

# Infusing Land Use Planning with Demand Management Strategies

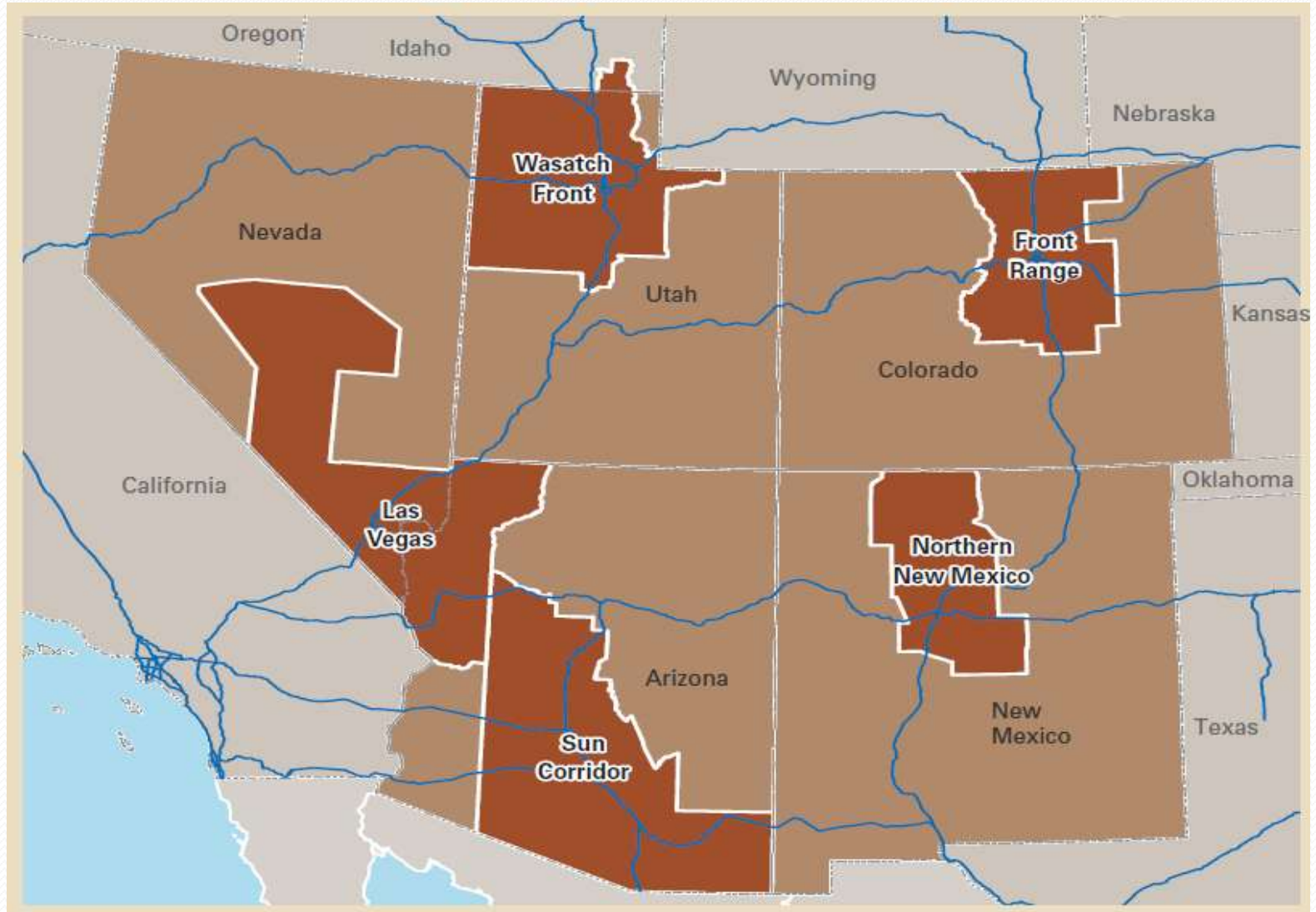
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Prepared by Center for Systems Integration on behalf of the  
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# Water Scarcity in the West

- Rapid population growth
  - Arizona, California, Colorado, Idaho, Nevada, Texas, & Utah
    - Colorado is third fastest growing state in U.S.
    - 8 of the top 18 fastest growing counties in US are in Colorado
  - Attractive economic conditions & employment levels
- Energy demands that use water
  - Oil shale development
- Agricultural irrigation
- Climate change
- Interstate Compact obligations

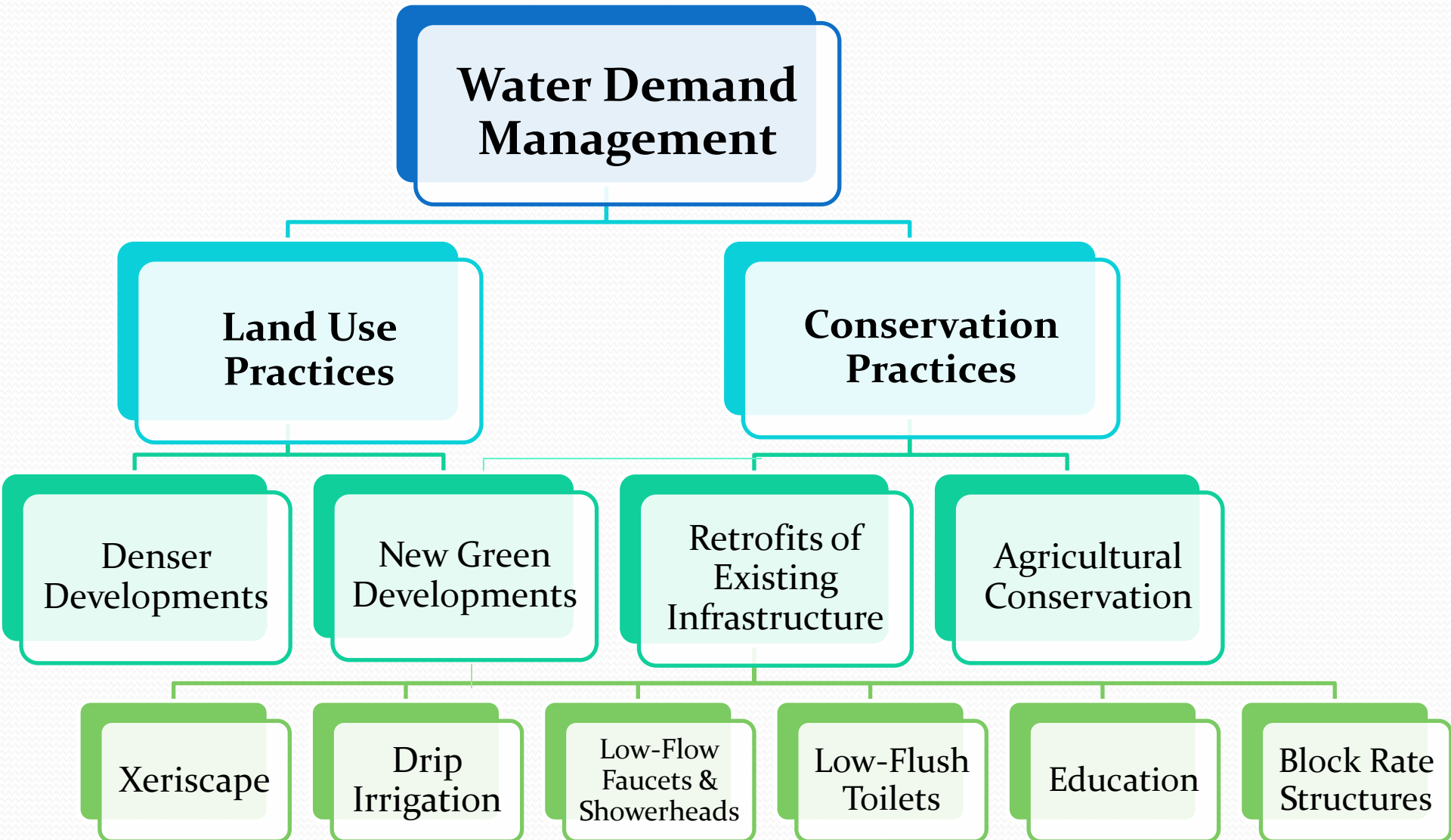
# Intermountain West Mega-Regions



# Water Demand Management Defined

1. Reduce the quantity or quality of water required to accomplish a specific task.
2. Adjust the nature of the task or the way it is undertaken so that it can be accomplished with less water or with lower quality water.
3. Reduce the loss in quantity or quality of water as it flows from source through use to disposal.
4. Shift the timing of the use from peak to off-peak periods.
5. Increase the ability of the water system to continue to serve society during times when water is in short supply.

# Practices & Tools



# Issues to Explore

1. Can higher density and/or sustainable community developments have a regional impact on reducing future water demand?
2. What is already happening within Colorado & the West?
3. What can we learn from these experiences?
4. Is there anything further we might explore within Colorado?

# Water & Land Use Planning Project

- **Report**

- Statutory and policy research
- Literature review
- Survey of key stakeholders

- **Three-day Symposium**

- Co-sponsored by the Colorado Water Conservation Board and the Western States Water Council
- 150 stakeholders in water and land use planning tackled issues of how to better integrate the two planning efforts

- **Stakeholder Leadership**

- Steering Committee
- Advisory Committee
- Symposium working sessions

# The Statutory Context



# The Statutory Context

- **Authority for Land Use Planning in Colorado**
  - General home rule powers
  - Specific statutory authorizations
  - Implied authority from general land use planning, zoning, and subdivision laws

Structure	Population	% of Population
Home Rule	3,328,930	93.30%
Statutory	237,819	6.67%
Territorial Charter	1,108	0.03%

# The Statutory Context

- **Districts & Authorities** Involved in Water
  - Title 32 districts
  - Title 29 & 37 districts

Type of District	Defining Statute	# in CO
Drainage	37-20-101	12
Ground Water Management	37-90-118	13
Water Authorities	29-1-204.2	22
Water Conservancy	37-45-101	52
Water Conservation (river water)	37-46-101 to 37-50-142	4
Water Districts	32-1-103	78
Water & Sanitation	32-1-103	128
Metropolitan	32-1-103	1,210

# The Statutory Context

- **Intergovernmental Cooperation**
  - Intergovernmental Agreements (IGAs)
  - Regional Planning Commissions

Regional Planning Commission	Members
Denver Regional Council of Govts (DRCOG)	Adams, Arapahoe, Boulder, Clear Creek, Denver, Douglas, Gilpin, & Jefferson Counties
Northwest CO Council of Govts (NWCCOG)	Grand, Pitkin, Routt, Eagle, Jackson, & Summit Counties
Pueblo Area Council of Govts	City & County of Pueblo, Board of Water Works, School Districts 60 & 70, Pueblo West & Colorado City Metro District, & Salt Creek Sanitation District
Region 10 Regional Planning Commission	Delta, Gunnison, Hinsdale, Montrose, Ouray, & San Miguel Counties
Pikes Peak Council of Govts	El Paso, Park, & Teller Counties

# The Statutory Context

- **State Agencies & Legislatively-Created Organizations**
  - Department of Local Affairs, Division of Local Government
  - Colorado Division of Water Resources, Office of the State Engineer
  - Colorado Water Conservation Board
  - Interbasin Compact Committee
  - Water Resources Review Committee

# Tools & Strategies for Integrating Water and Land Use Planning

# Tools & Strategies

- **Water Supply Assessment**

- *Colorado HB08-1141*

- Requires local governments determine adequate water supply for new development of 50+ units

- *El Paso County's proof of 300-year water supply* for new subdivisions in unincorporated areas

- Discourages use of nonrenewable Denver Basin aquifer
- Encourages use of renewable surface water

- *Douglas County hydrological zones*

- Strict limits on development in areas with low groundwater reliability

# Tools & Strategies

- **Rate Structures**

- *Impact Fees*

- Defray cost of new development
    - New development “pay its own way”
    - Average water impact fee on Front Range = 4% of median home value

- *Structured Impact Fees*

- Can promote specific locations or types of development
    - Can promote water conservation

- *Block Rates in Water Bills*

- Individualized water budgets
    - Inclining block rates
    - Seasonal block rates

# City of Westminster Water System Development Fees

- Individually structured and calculated for each site by including
  - Size of tap
  - Project water use
- Fees now reflect both
  - Instantaneous demand on system
  - Projected annual consumption





# City of Boulder Water Budgets

Billing Block	2008 Rates (per 1,000 gallons)	% of Budget
Block 1	\$1.95 (3/4 base rate)	0-60%
Block 2	\$2.60 (“base rate”)	61% - 100%
Block 3	\$5.20 (2 x base rate)	101% - 150%
Block 4	\$7.80 (3 x base rate)	151% - 200%
Block 5	\$13.00 (5 x base rate)	Greater than 200%

# Tools & Strategies

- **Comprehensive planning**
  - Commonly used in Colorado
  - “Water supply element” is optional & not reviewed by state for input
  - Local and county master plans are advisory only, although regional plans or IGAs are legally binding
- **For Example:**
  - *Oregon* requires suppliers who serve more than 1000 people to prepare long-term water supply plans, including such things as urban growth boundaries
  - **City of Aurora, Colorado**, comprehensive plan includes water conservation strategies

# Tools & Strategies

- **Regional Structures**

- State supportive of Intergovernmental Agreements (IGAs) and joint service delivery
- State role: facilitation of land use and water planning integration
- Regional Planning Commissions

- **For Example:**

- Interbasin Compact Committee and Basin Roundtables
- 14 Regional Council of Governments in Colorado
- Mile High Compact – 5 counties and 25 cities
- Denver Regional Council of Governments (DRCOG)
- Metro Vision 2035 plan

# Tools & Strategies

- **Green programs**
  - Landscaping requirements
  - LEED & other building standards
- **For example:**
  - *Arizona, California, Colorado, Nevada, and Washington* have issued directives requiring green building standards for state-funded construction / retrofitting.
  - **Colorado passed Senate Bill 05-100** prohibiting restrictive covenants that limit Xeriscape from being enforced.
  - **Cities of Lafayette and Erie, Colorado**, developed a model landscaping ordinance to encourage the use of drought-tolerant landscaping.



# Tools & Strategies

- **Education programs for the public and implementers**
  - Strongly supported by survey respondents
  - Statewide water needs assessment opportunity
- **For example:**
  - **Department of Local Affairs, Division of Local Government, Office of Sustainable Community Development (formerly Office of Smart Growth)**
  - The ***Texas Water Development Board*** (TWDB) publishes best management practices guides targeted at relevant groups (municipal, industrial, and agricultural water users) in hopes of increasing regional and local use of the practices.

# Roles for the State

- **31%: Non-regulatory, state assistance programs**
  - Technical and funding for local governments
  - Facilitate regional collaboration
  - Education programs
  - Statewide studies on water supply & demand
- **31%: Regulatory role**
  - Water demand reduction & conservation mandates for new developments
  - State review of master plans' water supply & demand components
  - Shared tax revenue & infrastructure
  - Set growth limits and boundaries

# Recommendations

1. Data
2. Education
3. Communication
4. Coordination
5. Integration
6. Implementation
7. Regulation
8. Regionalization
9. Incentives/Market Solutions

# Find the Report at

*Colorado Review: Water Management and  
Land Use Planning Integration*

[http://www.csi-  
policy.org/documents/WALUPFullReportF  
INALMarch2010.pdf](http://www.csi-policy.org/documents/WALUPFullReportFINALMarch2010.pdf)