

New River Desert Hills Community Association

Ben Graff

CAP Board

October 13, 2017



YOUR WATER. YOUR FUTURE.

Central Arizona Project



336-mile aqueduct stretches from Lake Havasu to Tucson

14 pumping plants lift water nearly 3,000 feet

8 siphons, 3 tunnels

Lake Pleasant/New Waddell Dam

Annually delivers approx. 520 billion gallons (1.6 mill acre-feet)

Delivery of Colorado River water began in 1985 in Maricopa County

Construction complete in 1993

CAP and the Economy

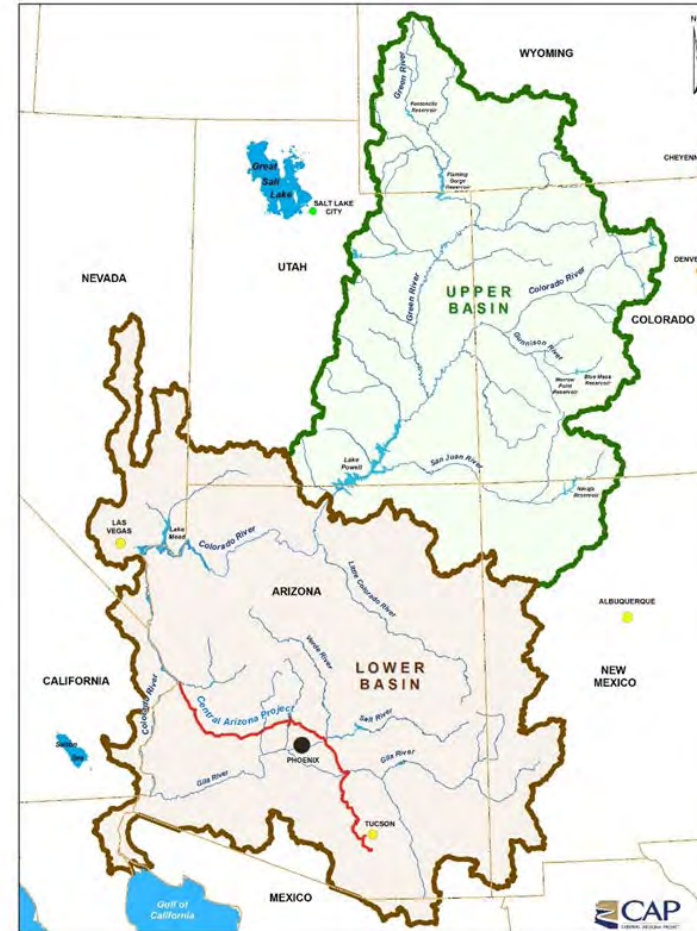
In recent years, CAP deliveries have generated:

- in excess of \$1 trillion (\$1,090,000,000,000) of Arizona's gross state product
- \$100 billion per year, which is 1/3 of Arizona's entire gross state product.
- in 2010, more than 1.6 million job-years (ASU, 2014).



Colorado River Basin

- Upper Basin States: Colorado, New Mexico, Utah, and Wyoming
- Lower Basin States: Arizona, California, and Nevada
- 7.5 million acre-feet (MAF) annual allocation of Colorado River water for the Upper Basin and 7.5 MAF for the Lower Basin
- Lower Basin allocations:
 - AZ (2.8 MAF)
 - CA (4.4 MAF)
 - NV (0.3 MAF)



Colorado River Shortage

- Shortage is a reduction of Colorado River water to users and is declared by the Secretary of the Department of Interior based on the water elevation of Lake Mead.
- Shortage is declared in August based on projected January lake levels and take force in January for the new year.
- Lake Mead elevations have been declining steadily in the past 15 years.
- What's causing the decline in Lake Mead?
 - 17-years of drought
 - Overallocation of the system or “structural deficit”

Lower Basin Water Allocation

Lower Basin (AZ, CA, NV + Mex.)	9.6 MAF
Lake Mead evaporation losses:	<u>0.6 MAF</u>
Average Inflow:	9.0 MAF
Structural Deficit:	<u>1.2 MAF</u>

Given basic apportionments in the Lower Basin, the allotment in Mexico, and an 8.23 MAF from Lake Powell, Lake Mead storage declines about 12 feet each year.

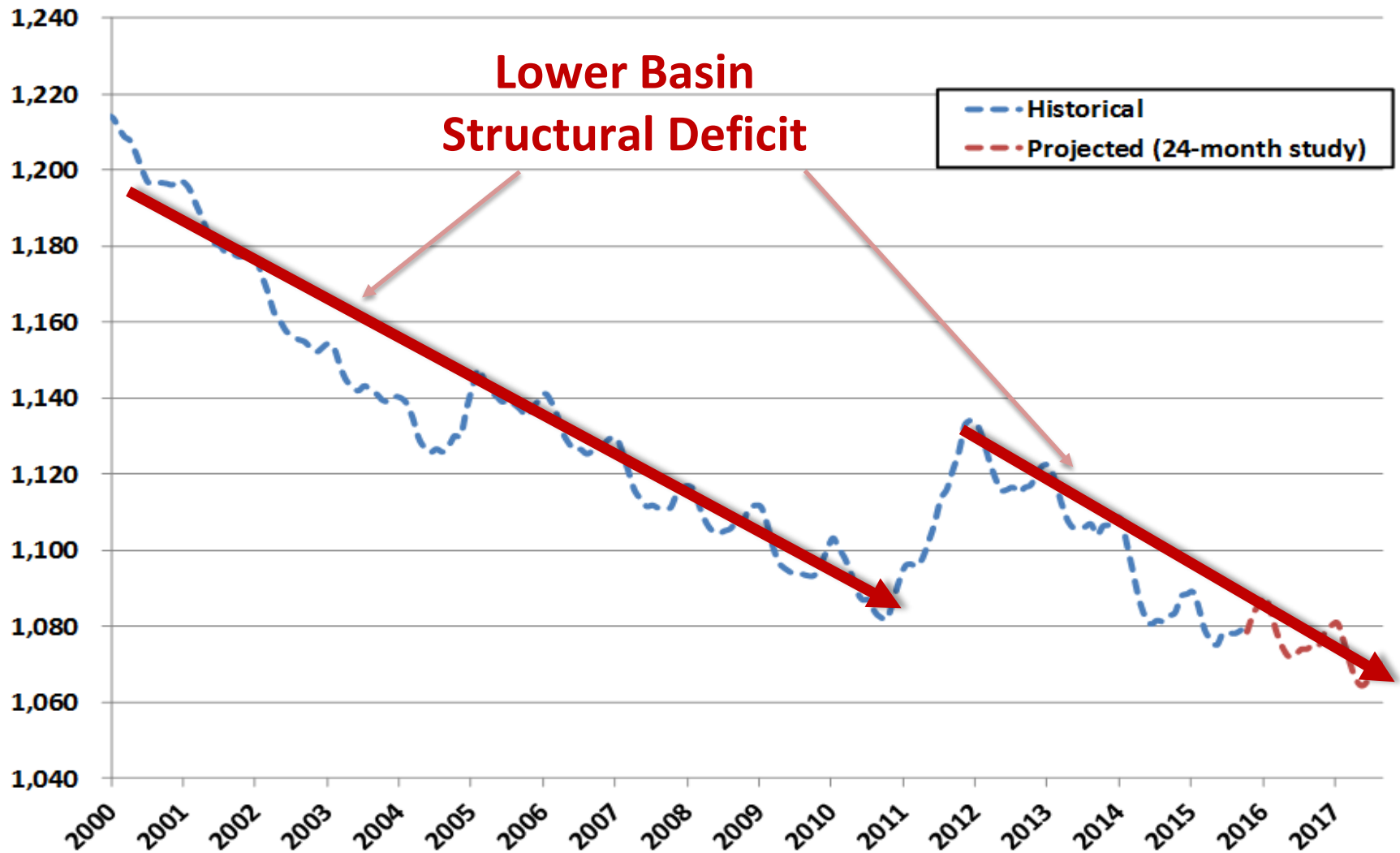
Impacts of the Structural Deficit

- Results in a decline of 12+ feet in Lake Mead every year when releases from Lake Powell are “normal” (8.23 million acre-feet, MAF)
- Results in a decline of 4 feet in Lake Mead every year when releases from Lake Powell are “balancing” (9.0 MAF)
- Drives Lower Basin to shortage
- CAP forced to bear obligations of others
- Evaporation and other system losses
- Lower Basin’s half of Mexican Treaty obligation

Lake Mead Elevation

Lake Mead End of Month Elevation (ft)

**Lower Basin
Structural Deficit**



Consequences of Lake Mead Decline

1075' • Arizona takes 320 KAF shortage

1050' • Arizona takes 400 KAF shortage reduction
• Reductions in hydropower generation

1025' • Arizona takes 480 KAF shortage reduction
• Uncertainty about what actions Secretary will take to protect Lake Mead
• Potential loss of hydropower generation and instability in the electrical grid

1000' • Active storage in Lake Mead is less than CA's allocation (~4.3 MAF)
• "Run of River" operations – insufficient storage to meet deliveries to AZ, CA, NV and MX

895'

Current Adaptation Strategies

Storage and Recovery

- 3.4 MAF of underground storage in partnership with AWBA

Augmentation

- Weather modification projects in the Upper Basin
- Local and binational desalination

Lower Basin Pilot Drought Response Actions MOU

- Interstate plan to leave 740 KAF in Lake Mead by end of 2017
- CAP's share is 345 KAF – completed in 2016

Innovative Conservation (“Pilot System Conservation”)

- Interstate funding to conserve >75 KAF in the Colorado River
- Conservation research grant program

Lower Basin Drought Contingency Plan (“DCP”) **Pending**

Lower Basin Drought Contingency Plan (DCP)

- DCP is an “insurance policy” to provide more certainty and greater protection of Colorado River supplies.
- DCP process led by the Bureau of Reclamation and the Lower Basin States built on the initial progress in the pilot projects.
- DCP process has identified key concepts outlining additional proposed reductions to “bend the curve” in the decline of Lake Mead.



Drought Contingency Plan

- New proposed reductions (in addition to the '07 guidelines) by each Lower Basin States, and conservation commitment by the Bureau of Reclamation
- Earlier and larger reductions by Arizona and Nevada
- Conservation by the Bureau of Reclamation
- Reductions by California at lower Lake Mead elevations
- Mexico to be asked to participate via Minute 32x
- Overlay on the '07 Guidelines



Next Steps

- Complete DCP Term Sheet with Lower Basin States and United States
- Coordinate DCP with Mexico negotiations
- ADWR coordinates and leads Arizona implementation process for DCP
- Attempt to complete negotiations and Board approvals (in Arizona and among the interstate parties)
- Once there is agreement, ADWR Director will seek approval from the Legislature to enter into DCP agreement on behalf of Arizona (pursuant to A.R.S. 45-106) in the form of a concurrent resolution
- Federal authorization will also be necessary for both

Campaign to *Protect Lake Mead*

“Protect Lake Mead” is CAP’s educational campaign to raise public awareness about Arizona’s Colorado River water supply, especially as it relates to the water conditions at Lake Mead.

Venues:

- Website
- Spokesperson
- PLM alerts
- TV placement
- Social media



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