This presentation premiered at WaterSmart Innovations

watersmartinnovations.com
Overview of Chandler’s Water Allocation Policy

Integrating Water Policy with Land Use Planning and Economic Development

Steps of the process

For all the details read Ordinance 4634, or Chandler City Code: Article VI. 52 - Sustainable Water Allocation Regulations
STRATEGIC WATER VISION

- Build a vibrant community
- Water and infrastructure available for the last building
- All Departments work together to encourage business development
- Strong focus on Employment Corridors and Downtown Revitalization
- Strategically manage remaining water supplies
CHANDLER FACTS

- 253,000 current population - 71.5 square miles - 22 miles southeast of Phoenix
- Governance: Elected Mayor and Council
- City owns and operates
  - Potable Water System
  - Waste Water Treatment System
  - Reclaimed Water System
Key Employment Centers

Price Road Corridor
Historic Downtown Chandler
West Chandler
Chandler Airpark
Westech Corporate Center

- Price Rd
- Dobson Rd
- Alma School Rd
- Arizona Ave
- McQueen Rd
- Cooper Rd
- Gilbert Rd
- Lindsay Rd
- Val Vista Dr

- Western Canal
- Elliot Rd
- Warner Rd
- Ray Rd
- Chandler Blvd
- Frye Rd
- Pecos Rd
- Germann Rd
- Queen Creek Rd
- Ocotillo Rd
- Chandler Heights Rd
- Riggs Rd
- Hunt Highway
Why Do We Need A Policy?

- Limited Undeveloped Land
  - Limited Opportunities for New Large Employers
- Finite Supply of Water
  - Make Every Drop Count
- Uncertainties of Build-out Planning Projections
  - Water Use and Land Use Projections Can Change
- Uncertainties with Future Large Water Users
**CHANDLER FACTS**

**Water**
- Finite Supply (80% committed)
- Surface water, groundwater, reclaimed
- Assured Water Supply Requirements

**Land**
- Finite Supply
- Total Area = 65 sq.mi.
- City is 85% developed
- Remaining undeveloped land
- 15% Residential
- 40% Non-Residential
Estimating Future Demands Is Not An Exact Science
Example: Water Use Per Job/Employee

<table>
<thead>
<tr>
<th>gpd/employee</th>
<th>Industrial Company 1</th>
<th>Industrial Company 2</th>
<th>Industrial Company 3</th>
</tr>
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<tbody>
<tr>
<td>5,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15,000</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>20,000</td>
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<td></td>
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<tr>
<td>25,000</td>
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</tr>
<tr>
<td>23,000</td>
<td></td>
<td>150</td>
<td>600</td>
</tr>
</tbody>
</table>
Aligns water policy with City’s Strategic Goals

Protects Chandler’s water resources
Protects existing users & reserves water for future users

Targets “high volume water users”

Minimizes staff time to implement (and monitor)
How Did The Water Allocation Policy Begin?

- September 2013 – Meeting with City Council
  - City’s water operations and resources discussion
  - Concerns about new high volume water voiced
  - City code did not specifically prevent new water connections
  - Staff began developing a water allocation policy
- May 2015 – Water allocation ordinance adopted
Water Policy Development
Critical Components

- Talk and **LISTEN** to
  - Land Planners
  - Permit Reviewers
  - Economic Development
  - Legal Department

- Understand the development process

- Examine past water use data
Collaborative Effort

Outreach
- 9 meetings with commercial, industrial, multi-family developers, data center developers, existing large industrial user

Stakeholders
- Intel, Basha’s, Snell & Wilmer, Grady Gammage, Valley Partnership, Southwest Value Partners

Staff
- City Manager’s Office
- Economic Development
- Law
- Planning
- Permit Review
Past Approach: Limit Water On A Per Acre Basis

- Does not work for a municipal setting as it …
  - Limits multi-story buildings
  - Limits water intensive industries
  - Artificially raises selected land values
Concept: Allocate Water Using The Water Meters

- Several paths to get project approved.
- Only “hard stop” in development process. Every new development must apply for water meter.
- Which new water meters should be regulated?
What Did The Existing Data Tell Us?

- A small group uses most of the water
- ICI meters can use lots of water

City of Chandler
Number of Water Meters
2011

City of Chandler
Water Use Per Meter
2011
Residential Water Users Exempt from Water Allocation Policy

- Existing ordinances and practices in place to manage residential demand
- Enforcement will be difficult and labor intensive

95% of all meters are residential
3-inch or Larger Meters Are Classified as High Volume Water Users

<table>
<thead>
<tr>
<th>Meter Size</th>
<th>Max flow (gpd)</th>
<th>30% Max flow (gpd)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-inch</td>
<td>288,000</td>
<td>86,000</td>
</tr>
<tr>
<td>3-inch</td>
<td>648,000</td>
<td>194,000</td>
</tr>
<tr>
<td>4-inch</td>
<td>1,728,000</td>
<td>518,000</td>
</tr>
<tr>
<td>6-inch</td>
<td>3,600,000</td>
<td>1,080,000</td>
</tr>
<tr>
<td>10-inch</td>
<td>9,360,000</td>
<td>2,800,000</td>
</tr>
</tbody>
</table>
High Volume Water Users

- Less than 1% of all new meters will be equal to or larger than 3 inches.
- Parcels using over 50,000 gpd.
- Use more than Tier I (base) allocation (based on building size).
- 3-inch and larger meters.
Managing New High Volume Users

- Does the policy impact the "right" users?
- Is policy easy to administer?
- Is the policy equitable?
- Define High Volume Users
- How will policy be enforced?

Manage New High Volume Users
WATER ALLOCATION POLICY

Strategically Manage Remaining Supplies

**New policy excludes:**
- Existing meters
- All residential meters (SFR and Multi-family)

**New policy manages:**
- New large volume water users (3-inch or larger meters)
- New multiple water meters on one parcel (combined use of more than 50,000 gpd)
- Allocates water using a tiered method
Consequences of Water Allocation Policy

- Linked Water Planning to City’s Strategic Goals
- Better coordination among city departments
Water Allocation Tiers

**Tier I**
Base Allocation
- Sufficient water for most projects

**Tier II**
Quality of Life Allocation
- New user needs more water
- Allocated by City’s Water Resource Mgmt. Strategy

**Tier III**
Market Based Allocation
- New user purchases a new 100-year water supply
# New ICI Users With 3-inch or Larger Meters

## Approved Tier I (base) Allocations

<table>
<thead>
<tr>
<th>Term (s)</th>
<th>City Ordinance Reference</th>
<th>Tier I Water Use Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office, industrial/warehouse</td>
<td>38-3</td>
<td>115 gallons per day per 1,000 square feet gross floor area</td>
</tr>
<tr>
<td>Retail/commercial</td>
<td>38-3</td>
<td>200 gallons per day per 1,000 square feet gross floor area</td>
</tr>
<tr>
<td>Hotel</td>
<td>35-200</td>
<td>356.5 gallons per day per guest room</td>
</tr>
<tr>
<td>Privately owned recreational facilities</td>
<td>38-3</td>
<td>500 gallons per day per 1,000 square feet gross floor area</td>
</tr>
</tbody>
</table>
Policy Administration – Enforcement

- Sign contract
- Over water use penalties (3-year rolling average)
  - First time – pays for excess water use
  - Second time - water reduction plan program initiated
  - Third time – legal action
Take Home (Lessons Learned)

Let’s develop policies that:

- Align with City’s strategic goals
- Impact only a specific audience (high volume water users)
- Use staff time efficiently
  - Minimize time spent by staff to implement and monitor

More Information, please check out these links:
http://www.chandleraz.gov/, Chandler Ordinance and City Code: Ordinance 4634, or Article VI. 52 - Sustainable Water Allocation Regulations

Or contact: gregg.capps@chandleraz.gov
Conclusions / Questions

Sustainable Water Allocation: One City's Solution

Thank You

www.chandleraz.gov/water