

Assessment of the Assessment/ Fourth Management Plan Development Tucson AMA

GUAC, February 13, 2012

Assessment of the Assessment

Where do we think we might be in 2025?

GUAC, February 13, 2012

Projected Demand and Supply in 2025:

CATEGORY	SCENARIO ONE	SCENARIO TWO	SCENARIO THREE	2009 HISTORICAL
Municipal	251,018	279,264	308,237	183,216
Industrial	55,682	63,782	71,282	53,908
Agricultural	57,038	71,342	112,245	97,454
Indian	19,033	21,455	34,043	21,462
TOTAL DEMAND	382,771	435,843	525,807	356,040
Renewable Supplies to Meet Demand ¹	221,983	227,159	242,877	160,031
Groundwater to Meet Demand	160,789	208,684	282,930	196,009
Offsets to GW Pumping ²	136,598	150,307	169,763	151,762
OVERDRAFT³	24,190	58,377	113,167	44,247

¹ Includes CAP, Surface Water, and Reclaimed Water

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

³ 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goal which attempts to achieve and thereafter maintain a long-term balance between the annual amount of groundwater withdrawn in an active management area and the annual amount of natural and artificial recharge in the active management area.”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
- Ability to obtain additional renewable supplies
- Ability to generate funding to meet water management objectives
- Ability to achieve and maintain cooperative regional water management

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 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