Planning in the West Webinars

Growing Water Smart Series

Five Approaches to Integrate Water and Land Use Planning

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Housekeeping

APA CM

- Survey sent to your email following webinar
- Didn't receive it? Contact us: ClimateResilience@sonoraninstitute.org

Questions or Comments

Webinar Recording

- ResilientWest.org

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1 School ÷ 7 Departments

Planning and **Urban Form**

Valuation and **Taxation**

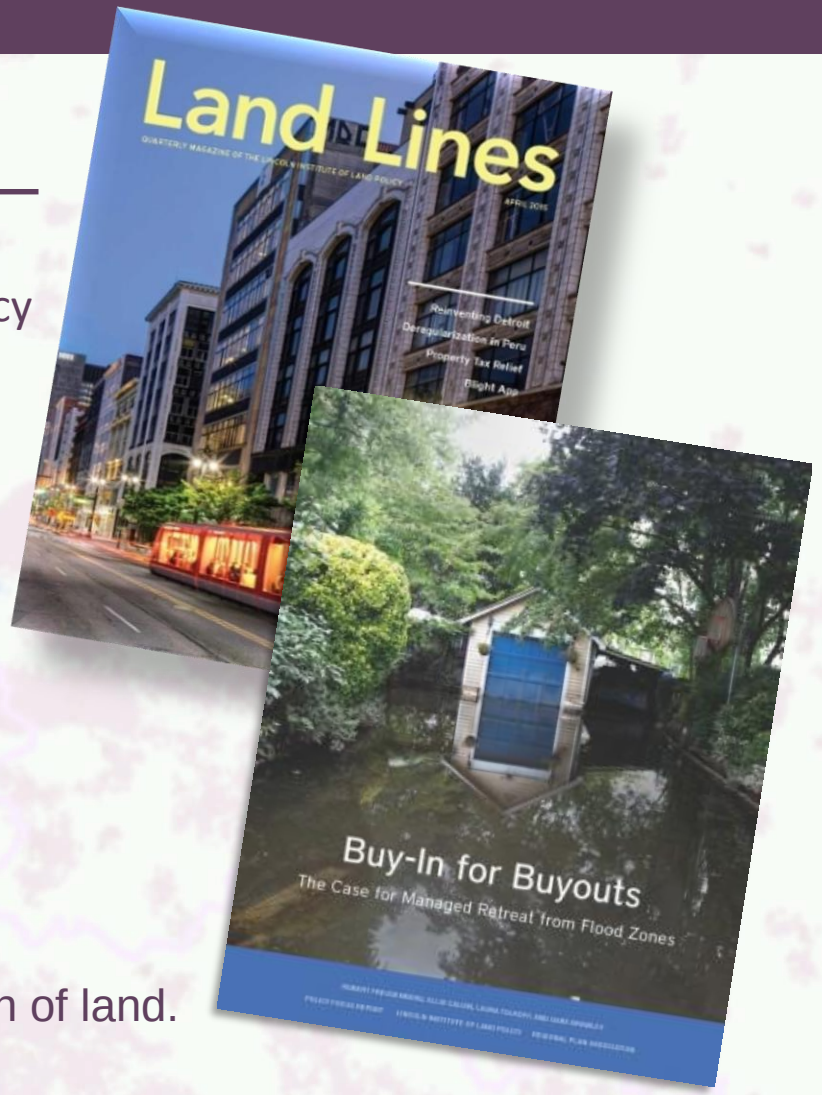
Center for **Community Investment**

Babbitt Center for Land and Water Policy

International Initiatives

Latin America and the **Caribbean**

Peoples Republic of **China**



- **Research** and Policy Evaluations
- **Convenings** + Conferences
- **Education and Training**
- **Demonstration Projects**
- **Visualization + Planning Tools**

Resilient Communities and **Watersheds**

- Books and Reports on policy issues relating to the use, taxation and regulation of land.

SONORAN INSTITUTE

Shaping the Future of the West

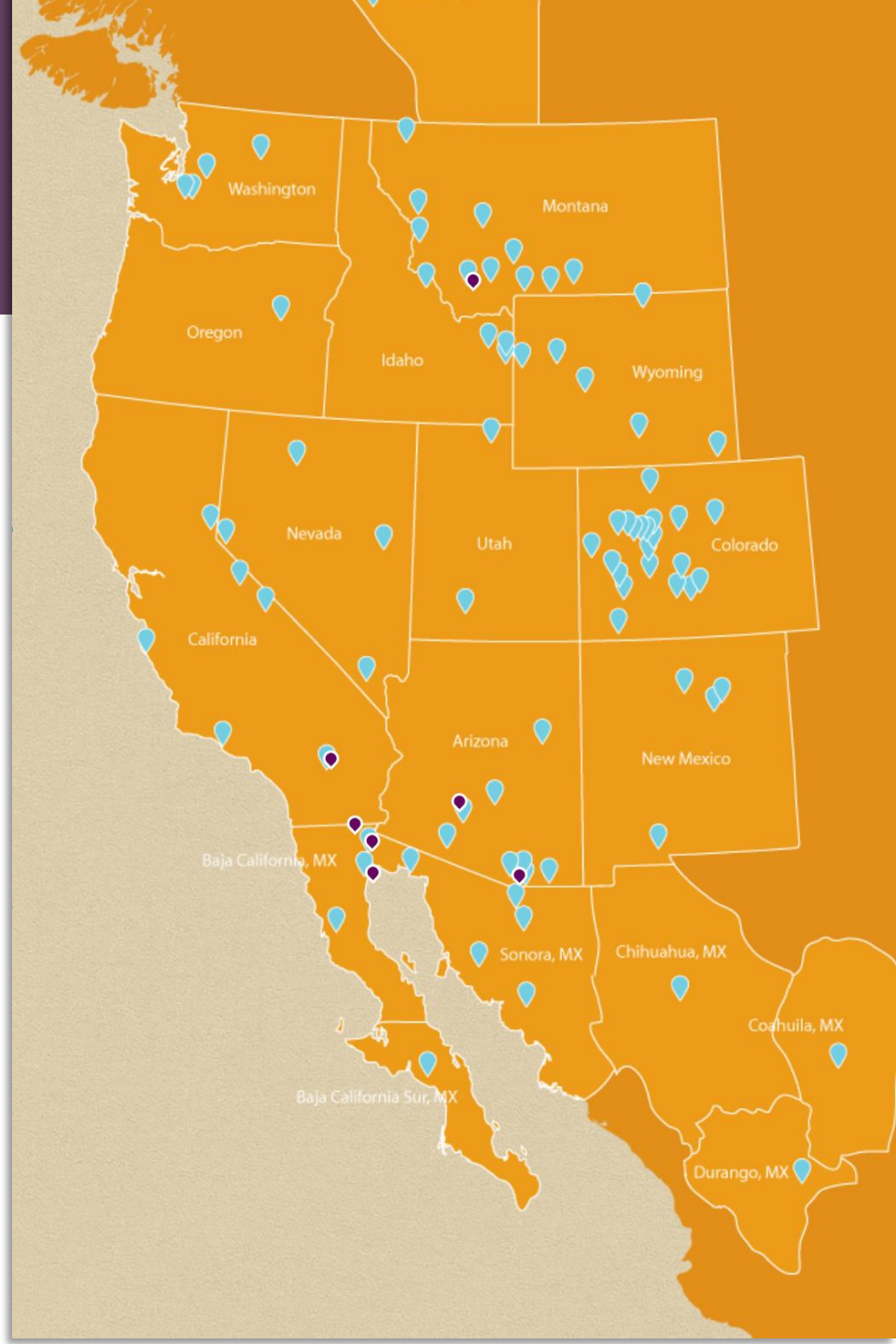
We're more than conservationists.

For more than 25 years, the Sonoran Institute has worked to help people and communities achieve harmony between the built environment and the natural world.

$300M
Local Investment

2,000+
Leaders Trained

500,000
Acres Conserved/Protected



Resilient Communities and Watersheds

Guiding the Intermountain West

Aligning + Combining

SONORAN INSTITUTE's hands-on, community-focused approach with the **LINCOLN INSTITUTE's land policy expertise** to:

Shape Growth, **Sustain** Cities, **Protect** Resources + **Empower** Communities

14YR
Joint-Program

Countless
Communities Served

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Resilient Communities and Watersheds

Guiding the Intermountain West

Visioning and Planning

Tools + Trainings + Technical Assistance

- **Resilient Communities Starter Kit** + Workshop
  - Adapting to Climate Change
- **Growing Water Smart**
  - Integrating Water + Land Use Planning
- **Exploratory Scenario Planning**
  - Preparing for an Uncertain Future

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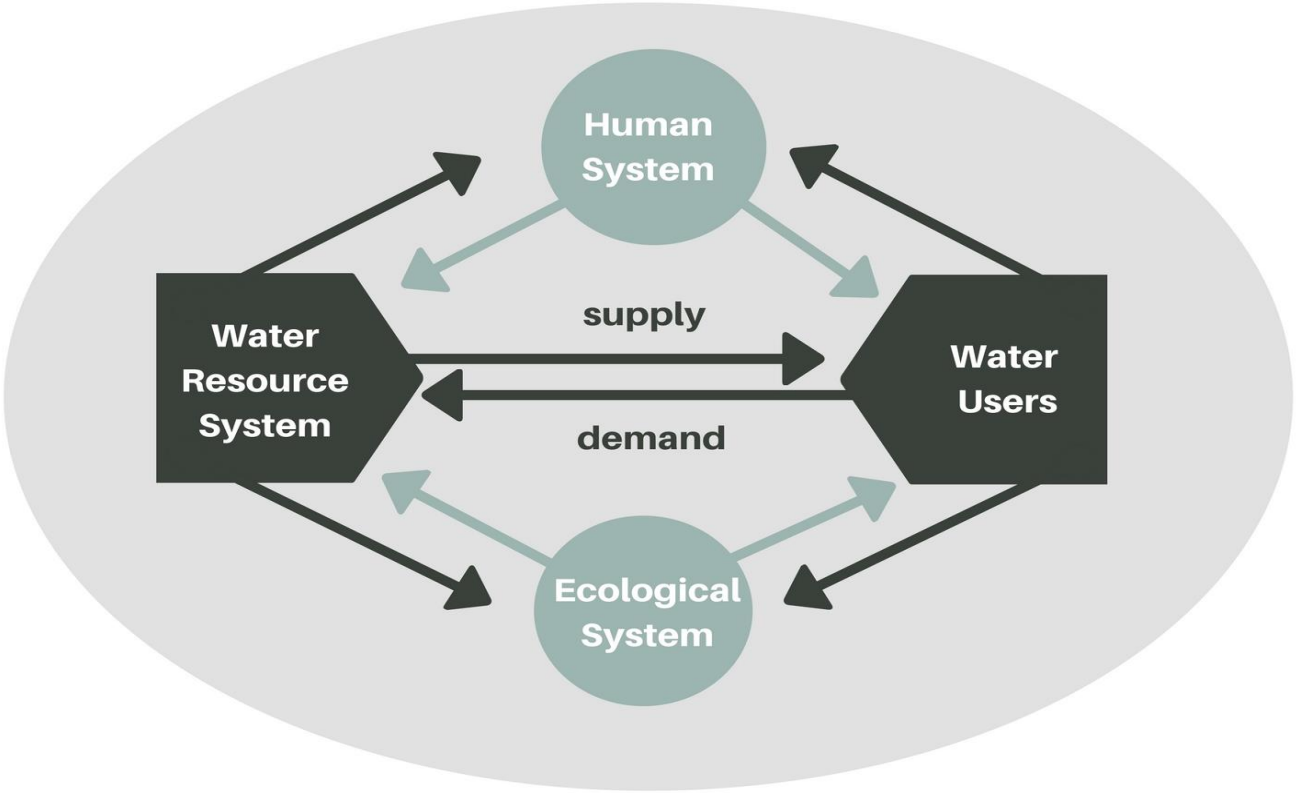
Water Resource Management

- Integrated-systems related perspective
- Proactively respond to stressors
  - population pressures
  - climate trends
  - conserving watersheds
- Water reliability



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Paradigm Shift

Supply Side

Acquisition

Buying new water rights

Treatment

Improving treatment systems

Infrastructure

Investments in water storage and distributions projects

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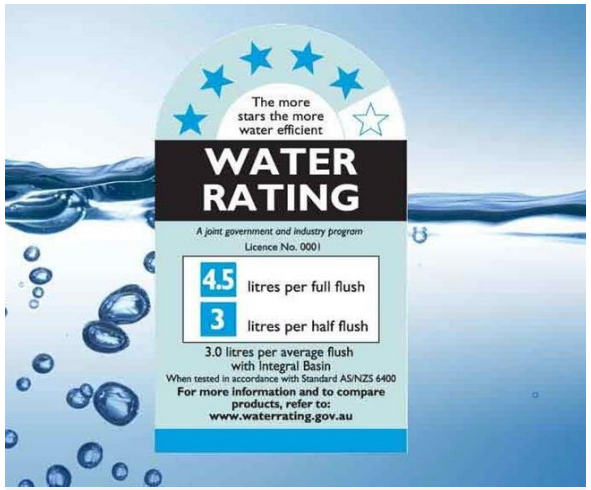
Paradigm Shift

Demand Side

Conservation

Reduce water use by modifying behavior



Efficiency

Reduce water use by tech efficiency improvements

Reuse

Rain, grey or black water to replace water supply

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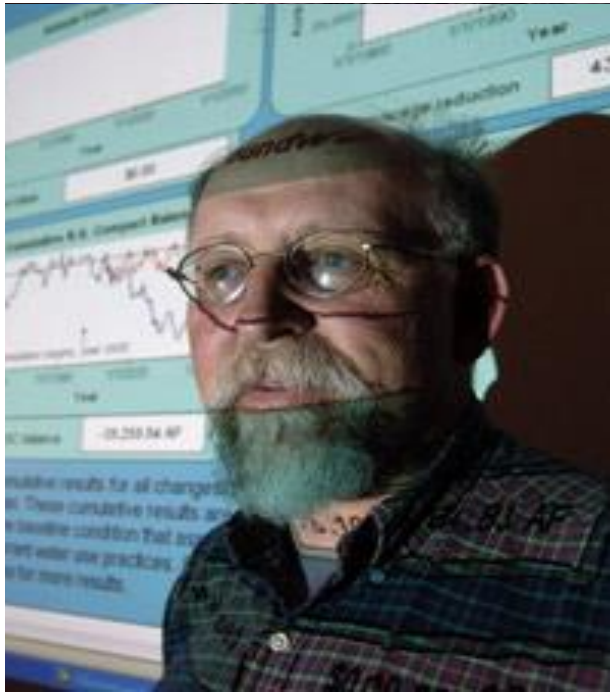
The Actors

Cross Sector Collaboration

Community Planners



Water Resource Managers

Environmental Planners

Goals

Urgency

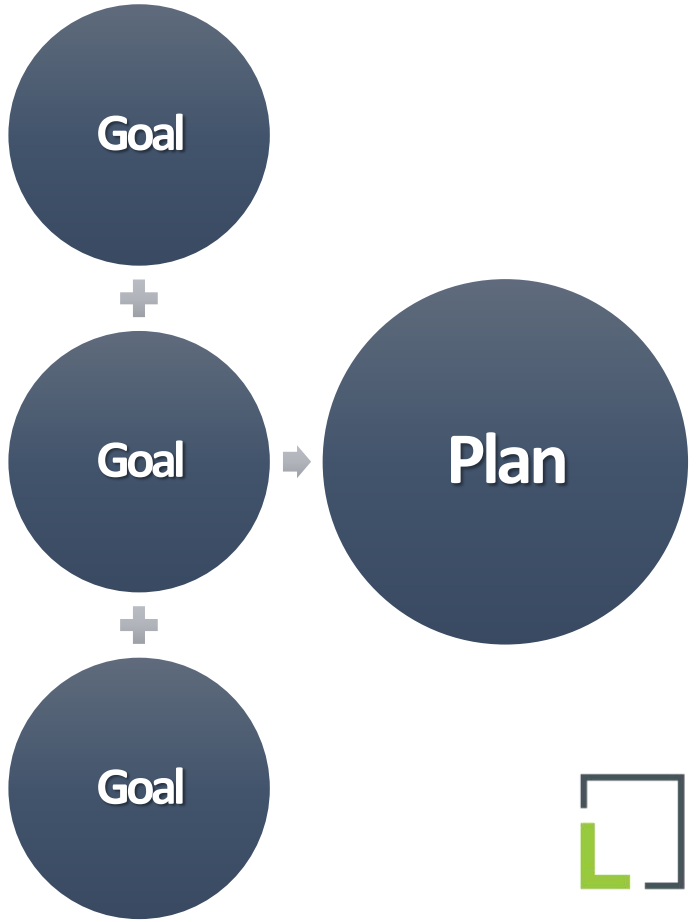
What is driving your need to better manage your water resources?

Target

What do you hope to achieve in terms of gains in water savings?

Interrelationships

Are there intersections of human and ecological systems you hope to impact?



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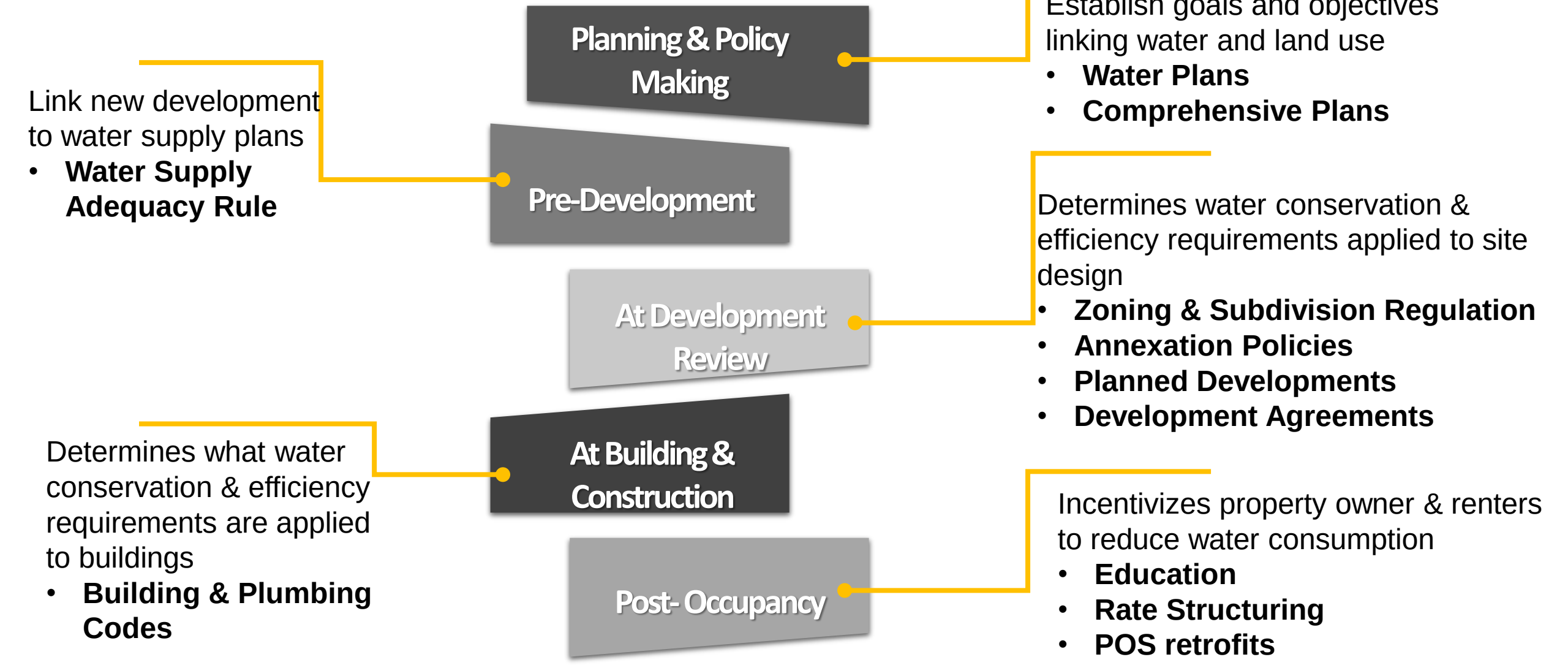
Intervention Points



Five Approaches

1. **Planning & Policy Making**
2. **Adequate Water Supply Ordinance**
3. **Water Smart Land Use Policy**
4. **Healthy & Resilient Watersheds**
5. **Conservation Rate Structuring**

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1 Planning & Policy Making

Albuquerque, New Mexico

"Albuquerque's drop in water use happened despite a rise in population. In 2013, the city used roughly the same amount of water that it used in 1983, even though its population grew by 70 percent in that 30-year period."

ABQWUA requires:

- Alignment of comp and other plans with water management
- Capital planning and growth master land-use plan are consistent with water management plans
- Infill encouraged to use water efficiently
- City, county, and state to adopt water-efficient building codes and landscaping standards for new construction

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1 Strategies

Planning & Policy Making

1. Visioning processes and scenario planning (case study)
2. Link water supply and demand to project land use patterns
3. Independent water element in the comprehensive plan
4. Invest in water resource management physical infrastructure

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Five Approaches

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2 **Adequate Water Supply Ordinance**

3 Water Smart Land Use Policy

4 Healthy & Resilient Watersheds

5 Conservation Rate Structuring

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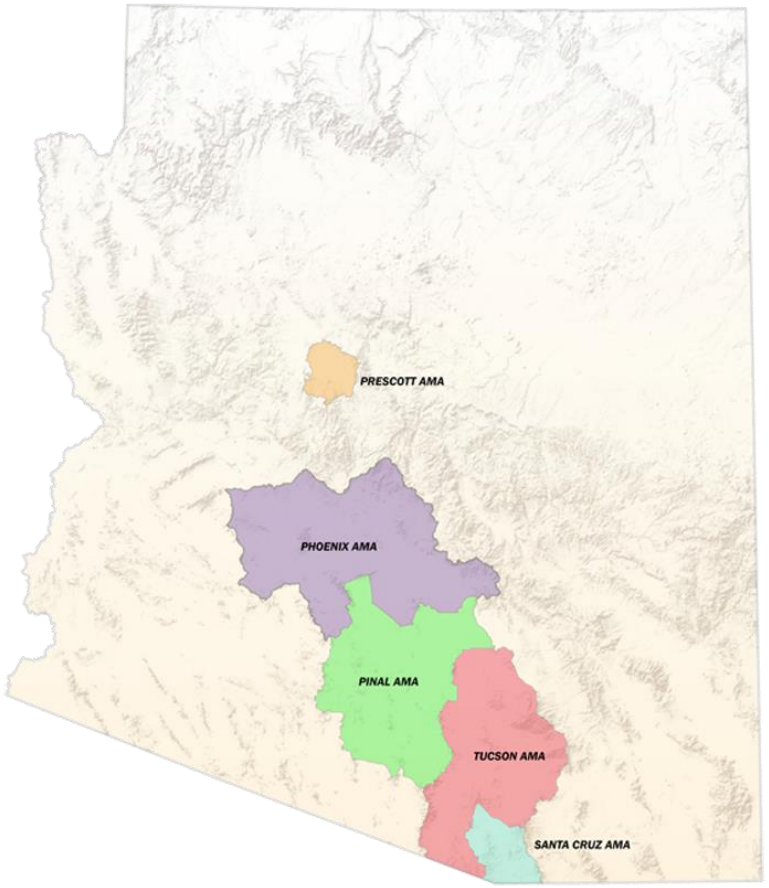
2 Water Adequacy Requirement

As water is a limited and constrained resource, prior to approving new development, its supply should be demonstrated adequate and sustainable.



Arizona Department of Water Resources

Demonstration of Criteria

1. Physical water availability
2. Continuous water availability
3. Legal water availability
4. Water quality
5. Financial capability

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2 Strategies

Water Adequacy Requirement

1. Assessments water supply conditions
2. Make adequacy a goal in the comprehensive plan
3. Adequacy review for new development
4. Zoning overlay to address variability
5. Impact fees (case study)

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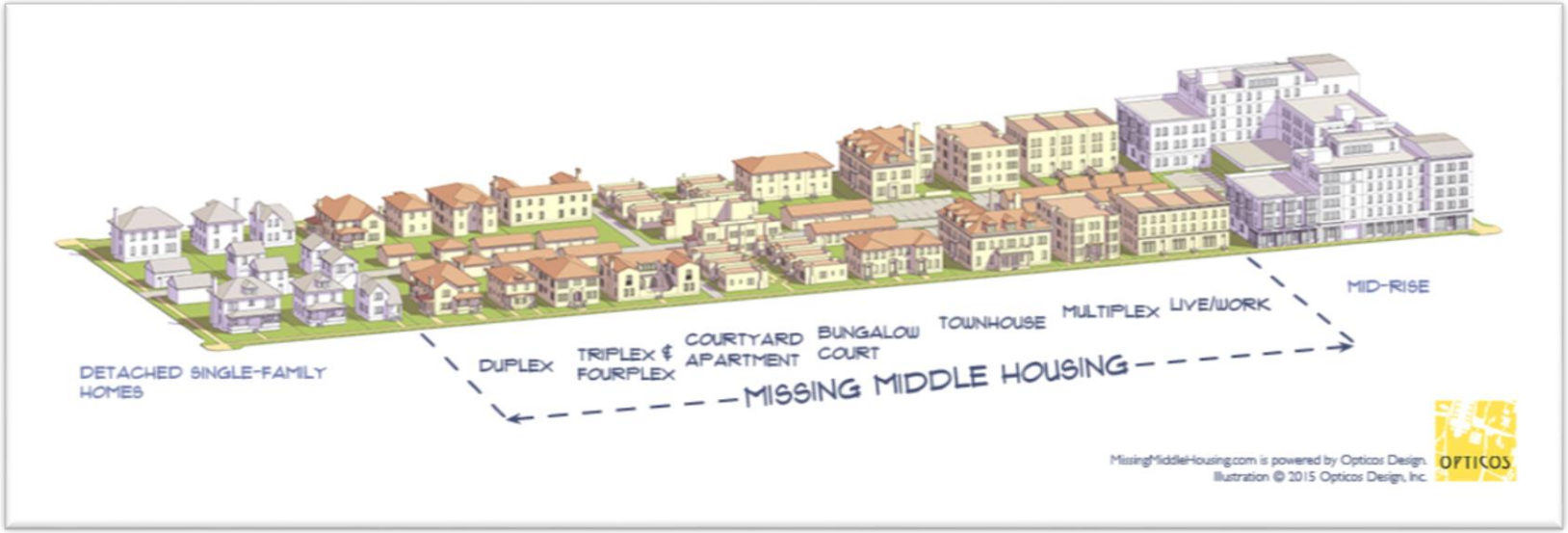
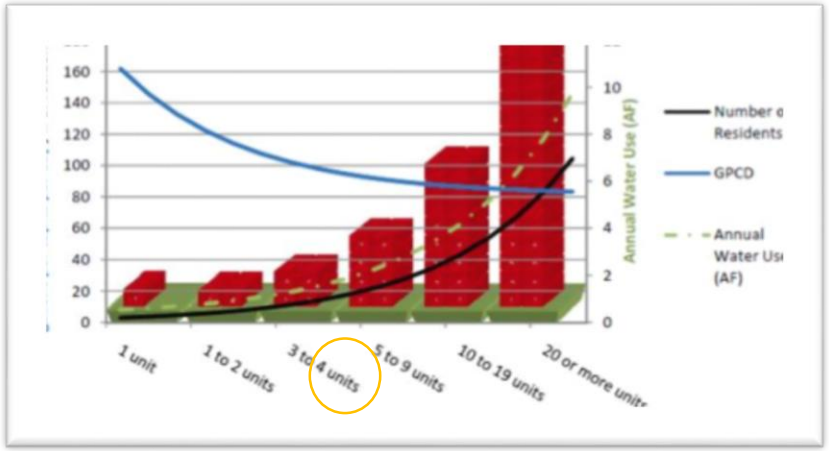
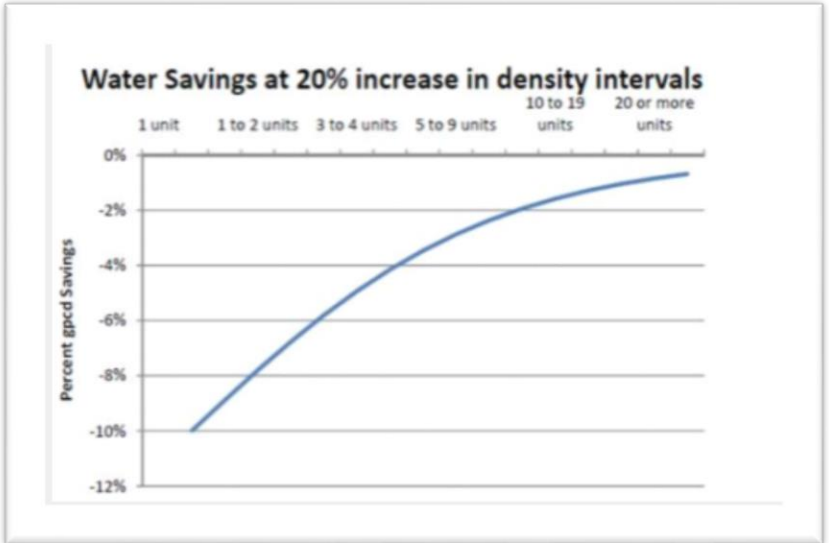
3 Water Smart Land Use Policy





Colorado Water and Growth Dialogue, Clarion Associates 2015



3 Strategies

Water Smart Land Use Policy

1. Higher density and compact development (case study)
2. Water efficient plumbing and building codes (case study)
3. Water saving landscaping standards. (case study)

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Five Approaches

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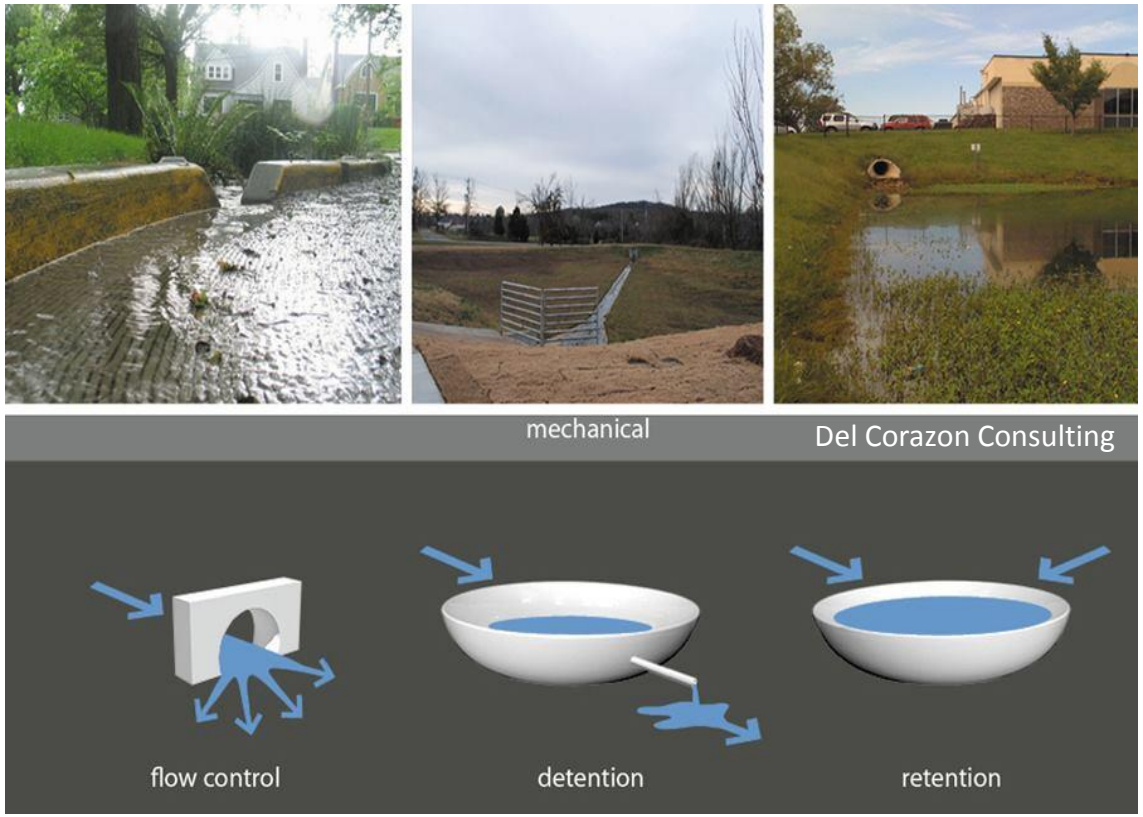
4 Healthy & Resilient Watersheds

Increasing development, climate trends, and natural hazards
can degrade quality of the watershed impacting both water yield and quality.



Best Practices

1. Minimize pollution from urban and agricultural runoff.
2. Minimize sedimentation due to soil disturbances, vegetation loss, and erosion from new roads and development.
3. Minimize destruction of riparian areas resulting from development and change in climate.
4. Reduce impervious surfaces and rapid runoff to increase infiltration from natural precipitation.
5. Plan for inconsistencies and vulnerabilities in the watershed due to drought and natural disaster.

4 Strategies

Healthy & Resilient Watersheds

1. **Map** all sensitive areas
2. Incorporate **protection, mitigation**, and **restoration** into **plans** (case study)
3. Development standards for **soil erosion mitigation**
4. **Stormwater** management and **site development standards** (case study)
5. **Surface** and **groundwater districts** with standards (case study)
6. **Zoning districts** with lower densities and/or cluster development (case study)
7. **Vegetation protection** standards (case study)
8. **Buffers** and **setbacks** (case study)

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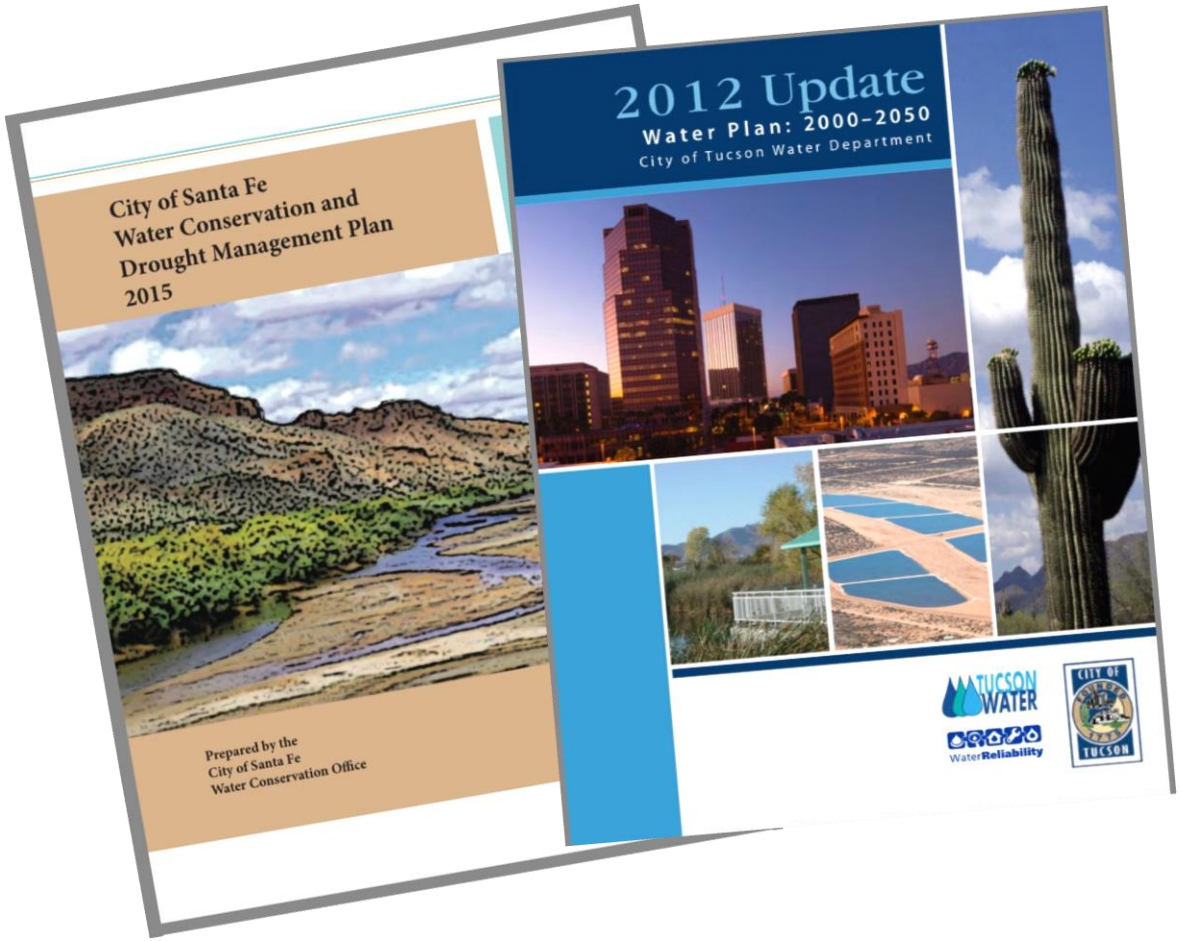
5 Conservation Rate Structuring



Best Practices

1. Drought Demand Pricing
2. Excess Use
3. Inclining Block Rates
4. Indoor Outdoor Meters
5. Penalties
6. Scarcity Pricing
7. Seasonal Pricing
8. Sliding Scale
9. Spatial Pricing
10. Time of Use Rates
11. Water Budgets

5 Strategies

Conservation Rate Structuring

1. Set goals (case study)
2. Rate assessments (case study)
3. Community education and outreach (case study)

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Growing Water Smart Workshop

Keystone, CO
September 26-28, 2018

Growing Water Smart Workshop RFP

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Growing Water Smart Webinars

“How Water Smart Are We? Conducting a Self-Assessment,”
May 17, 2018 (11AM - 12PM PT)

“How to Talk about Climate Change and Resilience to Build Community Support (Yes! It is possible!),”
May 24, 2018 (11AM - 12PM PT)

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Case Studies and Tools

ResilientWest.org

#BeResilient

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Q + A

Any Questions?

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Thank you!

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