothers.com>



SMART SOLUTIONS FOR A COMPLEX WORLD

- Water Resources Engineering
- Resource Forecasting and Optimization
- Climate Change Impact Analyses
- Integrated Watershed Management
- Modeling

Offices throughout the U.S.
Please visit www.geomatrix.com
for career opportunities - EOE



GOVERNMENT (continued)

of impairments on FS lands include elevated water temperature, excess sediment, and habitat modification.

The agreement provides for the two agencies to work more closely to identify impaired waters and Category 4b waters, and to develop a decision tree for determining the best course of action for addressing the water quality problem. The agencies will meet at least annually to further these goals.

The agreement is at www.epa.gov/owow/tmdl/usfsepamoa/memo.htm#epa.

SNWA Will Benefit Twice from Groundwater Import

In late December, the *Ely Times* reported on a U.S. Bureau of Reclamation decision that will allow the Southern Nevada Water Authority (SNWA) to collect return-flow credits

on groundwater imported from rural northeastern Nevada, a decision that will significantly expand the amount of water the agency can use.

Currently, Nevada receives return-flow credits for Colorado River water it uses and returns to Lake Mead as treated effluent; most of that return flow is generated by SNWA. This allows the state to divert (withdraw) far more than its 300,000 acre-feet-per-year (afy) allotment, as only the amount of water consumed (not returned) is counted toward the allotment. For example, in 2004, the state was able to divert 476,000 acre-feet because of return flow credits. However, to meet its future water demands, SNWA has applied to the state engineer for rights to transfer 200,000 afy of groundwater by pipeline some 300 miles from northern Clark, Lincoln, and White Pine counties to southern Nevada.

If the application is approved (portions have already been approved), Reclamation's recent decision means that any of the imported groundwater that is captured by SNWA's wastewater collection system and discharged to Lake Mead will also be counted as offset to the agency's Colorado River withdrawals. According to the *Ely Times*, as much as 70 percent of the imported groundwater could provide return-flow credits, substantially increasing SNWA's permitted Colorado River withdrawals.

Visit www.snwa.com and www.elynews.com.

Delta Fish Fiasco

Poor planning, lack of funding, and a slow response by federal officials resulted in a major fish kill in November on a 1,235-acre island in the Sacramento-San Joaquin Bay Delta.



We do way more than just look for water!

(480) 517-9050
www.hydrosystems-inc.com

HSI HydroSystems Inc.
A Full Service Hydrogeologic
Consulting Firm

According to several newspaper reports, the story began more than a decade ago, when the U.S. Bureau of Reclamation purchased Prospect Island with the intent of flooding it to create a refuge for birds and fish. Reclamation never received sufficient money to move the project forward, however.

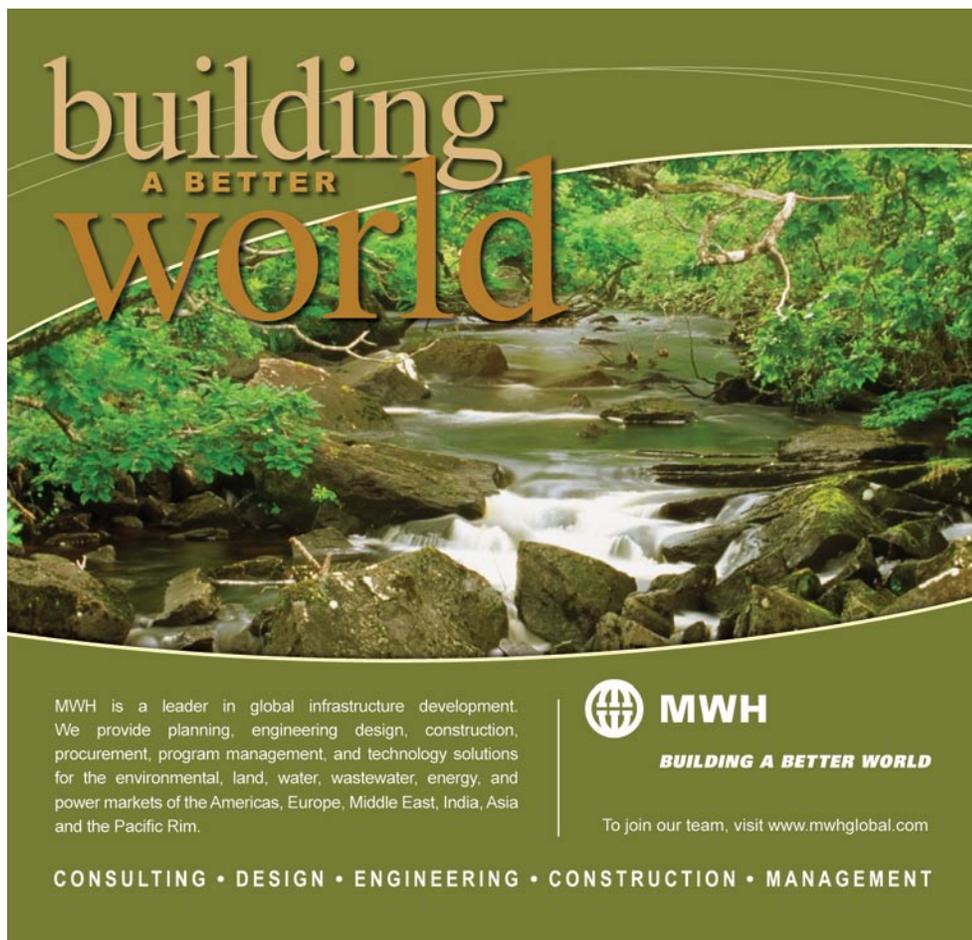
In January 2006, a large storm breached the levee around the island, and the interior was flooded. Again, lack of funding slowed Reclamation's response to the breach, such that the agency was not able to begin repairs until October 2007. After consultation with the California Fish and Game Department, Reclamation contractors made the repairs and sealed off the levee during low tide, so that as few fish as possible would be left behind when they pumped out the remaining water.

However, in the 22 months that the levee was open, numerous fish swam into the protected waters to spawn. As a result, when the pumping began, thousands of fish were left stranded. The smell of dead fish attracted significant attention and demands for action. But for two weeks, Reclamation turned down volunteer offers to help rescue the fish, citing concern over legal liability.

As the situation grew worse, the agency eventually accepted help, but by then it was too late. Submerged debris and structures covered by the floodwaters provided numerous nooks for small fish to seek refuge in, but it also made dragging rescue nets through the water difficult. Thus, thousands of striped bass, bluegill, carp, shad, and other fish were killed. Reclamation later admitted fault, saying they didn't do enough, and that they "should have reached out to the community," according to the *Stockton Record*.

The California Fish and Game Department was considering pressing criminal charges against Reclamation for "wanton waste of a game fish," said the *Record*.

Visit www.recordnet.com.



building
A BETTER
world

MWH is a leader in global infrastructure development. We provide planning, engineering design, construction, procurement, program management, and technology solutions for the environmental, land, water, wastewater, energy, and power markets of the Americas, Europe, Middle East, India, Asia and the Pacific Rim.

 **MWH**
BUILDING A BETTER WORLD

To join our team, visit www.mwhglobal.com

CONSULTING • DESIGN • ENGINEERING • CONSTRUCTION • MANAGEMENT



Roscoe Moss Company
We make water work worldwide.

No single screen type is appropriate for all wells. Roscoe Moss Company is the only manufacturer in the world producing shutter screen, continuous slot screen, bridge slot screen, and slotted pipe. This ensures that Roscoe Moss Company's customers receive unbiased technical assistance directed toward solving their specific problems.

4360 Worth Street, Los Angeles, CA 90063 • Phone (323) 263-4111 • Fax (323) 263-4497
www.roscoemoss.com • info@roscoemoss.com

© 2006 Roscoe Moss Company. All Rights Reserved.

