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Sustainable Water Allocation:

One City's Solution

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SUSTAINABLE WATER ALLOCATION

- Overview of Chandler's Water Allocation Policy
- Integrating Water Policy with Land Use Planning and Economic Development
- Steps of the process

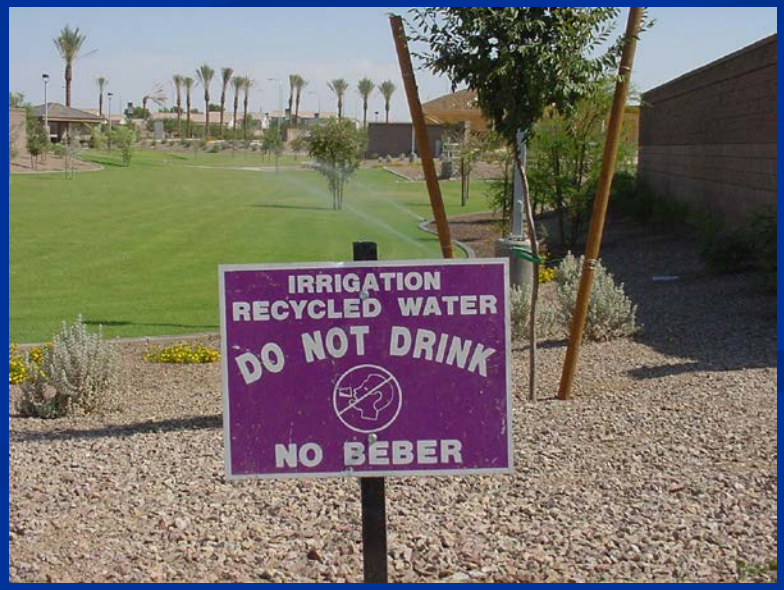
For all the details read Ordinance 4634, or Chandler City Code: Article VI. 52 - Sustainable Water Allocation Regulations

STRATEGIC WATER VISION

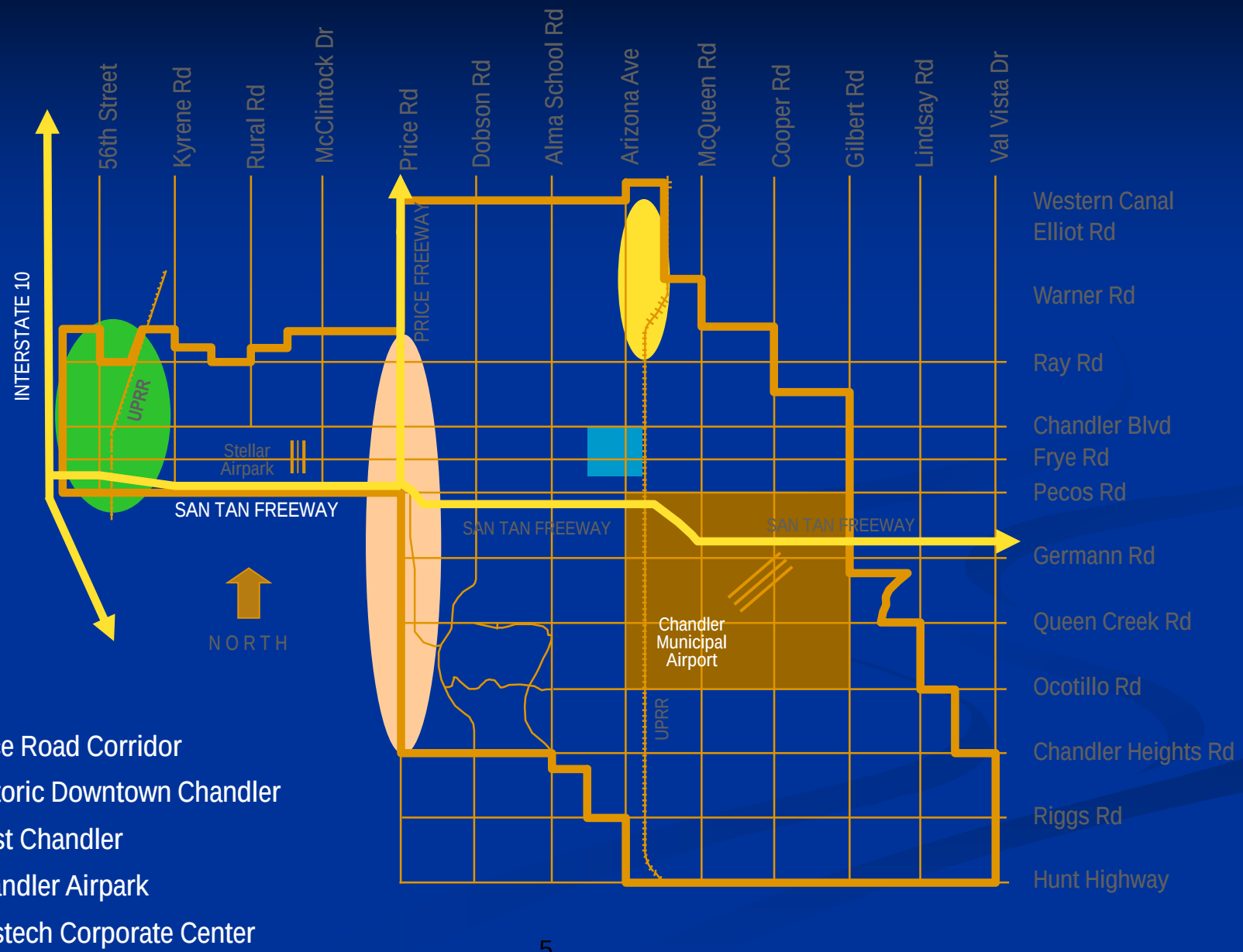
- Build a vibrant community
- Water and infrastructure available for the last building
- All Departments work together to encourage business development
- Strong focus on Employment Corridors and Downtown Revitalization
- Strategically manage remaining water supplies

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



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

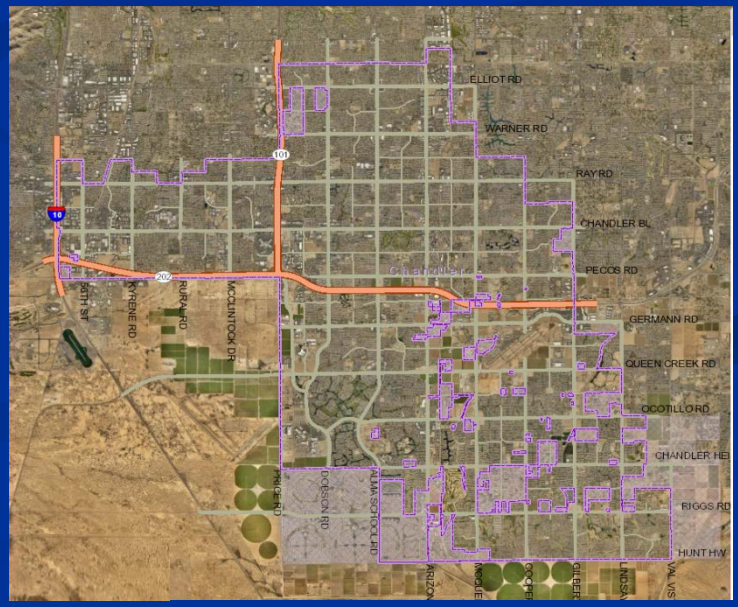
CHANDLER FACTS

Water

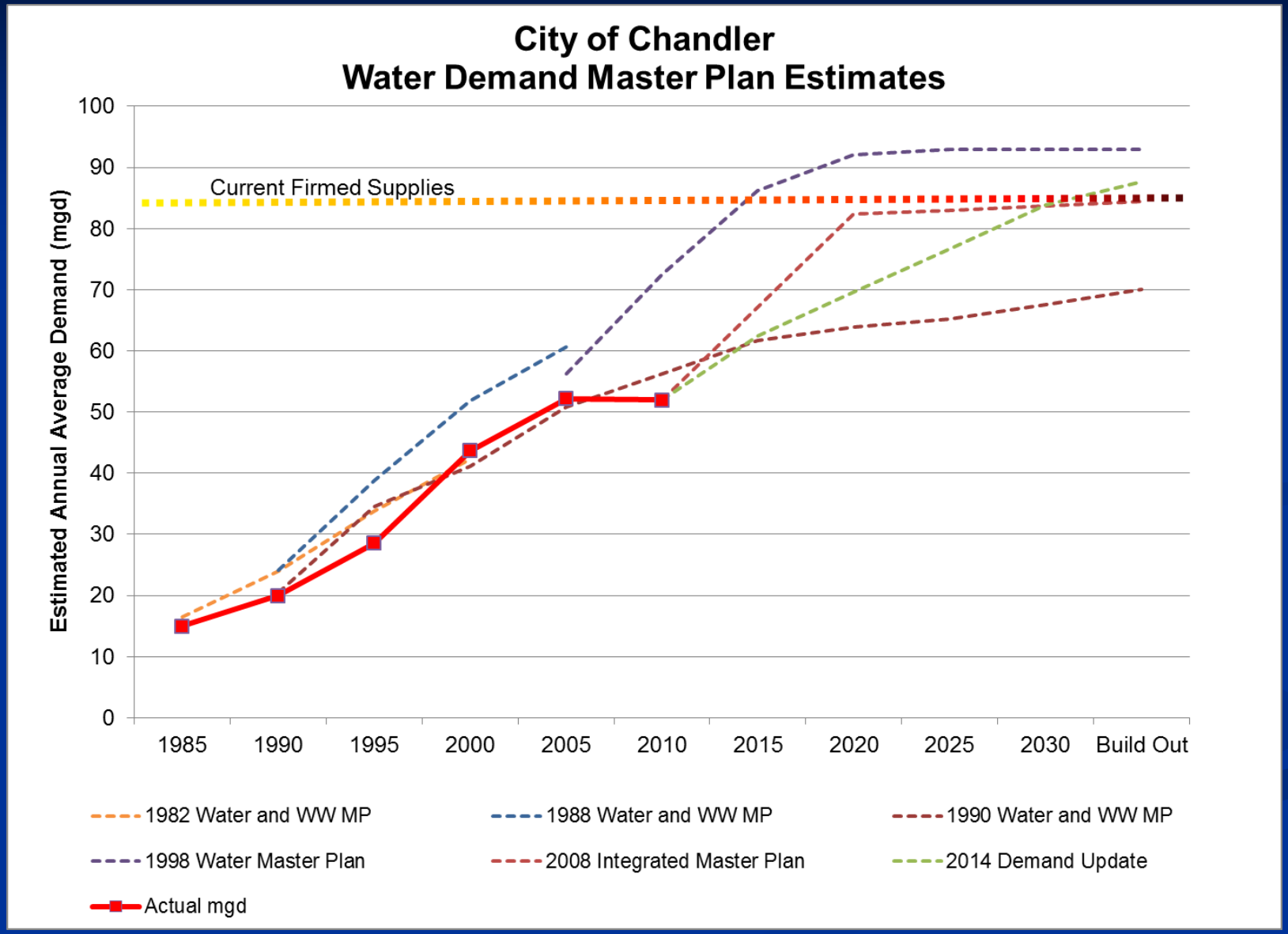
- Finite Supply (80% committed)
- Surface water, groundwater, reclaimed
- Assured Water Supply Requirements

Land

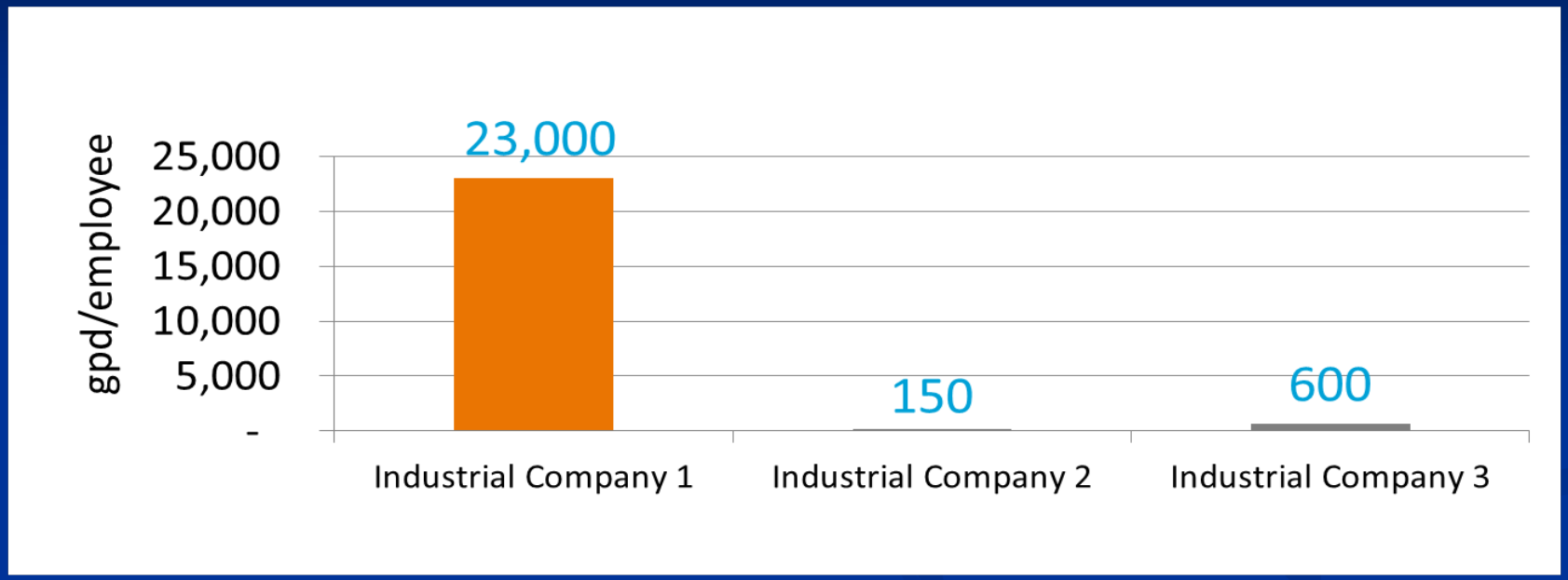
- Finite Supply
- Total Area = 65 sq.mi.
- City is 85% developed
- Remaining un-developed land
- 15% Residential
- 40% Non-Residential



Estimating Future Demands Is Not An Exact Science

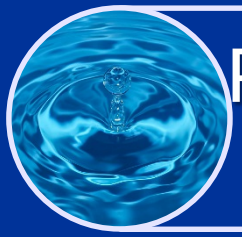


Example: Water Use Per Job/Employee



CITY OF CHANDLER WATER ALLOCATION POLICY

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

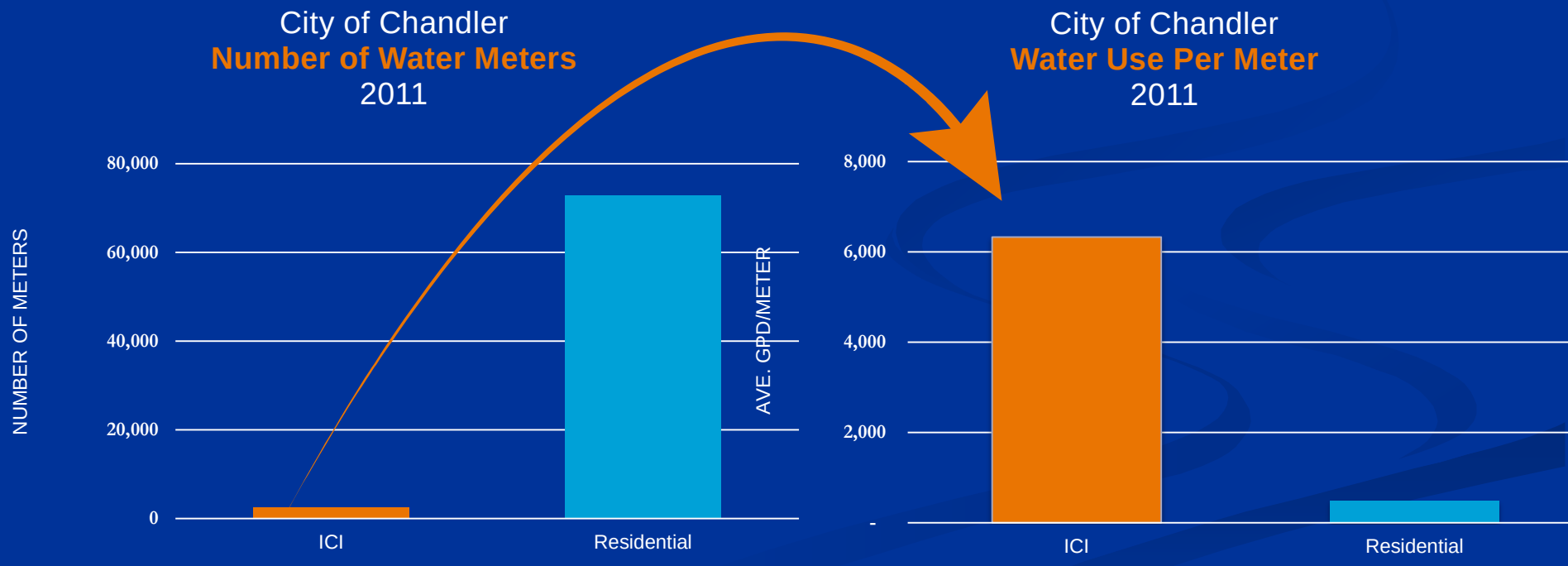
- Does not work for a municipal setting as it …
  - Limits multi-story buildings
  - Limits water intensive industries
  - Artificially raises selected land values

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

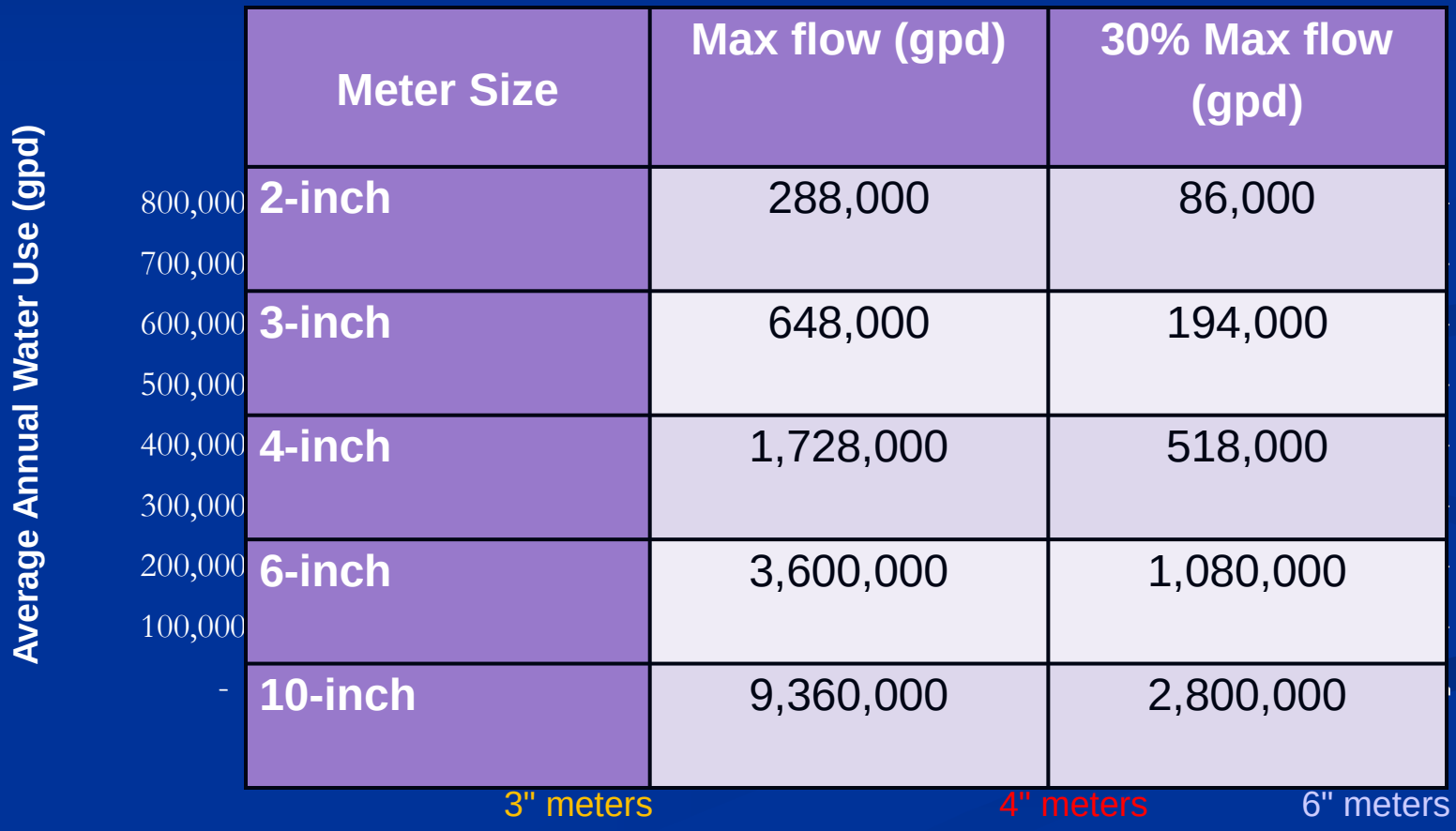


Residential Water Users Exempt from Water Allocation Policy

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

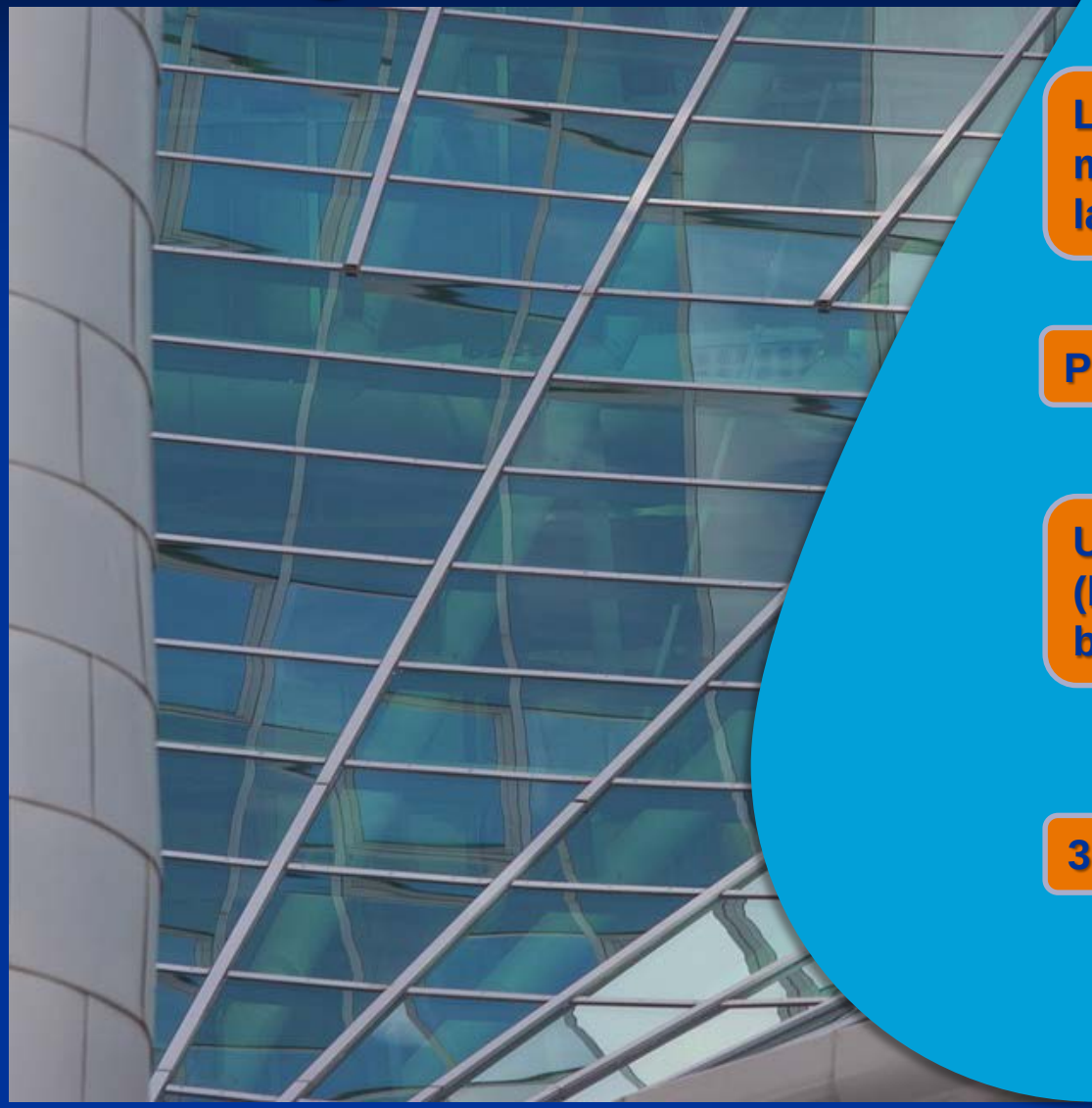
95% of all meters are residential

3-inch or Larger Meters Are Classified as High Volume Water Users



Meter Size	Max flow (gpd)	30% Max flow (gpd)
2-inch	288,000	86,000
3-inch	648,000	194,000
4-inch	1,728,000	518,000
6-inch	3,600,000	1,080,000
10-inch	9,360,000	2,800,000

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

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

Additional Water Needed?

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		
Term (s)	City Ordinance Reference	Tier I Water Use Rate
Office, industrial/ warehouse	38-3	115 gallons per day per 1,000 square feet gross floor area
Retail/commercial	38-3	200 gallons per day per 1,000 square feet gross floor area
Hotel	35-200	356.5 gallons per day per guest room
Privately owned recreational facilities	38-3	500 gallons per day per 1,000 square feet gross floor area

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

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Thank You

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