1973 Water Adequacy Statute

1980 Groundwater Management Act
- Established the Arizona Department of Water Resources (ADWR)
- Established Active Management Areas (AMAs) & Irrigation Non-Expansion Areas (INAs)
- Established Assured and Adequate Water Supply Programs

1994 – Underground Water Storage, Savings and Replenishment Management Act

1996 – Arizona Water Banking Authority

2007 – SB1575 – Mandatory Adequacy
Arizona Water Management Policy

Evolution Shaped By

• Resource Availability
• Economics of Acquiring, Treating & Distributing
• Cultural Foundations for Resource Use
• Legal Framework of Ownership & Management
• Politics of Area & Major Players
Arizona Groundwater Management Act

Drivers

• Groundwater Overdraft
• Secure CAP Authorization
• Legal Conflicts over Water Rights (FICO)

Goals

• Control severe overdraft occurring in certain parts of Arizona.
• Allocate limited groundwater resources to meet changing needs
• Augment Arizona’s groundwater supplies.
Arizona’s Management Framework.

- Regulatory Approach
- Management Areas vs Statewide
- State vs Regional/Local Control
- Groundwater / Surface Water Dichotomy
- Rights System with Grandfathering

Re-distributive | Regulatory
--------------------- |------------------------
Constituent | Distributive

............... & Consequences
Arizona Water Management

Management Structure

State-Wide Provisions
Irrigation Non-Expansion Areas; and
Active Management Areas
Water Management Areas

Prescott AMA goal: safe-yield by 2025

Joseph City INA: No new irrigated lands

Phoenix AMA goal: safe-yield by 2025

Tucson AMA goal: safe-yield by 2025

Harquahala INA: No new irrigated lands

Pinal AMA goals:
- allow development of non-irrigation uses
- preserve agriculture as long as feasible

Santa Cruz AMA goal:
- maintain safe-yield
- prevent decline of water table

Douglas INA: No new irrigated lands
Arizona’s Water Management Success


<table>
<thead>
<tr>
<th>Timeframe</th>
<th>Total Water Use (in million acre-feet)</th>
<th>Population (in millions)</th>
<th>Gross Domestic Income (in billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1957</td>
<td>7.1 maf</td>
<td>1.1</td>
<td>$13.4</td>
</tr>
<tr>
<td>2015</td>
<td>6.9 maf</td>
<td>6.8</td>
<td>$243.1</td>
</tr>
<tr>
<td>Change from 1957-2015</td>
<td>-3%</td>
<td>504%</td>
<td>1,716%</td>
</tr>
</tbody>
</table>

Source: ADWR, 2015
ARIZONA’S WATER MANAGEMENT TOOLS

Evolution of Programs

- Target/Allocation Tied to Conservation Potential
- Prescriptive Program Options Added
- Increased Flexibility & Complexity
- Regulation of Additional Sectors
- De-regulation of Small Rights
- Increased Emphasis on Supply Source
- Increased Potential for Tech Assistance
- Challenge of Maintaining and/or Enhancing Programs
Water Management Policy

Governance Questions & Challenges

• Appropriate Level of Government for Different Activities
  o Assured Supply – need state mandates
  o Conservation – closer to end user the better

• Policy Approach – Politics Linkage
  o Regulate vs Partner vs Incentivize
  o Beware of Unintended Consequences (Youngs Farm)
  o Keep Water Policy Isolated from Broader Political Dynamics

• Capitalize on Opportunity & Crisis
Current & Emerging Challenges

• Demand UP .... Supply DOWN .... Safe-Yield Goal
• The Structural Deficit plus Climate Impacts
• Impact of Reduced Supply on GW Mgmt Programs
• Future of Agriculture
• Pressure for Water Transfers
• Rural vs Urban Water Uses
• GW Mgmt Approaches for Rural Areas
• Environmental / Habitat Uses
• Multi-Jurisdictional – Tribal - Bi-National Coordination and Conflict
• Governance – Need More or Less Engagement
• Increasing Uncertainty
• Land is a Key