GOVERNMENT

Basin States Can’t Reach Consensus; Feds Decide

The Upper and Lower Colorado River Basin states, tasked with working out a drought management plan—or at least an operations plan for this summer—failed to reach consensus by April 1, throwing the issue to the U.S. Department of Interior to decide. Throughout numerous meetings, the Upper Basin states of Colorado, New Mexico, Utah, and Wyoming maintained their position that a reduction in the amount of water released from Lake Powell to the Lower Basin this summer is justified because the unusually wet winter will increase flows into the Colorado River, particularly below Glen Canyon Dam. Lake Powell was depleted to about a third of its capacity during the previous five years of drought, and the Upper Basin states want it to refill as much as possible this year in case the drought intensifies in the near future. The Lower Basin states of Arizona, California, and Nevada argued that with the wet winter, enough water is available for the Upper Basin to continue to meet present obligations, thus no pressing emergency warrants a change in operations this year. Lake Mead was at about 62 percent capacity in early May.

The Colorado River Compact of 1922 stipulates that the Upper Basin must release 7.5 million acre-feet (maf) per year to the Lower Basin and maintain a total flow of 75 maf over 10 years at Lees Ferry, the dividing point between the basins. Under the Mexican Treaty of 1944, the United States must deliver 1.5 maf/year to Mexico; that amount has been split between the Upper and Lower basins. Since Glen Canyon Dam was built, the Upper Basin has always released a minimum of 8.23 maf/year, and more during wet years. Thus, the Upper Basin made the case that over the last ten years it has released well over 75 maf. Furthermore, the Upper Basin argued that tributary inflows into the Lower Basin, not included in Compact terms, should count toward the obligation to Mexico.

The San Diego Union-Tribune reported in May that U.S. Department of the Interior Secretary Gale Norton had decided in favor of the Lower Basin for this year, stating that no change in operations over the next five months was warranted on the grounds that reservoir storage during April was greater than predicted. However, she requested another review next April, reported the paper, declaring her authority over water management on the river.

In the meantime, Norton instructed the states to continue trying to work out a long-term drought-sharing plan.


Perchlorate Reference Dose Set by EPA

In February, the U.S. Environmental Protection Agency announced it had established an official reference dose (RfD) of 0.0007 mg/kg/day of perchlorate, consistent with the recommended reference dose included in the National Academy of Science’s January 2005 report, and about 24 times higher than a preliminary dose set two years ago. A reference dose is a scientific estimate of a daily exposure level that is not expected to cause adverse health effects in humans.

The new RfD translates to a Drinking Water Equivalent Level (DWEL) of 24.5 parts per billion. A DWEL, which assumes that all of a contaminant comes from drinking water, is the concentration of a contaminant in drinking water that will have no adverse effect with a margin of safety. Because a margin of safety is built into the RfD and the DWEL, exposures above the DWEL are not necessarily considered unsafe.

EPA's Superfund cleanup program plans to issue guidance based on the new RfD.

According to EPA, the RfD, which assumes total intake from both water and food sources, is appropriate and protective for all populations, including the most sensitive subgroups. The selected reference dose contains a full tenfold uncertainty factor to protect the most sensitive population, the fetuses of pregnant women who have hypothyroidism or iodide deficiency. This uncertainty factor also covers variability among other human life stages, gender, and individual sensitivities, protecting other sensitive subpopulations such as premature neonates, infants, and developing children, said the agency.

The perchlorate summary is available at www.epa.gov/perchlorate.

HydroFacts

Percent of U.S. irrigation withdrawals from groundwater, 1950: 23
Percent of U.S. irrigation withdrawals from groundwater, 2000: 42
Percent of U.S. irrigation using sprinkler and micro-irrigation, 1985: 39
Percent of U.S. irrigation using sprinkler and micro-irrigation, 2000: 52
Average U.S. irrigation application rate, 1950: 3.55 af/acre
Average U.S. irrigation application rate, 2000: 2.48 af/acre
Gallons of water consumptively used to grow 1 pound of cotton: 1,000
Gallons of water consumptively used to generate 1 KWatt-hour of nuclear power in AZ: 0.8

Nuclear Waste to be Moved from Banks of CO River

Federal and state agencies campaigned for weeks this spring to convince the U.S. Department of Energy (DOE) to remove a 12-million-ton pile of radioactive waste from the banks of the Colorado River near Moab, Utah. In April their efforts were partially rewarded, as DOE announced its recommendation to move the pile to

continued on page 14
THE CHALLENGE: The trend of multidisciplinary solutions to water resources problems is increasing. The increasingly complex solutions to these problems demand collaboration from a group of professionals from a variety of disciplines: there is no longer a single source for answers. As more people share our water resources with each other, issues of hydrology, agriculture, water quality, geology, geography, economics and other factors emerge that cannot be satisfactorily solved without input and involvement of many different branches of knowledge and practice. While water professionals now realize they need to communicate and work with other disciplines, they often don’t have the communication skills to work together.

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—Marian Norris, Hydrologist

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Southwest Hydrology, July/August 2005
a storage facility 30 miles to the north.

This site was one of many waste piles formed during the uranium mining boom of the 1950s. According to the Fresno Bee, “most of the sites were transferred to the DOE by congressional order in 1978, but since this one was still processing small amounts of uranium, it was not included.” In 2001, DOE finally took control of the site from the Nuclear Regulatory Commission. It is the only decommissioned uranium mill site in DOE’s jurisdiction that has not yet been cleaned up, reported the Bee.

The pile, described by U.S.A. Today as “a mostly open-air heap that sits on bare ground and is surrounded only by a chain-link fence,” contains waste from uranium ore processing that lasted for 28 years, ending in 1984. It is located about 750 feet from the river. Those living downstream fear that waste seeping into the soil will reach the groundwater and ultimately the river, or, worse, a catastrophic flood will wash the pile directly into the Colorado, causing widespread contamination. Under the recommended plan, the waste will be buried in a lined and covered pit to prevent groundwater contamination.

In November, DOE announced it was considering four options for dealing with the pile, one of which called for keeping it in place and capping it. The other three options involved moving and burying the waste at various sites located 17 to 85 miles away, at about twice the cost of capping it. Strong opposition to leaving the pile where it is came from the U.S. EPA, the USGS, Metropolitan Water District of Southern California, California Gov. Arnold Schwarzenegger, members of Congress from the affected states, state water agencies, and environmental groups.

Although DOE made a formal recommendation to move the pile, it must receive public comment and issue a final decision, which could come within several months. After that, congressional funding must be secured. The cleanup cost is expected to be around $450 million.


ADEC Escapes Extinction

The Arizona Department of Environmental Quality weathered a storm in the Arizona legislature this spring. ADEQ’s authorizing legislation has a sunset provision that allows lawmakers to periodically determine whether the agency should continue to exist; it was up for renewal this year.

The Arizona Senate first voted to disband the agency, citing dissatisfaction with the way the agency’s director, Steve Owens, has run the agency, particularly regarding interactions with certain business interests. But one day later, after much public outcry, the Senate reauthorized ADEQ for ten years, the typical period used for other agencies. Republican House Environment Committee Chairman Ray Barnes appeared to lead ADEQ’s opposition, according to articles in the Arizona Republic. In the House, Barnes’ committee initially voted to renew the agency for two years. Then renewal was approved for five years, but that was amended yet again to four years before it was passed.

Had ADEQ been disbanded, nearly all of the agency’s duties would have transferred to the U.S. EPA’s Region IX office in San Francisco. Business interests in the past have supported the existence of ADEQ because it is faster and less expensive to deal with a local agency. According to the Republic, many businesses and industries in the state continued to support ADEQ through the recent turmoil.


No AMA Protection for Upper San Pedro

In March, Arizona Department of Water Resources (ADWR) Director Herb Guenther determined that the Upper San Pedro Basin in southern Arizona will not be declared an Active Management Area (AMA). According to state law, the director may propose to designate an AMA if any of the following criteria are met: 1) active management practices are necessary to preserve the existing supply of groundwater for future needs; 2) land subsidence or fissuring is endangering property or potential groundwater storage capacity; or 3) use of groundwater is causing or threatening water quality degradation. The five existing AMAs in Arizona are in areas with high population or intensive agriculture.

Guenther based his decision on ADWR findings that sufficient groundwater supplies exist in the basin to meet future municipal, agricultural, and industrial needs. In addition, there is no evidence of land subsidence or fissuring, or that groundwater use is causing water quality degradation in the basin.

Supporters of the San Pedro Basin were dismayed by the decision, saying it ignored the interaction between groundwater and surface water, according to the Arizona Republic. Environmental groups have argued for years that growth in the city of Sierra Vista and Fort Huachuca has impacted the river’s ecosystem. In fact, said the report, several court
cases to protect the river have been won under the Endangered Species Act.

The full ADWR report, consisting of two documents, can be obtained at www.adwr.state.az.us/adwr/Content/Publications/. Also visit www.azcentral.com.

Court: Cost No Justification to Exceed Federal Standards

In April, the California Supreme Court ruled that treatment costs cannot be used as a reason to exceed federal clean water standards for sewage treatment, according to the Associated Press, as reported in The [Palm Springs] Desert Sun. The ruling applied to the cities of Los Angeles and Burbank regarding effluent discharge that flows into the Los Angeles River from their three sewage treatment plants.

The court, quoted in the AP report, stated that decisions to issue wastewater discharge permits “may not consider economic factors to justify imposing pollutant restrictions that are less stringent than the applicable federal standards require.” However, cost can be considered if the standards to be applied are more stringent than federal standards.

The case was referred back to the lower court to determine if the standards under review did, in fact, go beyond federal restrictions. A Burbank city attorney told AP that the referral keeps alive the possibility for the cities to win their case.


CO Kayakers Get Water Rights

The Colorado Supreme Court determined that water rights can be claimed for boat courses, reported the Denver Post in March. According to the report, the court ruled unanimously that “the Colorado Water Conservation Board [CWCB] ignored state law and its own rules when it failed to evaluate an application for a water right submitted by course developers and recommended a lower flow instead.”

The development of boat courses is big recreational business in Colorado, with 13 courses already constructed and more in the works, said the article. This ruling does not mean a water permit is required for a course, but securing one provides insurance against future development that could divert water away from it.

Apparently the CWCB had made its own determination of how much water a course on the Gunnison River would need, which was less than requested, effectively reducing a potential world-class course to a much tamer one, according to the Post.


Mexico Reducing its Water Debt

Recent rains and improved water-use efficiency in Mexico have allowed that country to reduce by more than half its long-standing water debt to the United States, reported U.S. Water News. Under the terms of a 1944 treaty, Mexico and the United States share water from the Rio Grande, but since the onset of drought in 1993, Mexico has failed to release its share of water from two reservoirs on the Rio Grande, said the article. The debt grew as large as 1.2 million acre-feet, but is now down to around 580,000 acre-feet, according to the report.

Texas farmers have been impacted the most by the shortage. While pleased to have the water for the upcoming growing season, the manager of the Harlingen Irrigation District told U.S. Water News that until a long-term plan for meeting the terms of the treaty is in place, Texans fear they may only receive water in wet years. However, Cristobal Jaime Jaquez, the general director of Mexico’s National Water Commission, told U.S. Water News that recently “his country has opened state water utilities to some private investment and is curbing excess demand and modernizing dams to use water more efficiently.”

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