

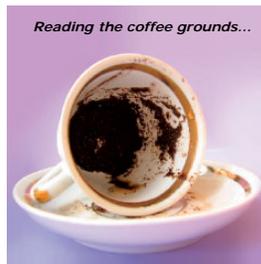


Projecting CAGRD Replenishment Obligation Key Challenges & Approaches for the 2015 Plan of Operation

Ken Seasholes
CAGRD & Underground Storage Committee
January 23, 2014

Challenge

- Obligation projections must consider supply and demand conditions for the entire CAP service area, coupled with subdivision-level analysis, and complex statutes and rules that affect reliance on the CAGRD



Demand

- Key Issues:
 - Pace of housing activity
 - How long before we return to “normal”
 - What is “normal”
 - Trends in use
 - Penetration rates of low-flow fixtures
 - Changes in lot & housing characteristics
 - Policy & economic drivers
 - Changes in non-residential uses



Supply

- Key Issues:
 - Availability
 - Supply variability
 - Surface water availability
 - Colorado River shortage
 - Effluent generation
 - Interior/exterior ratios
 - Interdependent uses
 - Long-term CAP contract use vs. Excess



Supply (cont.)

- Key Issues:
 - Utilization
 - Portfolio management
 - Preference order for use of supplies
 - Leases, exchanges, reallocations, etc.
 - Type, timing & magnitude
 - Long-term storage credits
 - Accrual & utilization strategies



Reliance on CAGR D

- Key Issues:
 - Member Service Areas
 - Pre & post “tipping point”
 - Changes through time
 - Obligation avoidance strategies
 - De-enrollment
 - Member Land Water Providers
 - Pinal AWS Rules
 - Effluent use
 - Reporting requirements
 - MSA conversions



Planning Approach

- Build planning and analytical capacity that can be used to support a range of CAP's responsibilities, including the CAGR
 - Research
 - Data
 - Modeling
 - Visualization



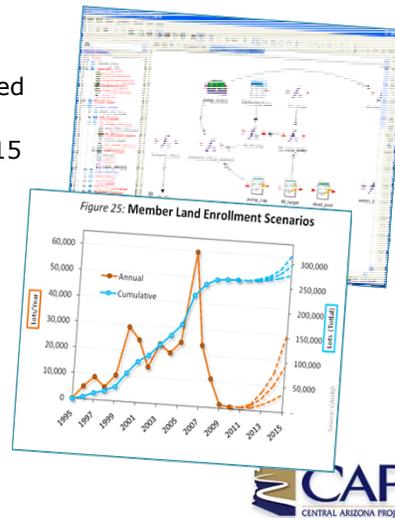
Planning Approach

- Research
 - Technical studies
 - Outside expertise
 - In-house analysis
- Data
 - CAGR's "CAPTR" database
 - ADWR Annual Report data
 - Assessor parcel data
 - Census data
 - MAG/CAG/PAG projections
 - GIS layers



Planning Approach

- Modeling
 - Service Area Model
 - In-progress; being developed in GoldSim
 - 100+ entities; all sectors; 15 supply types
 - Connections to CRSS
 - Short-term Outlook Model
 - Member Land projections
- Visualization
 - Interactive charting
 - GIS mapping



CAP
CENTRAL ARIZONA PROJECT

2015 Plan of Operation

- An obligation forecast is required by statute, and certain provisions are tied to that forecast
 - Annual Membership Dues ratios
 - Replenishment Reserve targets
- A credible forecast depends on meticulous analysis, but reporting too much detail can be misleading
 - Precision vs. accuracy
- Staff are working to develop sound projections, but will recommend that the 2015 Plan include less detail than the current Plan

CAP
CENTRAL ARIZONA PROJECT

Questions

