

# Assessment of the Assessment/ Fourth Management Plan Development Phoenix AMA

GUAC, January 12, 2012

# Assessment of the Assessment

Where do we think we might be in 2025?

GUAC, January 12, 2012

# Projected Demand and Supply in 2025:

CATEGORY	SCENARIO ONE	SCENARIO TWO	SCENARIO THREE	2009 HISTORICAL
Municipal	1,490,773	1,763,467	2,099,210	1,069,532
Industrial	190,163	225,666	253,896	191,987
Agricultural	331,836	424,836	539,356	736,073
Indian	495,148	533,315	567,393	264,670
<b>TOTAL DEMAND</b>	<b>2,507,920</b>	<b>2,947,284</b>	<b>3,459,855</b>	<b>2,262,262</b>
Renewable Supplies to Meet Demand <sup>1</sup>	1,684,643	1,962,181	2,279,714	1,536,395
<b>Groundwater to Meet Demand</b>	<b>823,277</b>	<b>985,103</b>	<b>1,180,141</b>	<b>725,867</b>
Offsets to GW Pumping <sup>2</sup>	668,648	661,500	682,619	776,924
<b>OVERDRAFT<sup>3</sup></b>	<b>154,629</b>	<b>323,603</b>	<b>497,522</b>	<b>-51,057</b>

<sup>1</sup> Includes CAP, Surface Water, and Reclaimed Water

<sup>2</sup> Includes Incidental Recharge, Canal Seepage, CAGR D Replenishment, Cuts to the Aquifer, Reclaimed Water Discharge, and Net Natural Recharge

<sup>3</sup> Includes GW Allowance pumping

# Water Management Goal versus Uncertainties

## AMA Goal:

Safe-yield = “...a groundwater management goal which attempts to achieve and thereafter maintain a long-term balance between the annual amount of groundwater withdrawn in an active management area and the annual amount of natural and artificial recharge in the active management area.”

## Future Changing Conditions and Future Uncertainties:

- Difficulty projecting the nature of the economy
- Climate/Drought and renewable supply availability
- Reduction in excess CAP (AWBA and CAGR)
- Reduction to the CAP Ag Pool (reductions to the Ag Pool in 2017 and 2024, and elimination of the Ag Pool in 2030)
- Relationship between power cost and water cost
- CAGR replenishment obligation
- Cumulative, regional impact of individual water management decisions
- Ability to obtain additional renewable supplies
- Ability to generate funding to meet water management objectives

# ADWR Management Plans

1MP:

- Foundation for 2MP and 3MP
- Compiled demand/supply data
- Included water budgets
- Established water conservation programs by sector
- Set the stage for Well and AWS Rules
- Established a monitoring and enforcement program

# ADWR Management Plans

## 2MP:

- More detailed analysis of demand/supply by sector, hydrology, and water quality
- Use of computerized mapping, hydrologic modeling and more detailed data analysis by sector
- Augmentation/Re-Use Program
- Agricultural & Municipal Flexibility Accounting Provisions
- Plan Implementation Approach
- Modifications-
  - ✓ Large Untreated Providers
  - ✓ Prohibit recovery of stored water in another AMA
  - ✓ 4' decline rate for recovery outside the AOHI
  - ✓ Conservation Assistance Program
  - ✓ Clarification of Municipal/Industrial/Agricultural Programs

# ADWR Management Plans

## 3MP:

- More flexibility in all sector conservation programs, including incentives and multiple conservation programs to choose from
- More detailed discussion of hydrology (models completed for four AMAs by the 3MP)
- Water Management Assistance Program
- Modifications-
  - ✓ Ag BMP Program
  - ✓ Adjustments to NPCCP and Industrial Programs (slightly revised BMPs, clarification of some Industrial programs)
  - ✓ Adjustments to Water Management Assistance Program for grants funding (to comply with statutory change for allocation of grants funds)
  - ✓ MNPCCP

# ADWR Responsiveness:

## Statute/Rule Changes Summary (previous plans)

- Allotments for industrial users
- Intermediate conservation requirements
- Small provider exemption from Large provider programs (100 acre-feet or less)
- Underground Storage and Recovery Program
- Two year notice to comply with conservation requirements
- Individual User Compliance Provision
- Spill water excluded from compliance
- Conservation Assistance Program
- Flex credit transfer provisions
- Reclaimed water excluded from compliance
- Non-Per Capita and Modified Non-Per Capita Programs
- Small Provider (250 acre-feet or less) and Small IGFR Exemption (less than 10 acres )
- ADWR/Agricultural community agreement on maximum efficiency (80%)
- Ag Historic Cropping Program
- Ag BMP Program
- Other non-management plan statutory/rule changes



# The Tools We Have:

- Management Plans/Conservation Programs
- AWS Rules
- Recharge Program
- Well Rules
- Statutory Authority and Compliance
- Community Input and Other Agency Coordination

# The Tools We Need?

## FOR DISCUSSION IN THE 4MP:

- Local/Regional Cooperative Water Management
- Localized Groundwater Management
- Location of Underground Storage vs. Location of Annual or LTS Credit Recovery
- Climate Change Planning and Response Program
- Short-Term Drought Response Program
- Additional Infrastructure and Funding
- Ability to respond positively to economic growth without increasing groundwater withdrawals
- Planning horizon beyond 2025
- Other ideas?

# 4MP

- No change to the Agricultural Programs
- No change to the Industrial Programs
- Updates to some MNPCCP BMP descriptions and changes to other Municipal Programs-
  - ✓ Eliminate the Alternative Conservation Program
  - ✓ Simplified Total GPCD Program based on a percent reduction (eliminate the component method)
- “The Plan”
  - ✓ How do we increase the water supply?
  - ✓ How do we decrease groundwater dependency?
  - ✓ How can we respond to/prepare for change?
  - ✓ In what ways can we begin building the path to water management solutions?
    - Establish collaborative/cooperative water management
    - Flexible/responsive management approaches
    - Examine/define infrastructure needs

# 4MP Structure

- First three chapters similar to 3MP but incorporate Assessment data
  - ✓ Summarize statutory and rule changes
  - ✓ Changes in hydrologic conditions since the 3MP
  - ✓ Historical data and assessment 1985-2009
- Next three chapters will be Agricultural, Municipal and Industrial Programs, updated but essentially unchanged other than Municipal Program:
  - ✓ Streamlined Total GPCD Program,
  - ✓ No ACP and no NPCCP,
  - ✓ Updates to some MNPCCP BMP descriptions
- Groundwater Quality Management Chapter
- Augmentation and Recharge Chapter
- Water Management Assistance Chapter
- Plan Implementation Chapter
- Water Budgets and Projections (from Assessment data)
- Future Planning Chapter

# 4MP Proposed Timeline

- GUAC presentations on Assessment of the Assessment and 4MP Concepts (Jan/Feb 2012)
- Presentation of Draft 4MP at GUACs (April/May 2012 - PRAMA will be first)
- Distribution of Final Draft 4MP to GUAC for GUAC recommendations on the draft plan (August 2012 – 30 days for GUAC to review and comment)
- Promulgation of 4MP (October 2012)
- Public hearings (December 2012)
- First Order of Adoption (March 2013)
- Final Order of Adoption (May 2013)
- 4MP becomes effective (June 2013)
- Conservation requirements become effective (January 2016)

# 4MP Staff and Public Comment

- ADWR 4MP Staff:
  - ✓Pam Muse
  - ✓Sharon Morris
  - ✓Ruth Greenhouse
  - ✓Mohammed Al-Sabbry
  - ✓Interns
  - ✓GIS/AMA/AMA Planning & Data Management Support
- Public Comment:
  - ✓GUACs will be forum for 4MP public comment

# Questions/Discussion