19<sup>th</sup> Annual Arizona Ag Forum

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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



#### Importance of NGS

Constructed in the early 1970s on the Navajo Reservation near Page, AZ, to provide power to the CAP as an alternative to two additional dams in the vicinity of the Grand Canyon

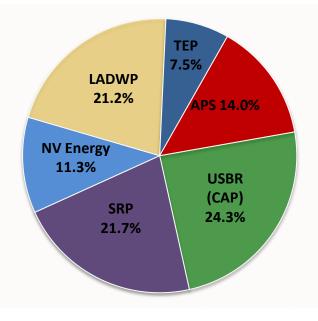
3 coal-fired units, total net output of 2,250 megawatts (MW)

Operated by the Salt River Project (SRP) on behalf of six participants

Provides 95% of power required by CAP

Surplus power from the BOR's share of NGS is sold to help fund CAP repayment, which in turn funds Indian water rights settlements





#### **Benefits to CAP of TWG Agreement**

EPA released its final rule in July 2014

Ensures the viability of NGS to 2044, providing certainty that stable and reliable power supplies are available for decades

Significantly delays the cost of SCR, potentially until 2030



Reduction in CO2 emissions meets the EPA's proposed carbon rule for NGS

Preserves CAP's ability to fund Arizona's repayment obligation for CAP construction through the sale of surplus NGS power



#### **Shortage - 2007 Guidelines**

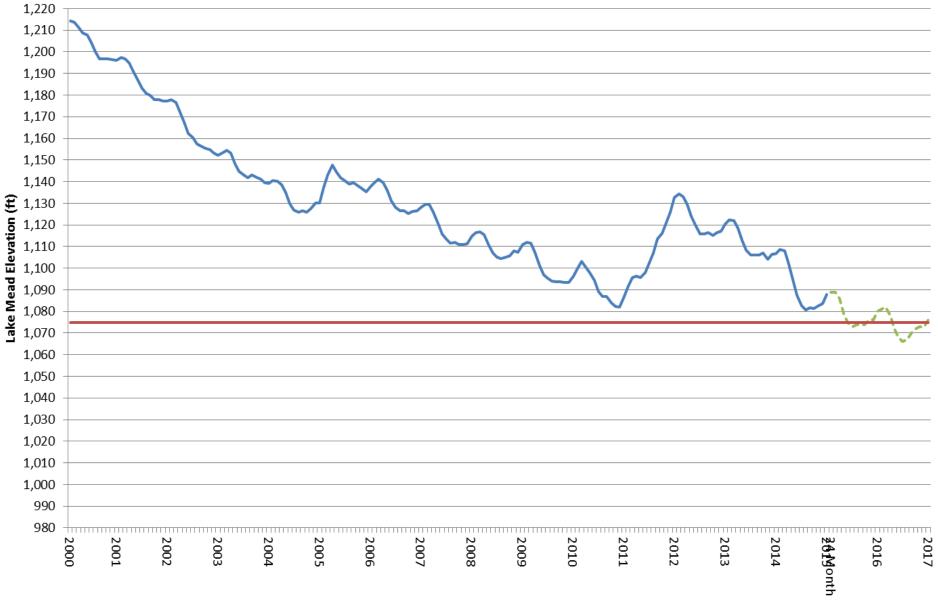
 Lower Basin apportionments are reduced when Lake Mead falls below specified elevations:

| <u>Elevation</u> | <u>Reduction</u> |
|------------------|------------------|
| 1075′            | 333,000 AF       |
| 1050'            | 417,000 AF       |
| 1025'            | 500,000 AF       |

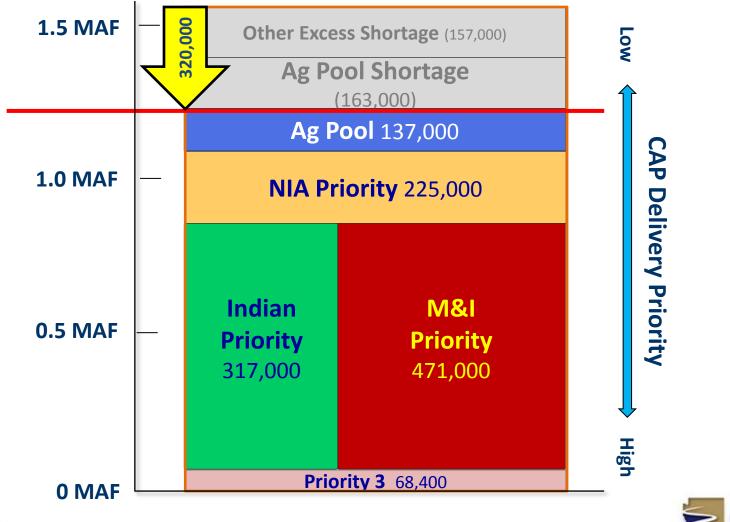
 If Lake Mead is projected to fall below elevation 1000, the Secretary will consult with Basin States to discuss further measures



#### Lake Mead Elevation (EOM Jan 2000 - Dec 2014 and Projected 24 Months)



#### **Level 1 Shortage**



CENTRAL ARIZONA PROJECT

#### Impact of "Structural Deficit"

- Results in a decline of 12+ feet in Lake Mead every year when releases from Powell are "normal" (8.23 MAF)
- Undermines effectiveness of the 2007 Guidelines
- 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
  - US failure to operate YDP



#### **Risk to All Colorado River Users**

Without equalization or corrective action, Lake Mead will fall below elevation 1000 in 5-8 years

If Lake Mead is below elevation 1000:

- Impacts SNWA ability to withdraw water
- Less than 4.5 MAF left in storage in Lake Mead
- Reduced power generation and efficiency at Hoover Dam, potential cavitation or vibration damage





#### **Drought Response Plan**

- Colorado River water and power users share risk
- CAP and ADWR are working with Basin States and Reclamation to execute a Drought Response and Sustainability Plan
- MOU = voluntary commitment to store 740kaf in Lake Mead from 2014-17
- Ongoing efforts
  - Expand weather modification and tamarisk removal
  - Pilot System Conservation Agreement
  - Yuma Desalting Plant pilot run
  - Innovative Conservation Program grants
  - Long-term augmentation studies



### **Current Status**

Lake Mead is at elevation

1086 feet = 41% capacity

- 2015 no shortage
- 2016 39% probability
- 2017 61% probability



CAP is working on a reservoir protection plan with other Lower Basin water users and taking steps to protect Lake Mead (MOU is the first step)

### **CAP Funding Sources**

- Water delivery charges (60% of CAP's budget)
- M&I Capital charges applied exclusively to repayment
- Power Basin and Development Fund revenues (10% of budget) applied exclusively to repayment
- 10-cent ad valorem tax
- 4-cent ad valorem tax
- Interest income, reimbursements and other misc. revenues
- CAP is also authorized to issue general obligation and revenue bonds, but does not currently have any bonds outstanding





# HOW THE 4¢ TAX IS USED

Arizona law specifies a **1-2-3 tiered system** for expenditures.





#### What does this cost the home owner?

\$100,000 value = \$4.00 per year

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\$200,000 value = \$8.00 per year

#### \$400,000 value = \$16.00 per year



### **Considerations**

- If the 4-cent tax expires, the only place to absorb significant new costs is in water rates and capital charges.
- AWBA may not have another alternative.
- Burden of additional costs will fall exclusively on water users, although the benefits of CAP extend to all citizens in the three counties and the balance of the state.
- Future funding needs to ensure CAP reliability.



## **Questions?**



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