How has Arizona been working regionally to prepare for a Colorado River shortage?

The Arizona Department of Water Resources and Central Arizona Project are taking proactive steps to address the risk of Colorado River shortages and improve the health of the river system by working in collaboration with the Colorado River Basin states, federal government, Mexico and local and regional partners, including Yuma agricultural and on-river municipal water users, in water resource management. Collaboration is focused on reducing the near-term risks caused by the ongoing drought as well as addressing the long-term imbalance between supply and demands on the Colorado River system.

In 2007, to prepare for possible shortage and to guide Colorado River operations during low reservoir conditions, the seven Colorado River Basin states and the U.S.Bureau of Reclamation completed an agreement clarifying the triggers and anticipated reductions during shortage conditions. This document identifies the steps to be taken should a shortage be declared. As part of the Shortage Sharing Guidelines, water levels in Lake Mead and Lake Powell are now coordinated to allow better management of the Colorado River supply. Water users across the Basin continue to work together to promote the benefits of conserving Colorado River water.

Take a look at other innovations implemented by CAP and its partners:

Water Banking

- CAP, working in conjunction with the Arizona Water Banking Authority, is storing water underground to protect against the impacts of shortage and has developed a plan for the recovery of that stored water. More than three million acre-feet of Colorado River water has been stored underground.
- CAP's innovative 100-year public-private water recharge agreement with Liberty Utilities was nominated for "water deal of the year" in the Global Water Awards sponsored by the Global Water Institute. Liberty Utilities will sell excess effluent, or reclaimed water, to CAP which will then safely recharge the water underground.

Agricultural Conservation

- CAP agricultural customers have invested $3,600 per acre in water efficiencies including laser leveling fields, drip irrigation and other mechanisms to reduce water consumption and use CAP water as efficiently as possible.
- CAP instituted a water-rate incentive program to reward agricultural customers who have instituted best management practices and improved water use efficiency.

Reservoir Levels/Shortage

- CAP is investing more than $25 million in water efficiency projects like Brock Reservoir, seasonal storage that reduces excess deliveries of Colorado River water. This reservoir conserves approximately 100,000 acre-feet/year.
- CAP is encouraging the U.S. to operate the Yuma Desalting Plant (YDP) or to prepare a suitable alternative. CAP has funded the YDP pilot and, through its joint efforts with ADWR, is working to develop alternatives to conserve 100,000 acre-feet/year.
- CAP is funding cloud seeding projects to increase runoff and stream flows in the Colorado River basin. A new study finds the results of those programs very encouraging.
- CAP along with ADWR, the federal government, the Colorado River Commission of Nevada, the Colorado River Board of California, Metropolitan Water District of Southern California and the Southern Nevada Water Authority are taking actions to store water in Lake Mead to avoid or delay potential shortages. This approach, totaling 745,000 acre-feet of water, could delay shortages and begin to address longer-term challenges to Lake Mead.

Colorado River Shortage

Impacts on Arizona

April 2015

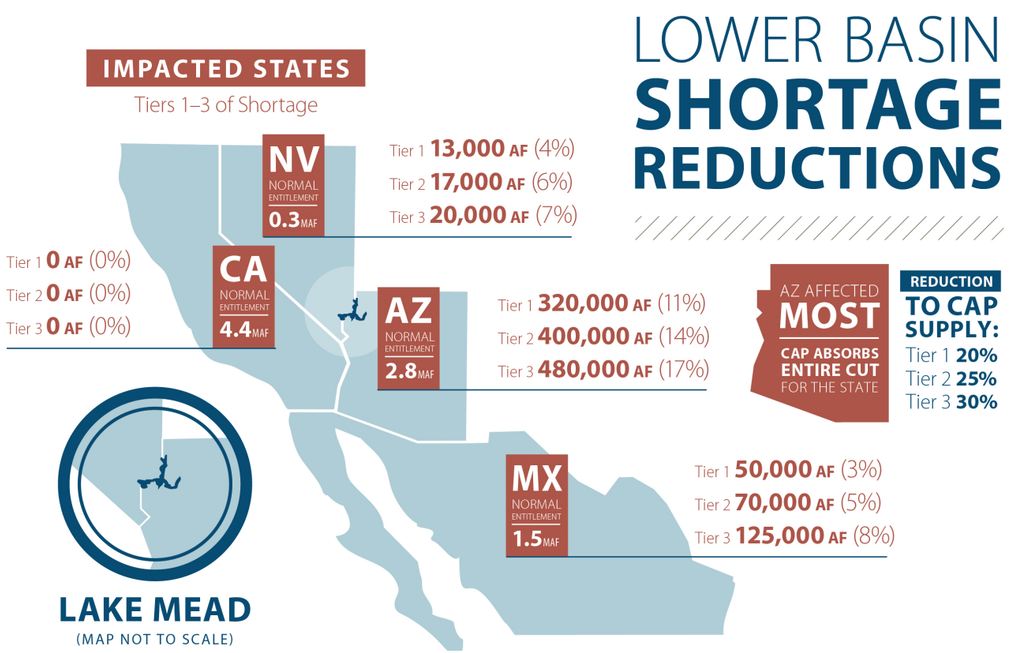
Arizona is Prepared for Colorado River Shortage

The Colorado River system has experienced extensive drought conditions for nearly 15 years, resulting in Lake Mead dropping to historically low reservoir levels. In addition, uses in the Lower Basin states exceed normal supply, driving lake elevation even lower. This is important because the water levels in Lake Mead and Lake Powell determine how much Colorado River water Arizona, along with other water users in the Lower Colorado River Basin (Arizona, California, Nevada and Mexico), receives on an annual basis. The Colorado River supplies nearly 40 percent of Arizona's total water use.

Thanks to Arizona's innovative water management programs and collaborative long-term planning, the state has enjoyed reliable water supplies and is prepared to handle the effects of the current drought and impending potential Colorado River shortage which may occur as early as 2016, although more likely in 2017.

You Should Know:

- A near-term Colorado River water shortage does not mean that Arizona is in a water crisis.
- With the exception of a potential increase in CAP water rates, Arizona's cities, towns, industries, mines and tribes using CAP water will not be affected by a near-term shortage.
- A near-term shortage will impact water supplies available to central Arizona farmers, the Arizona Water Banking Authority for storage, and for replenishment.
- Arizona's innovative water management programs and collaborative long-term planning has allowed for water providers and private entities to store additional water supplies underground, thus reducing the state's vulnerability to near-term shortage.
- Arizona has set precedent with rigorous water conservation and sustainability laws that protect Arizona water users.



FREQUENTLY ASKED QUESTIONS:

What is a Colorado River Shortage?

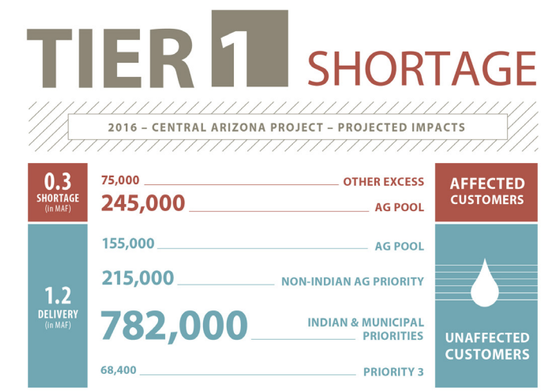
A shortage is an annual reduction in the amount of Colorado River water available to Arizona, Nevada and Mexico and is determined primarily by the volume of water in Lake Mead. Each month, the U.S. Bureau of Reclamation (which manages the Colorado River system) forecasts the elevation of the surface of Lake Mead for the following two years in a document called the 24-month study. If the elevation predicted by the August 24-month study for January 1 of the following year falls below an elevation of 1075', a shortage would be declared for the following year (e.g. a shortage would be declared for 2017 if the August 2016 prediction of January 2017 is below 1075'). A shortage has never been declared on the Colorado River since 1964.

Based on current hydrologic conditions, the Lower Colorado River Basin could see an official declaration of shortage as early as 2016 with an increasing probability of shortage in 2017 (greater than 50 % chance). Central Arizona Project would be subject to reductions in Colorado River water because CAP holds a "junior" priority water entitlement among the Lower Basin states.

Who will be impacted by a Colorado River Shortage?

A near-term shortage will not impact water supplies for Arizona's cities, towns, industries, mines or tribes using CAP water. It would, however, eliminate Central Arizona Project (CAP) water supplies to the Arizona Water Banking Authority. It would also reduce a portion of the CAP water supply identified for groundwater replenishment, which would impact agricultural users in central Arizona and may cause an increase in CAP water rates. In the face of potential shortage, farmers in central Arizona may choose to offset supply reductions in their CAP supply by using local supplies including pumping groundwater.

A Colorado River shortage would reduce CAP supplies by up to 320,000 acre-feet. CAP's share of the Colorado River is 1.6 million acre-feet. Should levels in Lake Mead continue to fall even after a shortage has been declared, additional cutbacks to CAP, Nevada and Mexico will occur at elevations 1050' and 1025'. The Arizona Department of Water Resources (ADWR) and CAP are working



cooperatively with many other Colorado River users to stop or delay these additional cutbacks by protecting levels in Lake Mead.

Is Arizona prepared for a Colorado River shortage?

Arizona has been planning for a potential shortage for decades. Since 1996, CAP has worked with the Arizona Water Banking Authority (AWBA) to store excess CAP water underground to provide back-up supplies for municipal, industrial and Native American water users. More than twice the amount (3.2 million acre-feet, which exceeds a trillion gallons) of the Colorado River water that is delivered to central Arizona annually has been stored to date. CAP, the ADWR and the AWBA have planned to recover and deliver these supplies should the need arise.