

Arizona Water Policy Update

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Editors' Notes

Low water levels in Lake Mead have been the subject of a great deal of press in recent weeks. The headlines and photos of the "bathtub ring" highlight the water level in Lake Mead, which is about 1,089 feet above sea level — only 12 feet higher than the elevation required to trigger a shortage declaration on the Colorado River (see page 6.) Regardless of the hype, the bottom line is that even a small equalization release from Lake Powell in 2011 is likely to maintain Lake Mead's level above 1,075 feet, avoiding a declaration of shortage for 2012. Therefore, for the next few years, water managers need to focus on the details of the equalization provision for managing water levels in the two lakes. This will be its first real-world test, and it is not entirely clear how the Bureau will implement this provision.

The current differential in storage between the lakes will likely trigger the requirement to release additional water from Powell into Mead to avoid a shortage declaration in 2011. This should be spelled out in the Annual Operating Plan that the Bureau publishes in late 2010 for the 2011 water year (October 1, 2010 – September 30, 2011). However, the required equalization depends on actual spring runoff, and a reliable estimate of runoff is unavailable until around April. If the Bureau underestimates the required equalization in the 2011 Annual Plan and snowpack runoff into Lake Powell is heavier than expected, higher releases will be required from Lake Powell during the remaining few months of the water year (May – September) than anticipated. This additional release could raise environmental concerns related to timing and flow volumes in the Grand Canyon.

Although the Bureau has not announced whether it will include an equalization component in the Annual Plan, we venture to speculate that they will propose a conservatively low release for 2011. Negotiations may be needed among the basin states to

accommodate operational tweaks and improve the implementation of equalization in the future.

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Colorado River Basin Water Supply & Demand

Shortage Planning

La Niña conditions are present across the equatorial Pacific Ocean. Forecast models project that La Niña conditions will persist or strengthen through the next few months, setting up the southwestern U.S. for a drier-than-average fall. From a water supply perspective, the Upper Colorado River Basin is not as strongly influenced by ENSO cycles as the Lower Basin.

Reclamation projects that unregulated inflow into Lake Powell in August will be 0.55 million AF, about 90 percent of average.

Upper Basin

Colorado has entered an agreement with the Federal Energy Regulatory Commission to streamline review and approval of proposed small hydroelectric projects in the state. A recent study showed that Colorado has several hundred sites with potential to generate up to 5 MW, sites that have not been developed because of arduous state and federal approval processes.

Grand County will pay \$78,000 to release 3,000 AF of water from the Granby Reservoir to supplement flows in the Upper Colorado River. This is the third year that the county has paid for releases to aid downstream users and ecological functions.



Las Vegas / Southern Nevada Water Authority (SNWA)

Contractors were informed that SNWA has placed its Groundwater Pump Station #2 Project on hold “indefinitely.” The station is required to deliver 170,000 AF of groundwater from remote basins to Las Vegas.

State Engineer Jason King released a schedule for reviewing SNWA’s applications to export groundwater from the Spring, Cave, Dry Lake, and Delamar Valleys. Hearings on will be held in July and August 2011, and a decision is anticipated in December 2011.

Lake Powell / Glen Canyon Dam

Uranium mining and reduced sediment load are among the greatest threats to the Grand Canyon, according to an 80-page report released by the National Parks Conservation Association. The Glen Canyon Dam, which lies upstream of Grand Canyon, impedes the release of sediment, creating habitat that is better suited to non-native fish species. The group recommends instituting high-volume releases from the dam to coincide with normal spring runoff.

The Utah Division of Wildlife Resources has determined that Lake Powell remains free from infestation by invasive quagga and zebra mussels.

Lake Mead / Hoover Dam

The steady drop of Lake Mead’s water level continues to draw national attention. See the “Editors’ Notes” (page 1) for our take on the implications of Mead’s drop in storage.

CA State Water Project & Central Valley Project (SWP, CVP)

As expected, the California legislature voted to pull the \$11 billion water bond from the November ballot. The vote also removed a provision that would have allowed private entities to own and operate taxpayer-funded infrastructure. The bond will be rewritten and put on the 2012 ballot.

The Delta Stewardship Council (DSC) adopted an Interim Plan to guide state and local agencies in their efforts to prepare a Delta Plan by 2012.

Coastal Desalination

Desal America is opening a manufacturing plant near San Francisco. The company manufactures modular mobile desalination systems that can fit into 20- or 40-foot shipping containers. A mid-sized, 20,000 gpd system costs about \$150,000 to \$200,000 and can desalinate water for \$1,200 to 1,400 / AF.

Southern California / Metropolitan Water District (MWD)

Like the CAP, the MWD is actively exploring opportunities to reduce cost and risk associated with escalating energy prices and to gain access to renewable energy supplies. MWD’s Board has adopted policies that allow the District to pursue specific renewable-energy projects, including four different 10 MW solar-generation projects. Unlike CAP, however, MWD’s Board is not openly discussing nuclear as an alternative.

Imperial Irrigation District (IID)

IID agreed to a settlement with the San Diego County Water Authority over the price of water transferred to SDCWA under the Quantification Settlement Agreement. SDCWA currently pays \$405/AF; under the settlement, the price will ramp up to \$625/AF by 2015. The 2010 QSA transfer volume is 70,000 AF. Between 2025 and 2047, IID will transfer 200,000 AF/year to SDCWA. On September 27, the California 3rd District Court of Appeals will begin the process of reviewing a California Superior Court judge’s invalidation of the QSA back in January. Both IID and SDCWA appealed the decision.

IID expects to use about 235,000 AF less than its 3.1 MAF allocation of the Colorado River this year. If IID does not use the water, it is likely to be used by the Metropolitan Water District of Southern California. IID is now assessing whether it could divert the unused water to the Salton Sea playa area for dust-control purposes.

The IID Board approved plans to provide 130 acres of IID land for a 20 MW solar facility developed by SunPeak Solar. IID will purchase power for 6 years, after which it will have the option to purchase the facility for \$70M.



Salton Sea

Simbol Mining, a U.S.-based mining startup, is trying to demonstrate that lithium could be economically mined from the Salton Sea area using geothermal wells. Simbol plans to open its first commercial plant in early 2012.

Yuma Desalting Plant (YDP)

CAP reports that the pilot run is ahead of schedule in terms of water production and is under budget because of lower energy, chemical, and labor costs. Actual operating costs so far are around \$500/AF.

U.S. / Mexico Negotiations

Talks continue between the U.S. and Mexico regarding cooperative water-supply management. The most recent meeting of federal and state officials from both countries was August 6 in Las Vegas. The next round of talks is scheduled for September.

Around Arizona

Northwest Arizona / Mohave County

Mohave County will contribute \$20,000 toward completion of comprehensive numerical groundwater model of the Hualapai, Derital, and Sacramento Valley groundwater basins. ADWR and the USGS have been working on the project since 2005; its total estimated cost is \$2.3 million.

Colorado River (Bullhead City to Yuma)

Reclamation announced that it obtained a preliminary permit from the EPA to begin testing a bacterial product on invasive quagga mussels at Davis Dam on the Lower Colorado River. Testing of the product Zequanox is planned for October.

Globe / Payson / Mogollon Rim

Payson is designing a recharge and recovery system for water it will eventually receive from the Blue Ridge Pipeline. Payson has concerns about using the water directly; the town, which currently relies on groundwater, is concerned that the chemical properties of reservoir water will cause problems with its distribution infrastructure.

When Payson approved the Blue Ridge Pipeline project 3 years ago, it assured residents that a water-impact fee of \$7,500 on new home construction would finance the project. However, this calculation assumed that 250 homes would be constructed each year. With an average of only about 30 new homes per year for the last 3 years, the town now must consider raising the rates of existing customers to finance the project.

ADEQ awarded a Water Quality Improvement Grant of nearly \$600,000 to install a topsoil cover over 10 acres of the abandoned Gibson Mine to reduce copper leaching into Pinto Creek. The site is located northwest of Miami in Gila County.

Flagstaff / Northeastern Arizona

Upper Lake Mary was 71 percent full (11,662 AF in storage) on August 30, compared to 77 percent full (12,600 AF in storage) 1 month ago.

Debris flows and flooding of homes in the Timberline and Donney Park subdivisions on the east side of the city followed the Schultz fire that burned about 15,000 acres outside of Flagstaff. Revegetation on the upper slopes is expected to take several years. The cost to repair the damaged Inner Basin waterline and access road is estimated at \$1 million.

In seeking a solution that is more acceptable to local tribes, Arizona Snowbowl owners are requesting that Flagstaff supply potable water rather than reclaimed effluent for snowmaking. The U.S. Dept. of Agriculture has said it would pay the additional cost for implementing the potable water solution. Navajo Nation President Joe Shirley Jr. says that although the tribe wants the ski area to be closed entirely, drinking water is preferred over reclaimed wastewater for snowmaking. After hundreds of people showed up for a public hearing on August 30, the Flagstaff City Council decided to put off the vote on whether to supply drinking water for snowmaking.

The Navajo Nation passed a resolution opposing a plan approved by the Hopi Tribal Council to allow a \$5 million pilot project for carbon capture and sequestration (CCS) on Hopi lands. DOE and four utilities are prepared to sponsor the project.

Prescott AMA/Big Chino Valley/Verde Valley

No updates

Phoenix Area

On August 6, the 30-day public comment period closed for redesignations of Assured Water Supply for 12 water providers in the Phoenix AMA. The 12 entities are Peoria, Phoenix, Surprise, Glendale, El Mirage, Avondale, Scottsdale, Mesa, Chandler, Gilbert, Tempe, and the Apache Junction Water Utility Community Facilities District.

ADWR approved the operation of Chandler Tumbleweed Park Recharge Facility and the Chandler Ocotillo Recharge & Recovery Facility.

Rioglass, a Spanish manufacturer of solar mirrors, is opening its U.S. headquarters in Surprise. The facility will manufacture the reflecting mirrors for Abengoa's Solana Generating Station in Gila Bend. Rioglass expects to initially invest \$50 million in the plant and create 100 jobs. The company received \$11 million in tax incentives from the federal stimulus program. As reported in July, the federal government announced a \$1.45 billion loan guarantee through the stimulus act for the Solana solar facility.

Salt River Project

SRP released final cost estimates for retrofits proposed by EPA for reducing emissions at Navajo Generating Station. The estimated capital cost for installing selective catalytic reduction (SCR) technology is between \$550 million and \$1.1 billion, with annual operating costs of \$21 million.

SRP announced a profit of \$371 million in fiscal 2010, with operating revenue of \$2.7 billion, compared to \$2.8 billion for the previous year.

Central Arizona Project

CAP is projecting an increase in its base energy rate of \$25 to \$200/AF if Navajo Generating Station is forced to close.

Maricopa County reports 15 candidates filed to run for the five open seats on the CAP Board. The list includes only two of the five incumbents (Tim Bray and Mark Lewis). It also includes former Phoenix City Manager Frank Fairbanks, former CAP general manager Sid Wilson, and former assistant director of ADWR, Jim Holway. Only one candidate, Cynthia Moulton, is female, which is

notable because female candidates have historically had a much higher success rate than male ones for the CAP Board.

CAP's directors are being honored as "2010 Leaders of the Year" in the category of government at an award ceremony sponsored by the Arizona Capitol Times.

Pinal AMA

On August 30, the ACC approved rate increases for Global Water customers in Maricopa. The decision ended a long and contentious rate case, including a final ACC hearing in Phoenix last week that was attended by three busloads of citizens from Maricopa. Although the approved rate is actually \$40/month less than what Global originally requested, the average residential water bill will still be about \$95/month. The ACC also approved an increase in Global's reclaimed water rate, despite the objections of homeowner associations that rely on reclaimed water to irrigate common areas.

A bill was introduced in Congress to expand the boundaries of the Casa Grande Ruins National Monument by transferring about 10 acres of land administered by BLM and the Bureau of Indian Affairs (BIA) to the National Park Service (NPS). The legislation proposes to transfer another 3.5 acres from the NPS to the BIA for the San Carlos Irrigation Project.

Casa Grande approved spending about \$50,000 on a feasibility study for recharging effluent from the city's sewage treatment plant.

Santa Cruz County / Nogales

No updates

Tucson Area

The EPA issued a navigable designation for 54 miles of the effluent-fed Santa Cruz River in southern Arizona. Navigable streams are subject to regulation under the Clean Water Act. (This decision was anticipated following an EPA ruling in July that the Los Angeles River is navigable.)



San Pedro River Corridor

The Upper San Pedro Partnership is requesting that Senators McCain and Kyl support an appropriation of nearly \$1 million for a water-augmentation feasibility study by the Bureau. Representative Giffords supported this appropriation in the House for FY 2011. The City of Sierra Vista is the only local entity that has committed matching funds to the project.

Fort Huachuca is working with the EPA on an environmental assessment (EA) for an effluent transfer and recharge project. The EA is required to comply with NEPA provisions.

ADEQ awarded a Water Quality Improvement Grant for \$265,000 to a nonprofit group, Coronado Resource of Willcox, to identify and address sources of *e. coli* contamination along a 17-mile stretch of the San Pedro River. The grant is funded through the EPA Clean Water Act.

Arizona Regulations & Legislation

State Agencies & Regulations

Arizona Department of Environmental Quality

No updates

Arizona Department of Water Resources

No updates

Assured & Adequate Water Supply

No updates

AZ Water Banking Authority (AWBA)

No updates

AMAs Fourth Management Plan Development

No updates

Governor's Blue Ribbon Panel on Water Sustainability (BRP)

On August 6, the BRP identified the top 25 issues that stand in the way of the sustainable use of water in the state, out of 165 issues identified by the subcommittees.

State Legislation

The legislature is not in session. A special session was held on August 9 to approve a referendum for the November ballot on unionization voting. The first meeting of the Water Resources Development Commission was held in August. The commission was created by the legislation passed earlier this year.

Federal Regulations & Legislation

Federal Regulations

EPA

Lawsuits over the emissions modeling requirements in the newly proposed Clean Air Transport Rule were filed by the states of Texas and North Dakota. Arizona-based copper mining company Asarco also filed a petition. The rule targets sulfur dioxide (SO₂) and nitrogen oxides (NO_x) emissions from power plants. In conjunction with the American Lung Association, a coalition of northeastern states that lie downwind of emissions from out-of-state power plants are advocating for tougher standards. EPA has stated that the new rule will not allow utilities to carry over SO₂ credits previously accrued by investments in emission-reducing technologies.

EPA released details for implementing the tailoring rule to regulate emissions from the country's largest power plants, emissions that represent about 70 percent of U.S. greenhouse gas emissions. The EPA is proposing to take over permitting duties in 13 states that cannot implement the rules. Among them is Arizona, which passed a law last year prohibiting state agencies from enacting greenhouse gas regulations.

EPA announced it will be holding public hearings across the country on its proposal to regulate the disposal and management of coal-ash as a hazardous waste. Environmental groups Earthjustice and Sierra Club released a report on groundwater contamination at 137 coal-ash disposal sites in 34 states. According to this report, there are no documented cases of damage to groundwater in Arizona from coal-ash disposal ponds.

Federal Legislation

Congress is on recess during the month of August and will return September 13.

Climate-Energy

It is unlikely that climate legislation will advance this session. There may be a chance for a renewable energy standards bill if a lame duck session is scheduled following the November elections. With climate legislation unlikely this year, there is renewed focus on regulation by EPA for reducing emissions of greenhouse gases.

Meetings This Month

Sep. 2: CAP Public Policy Committee
 Sep. 2: CAP Board
 Sep. 15: AWBA Commission (Quarterly)
 Sep. 23: CAP FAP Committee
 Sep. 23: CAP Work-Study Session – Integrated Resource
 Sep. 24: Blue Ribbon Panel on Water Sustainability
 Planning

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Status of Surface Water Supplies August 30

	2010	2009	2008	2007
COLORADO RIVER SYSTEM				
Lake Powell (% full)	63%	65%	61%	50%
Lake Mead (% full)	40%	42%	46%	49%
Total Colorado System (% full)	57%	59%	58%	55%
Elevation (Lake Mead; feet amsl)	1,087 ft	1,094 ft	1,105 ft	1,112 ft
1st Shortage Declaration Elevation (Lake Mead)	----- 1,075 ft -----			
Basin Snowpack (% of average)	N/A	N/A	N/A	N/A
SALT / VERDE RIVER SYSTEM				
Salt River Reservoirs (% full)	95%	85%	92%	68%
Verde River Reservoirs (% full)	61%	57%	60%	48%
Total Salt / Verde System (% full)	91%	82%	88%	66%
Basin Snowpack (% of average)	N/A	N/A	N/A	N/A
CAP STORAGE				
Lake Pleasant (% full)	54%	47%	76%	43%
Roosevelt Lake Exchange Storage (AF)	*76,210	130,000	130,000	130,000

* Exchange volume remaining as of December 31, 2009; additional return volume delivery to CAP is planned for 2010
 Data from Central Arizona Water Conservation District, U.S. Bureau of Reclamation, and Salt River Project