

INTEGRATING WATER INTO LAND USE PLANNING

Presented by:

Kevin Reidy, *State Water Conservation Technical Specialist*

Drew Beckwith, *Water Policy Manager, Western Resource Advocates*

John Nolon, *Land Use Law Center*

Mac Cummins, *Planning Manager, City of Westminster*



Why We Are Here



Workshop Objectives:

- The urgency of water scarcity and growth projections;
- The importance of coordinating water supply and land use planning;
- The elements of the legal systems governing land use and water planning;
- How water and land use planners can work together and the processes they can use to collaborate;
- The questions they should ask in reviewing their current land use and water supply documents and planning instruments;
- The mechanism available for both to adopt to achieve water conservation as growth occurs.

AGENDA



- 12:00 – 12:05 Welcome and Overview
Kevin Reidy, State Water Conservation Technical Specialist
- 12:05 – 12:15 Water Supply & Population Growth Issues in Colorado: Call to Action
Drew Beckwith, Western Resource Advocates
- 12:15 – 12:25 The Water Planning Process Overview
Kevin Reidy, State Water Conservation Technical Specialist
- 12:25 – 12:45 The Land Use System and Water Planning Connection
Professor John Nolon, Land Use Law Center
- 12:45 – 12:50 Advice from the Front Range of Colorado
Mac Cummins, Planning Manager, City of Westminster
- 12:50 – 1:00 Questions and Answers
- 1:00 Closing Remarks

WHO'S ON THE CALL?

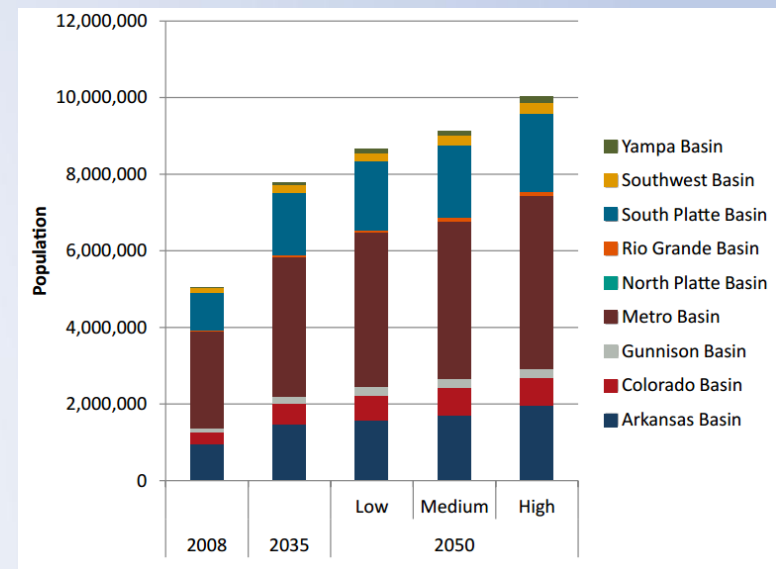


- A. Local gov't admin
- B. Local gov't planners
- C. Elected officials
- D. Planning or zoning board member
- E. Water Provider
- F. Community member
- G. Other

Population Increasing



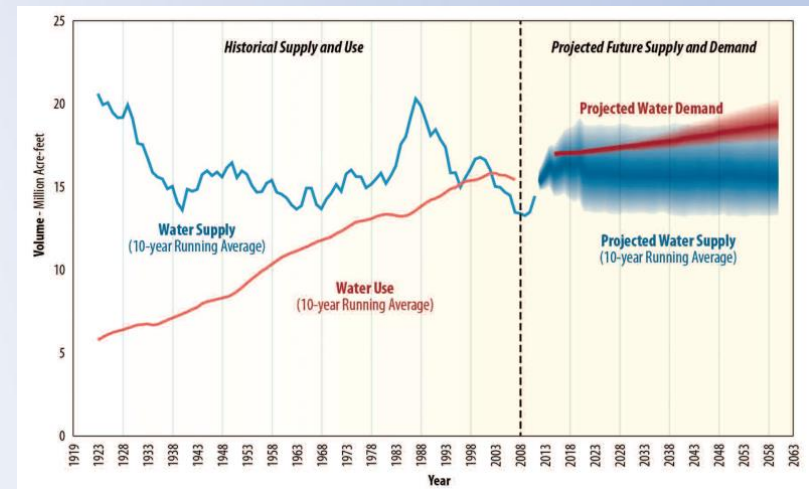
- Doubling of population 2010-2040
 - CO top 6 for growth last 35 yrs
- Lots of land use decisions to accommodate this growth



Water Supply Decreasing



- CO to warm 4°F by 2050
 - Increases in evaporation
 - Lower elevation snowpack decline
 - Timing of runoff to shift earlier
- CO in “transition zone” on precipitation
 - More winter precipitation, less in summer?



Working Together



- The way we grow matters
- Need more water-efficient land use patterns
- Decreasing demand & using 'alternative' supplies best done at planning stage
- Need solutions for CO communities to thrive in spite of water scarcity



Breaking Down Silos



We're not the 1st w/ this problem ☺

1) Education

2) Procedure for regular contact

3) Coordinated planning

4) Institutionalization



Taking the Lead

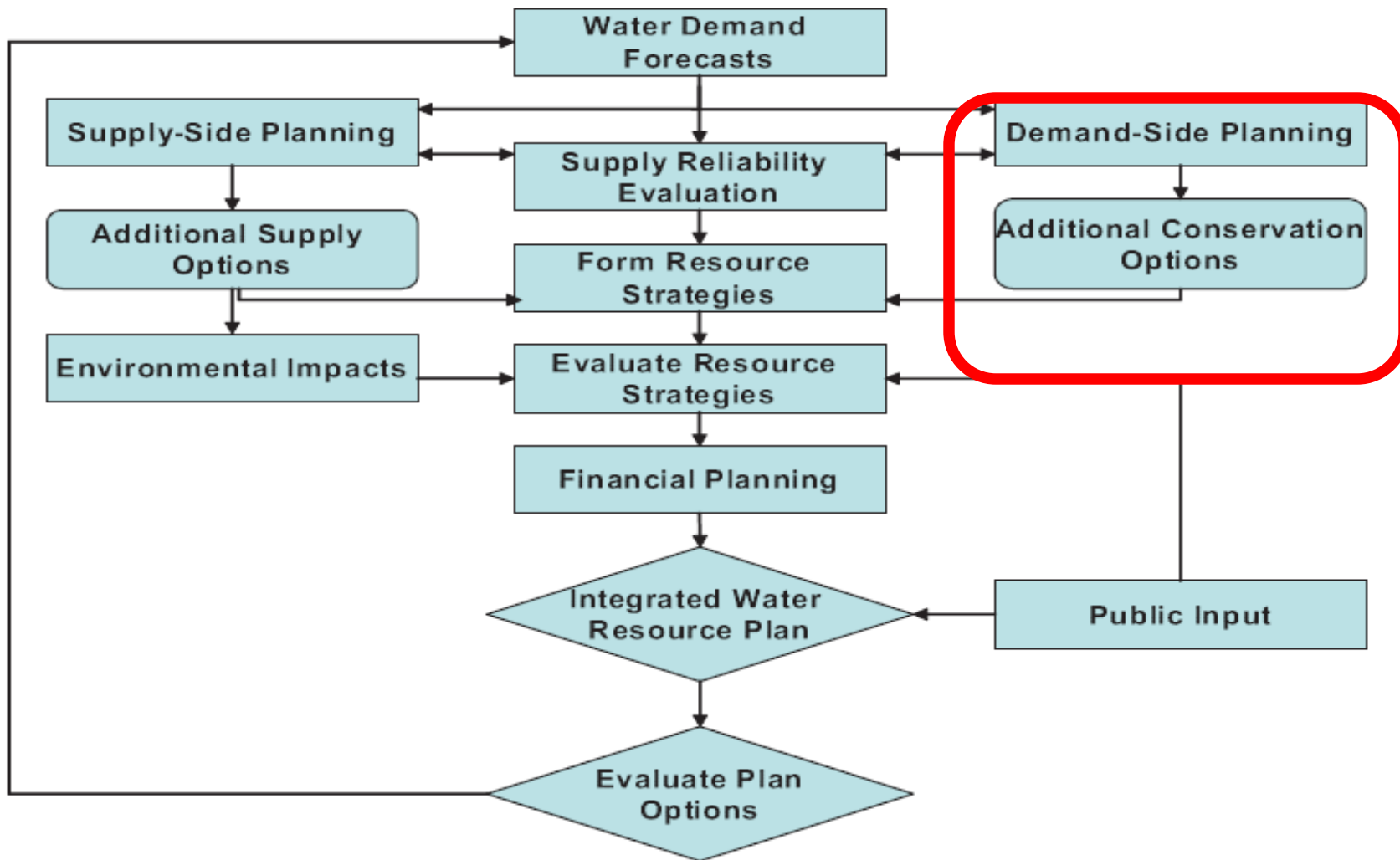


- Land use planners are integrating resiliency
 - water is key
- Traditionally a land use led activity, but...
- Many water providers have achieved great successes
 - No control is no excuse!

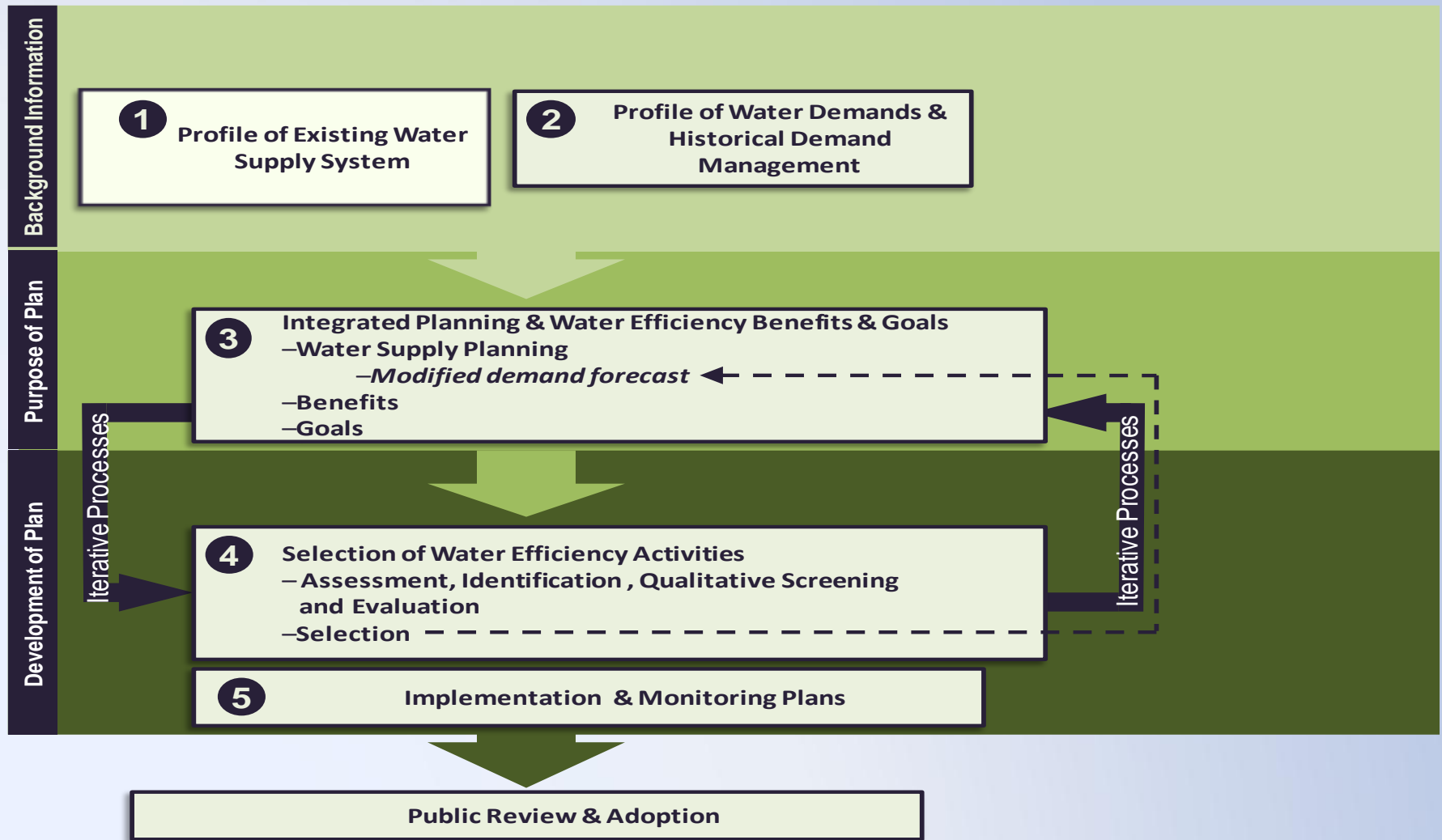
		Change from 1990-2010		
Water Provider	State	Deliveries (AF)	Population	GPCD
Metropolitan Water Dist.	CA	-154,921	3,594,000	-23%
Salt Lake City	UT	-34,199	37,215	-39%
Albuquerque	NM	-18,789	115,215	-34%
Fort Collins	CO	-2,876	32,800	-33%
Tempe	AZ	-840	31,000	-19%

The Water Planning Process

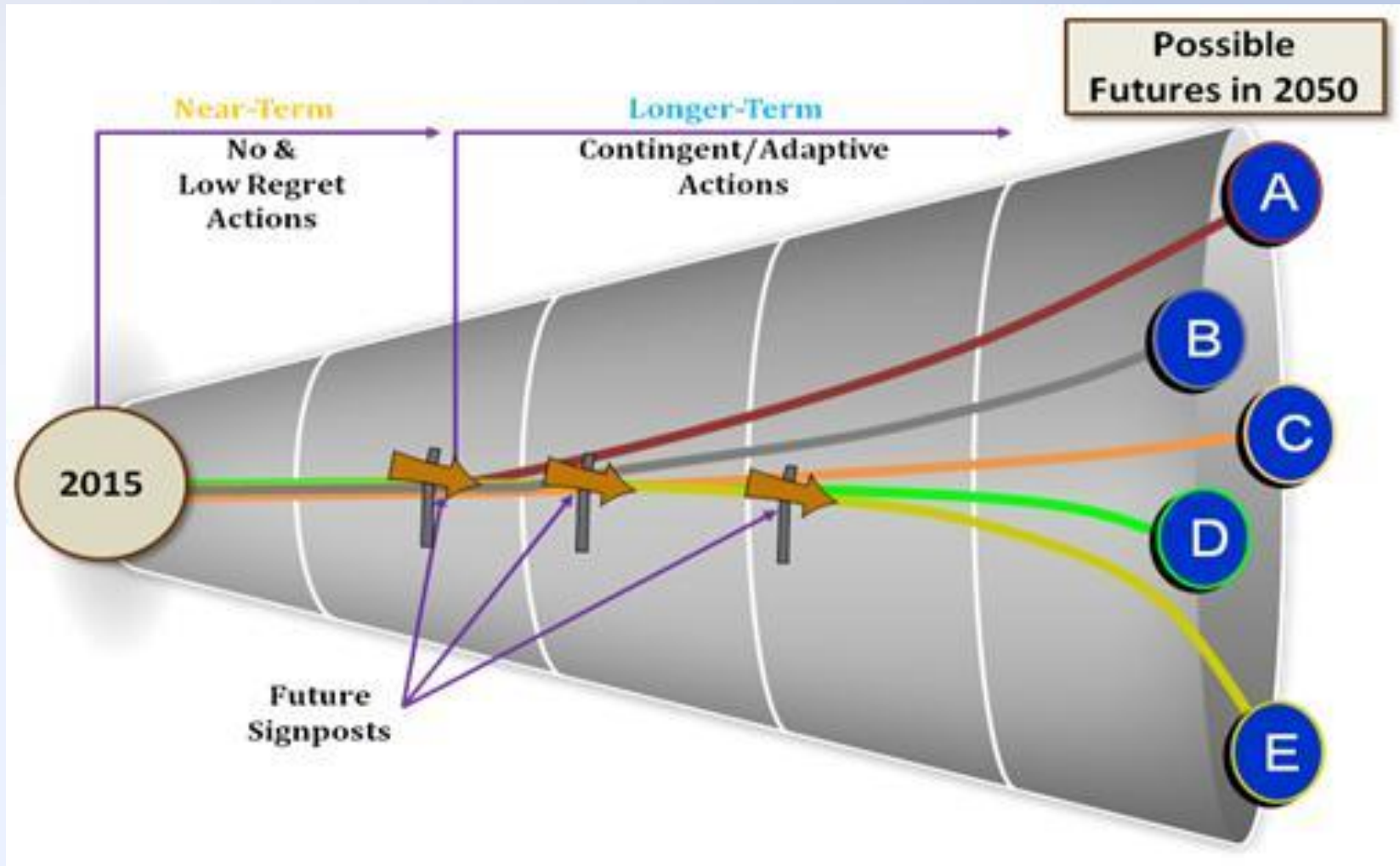
Integrated Water Resource Plan



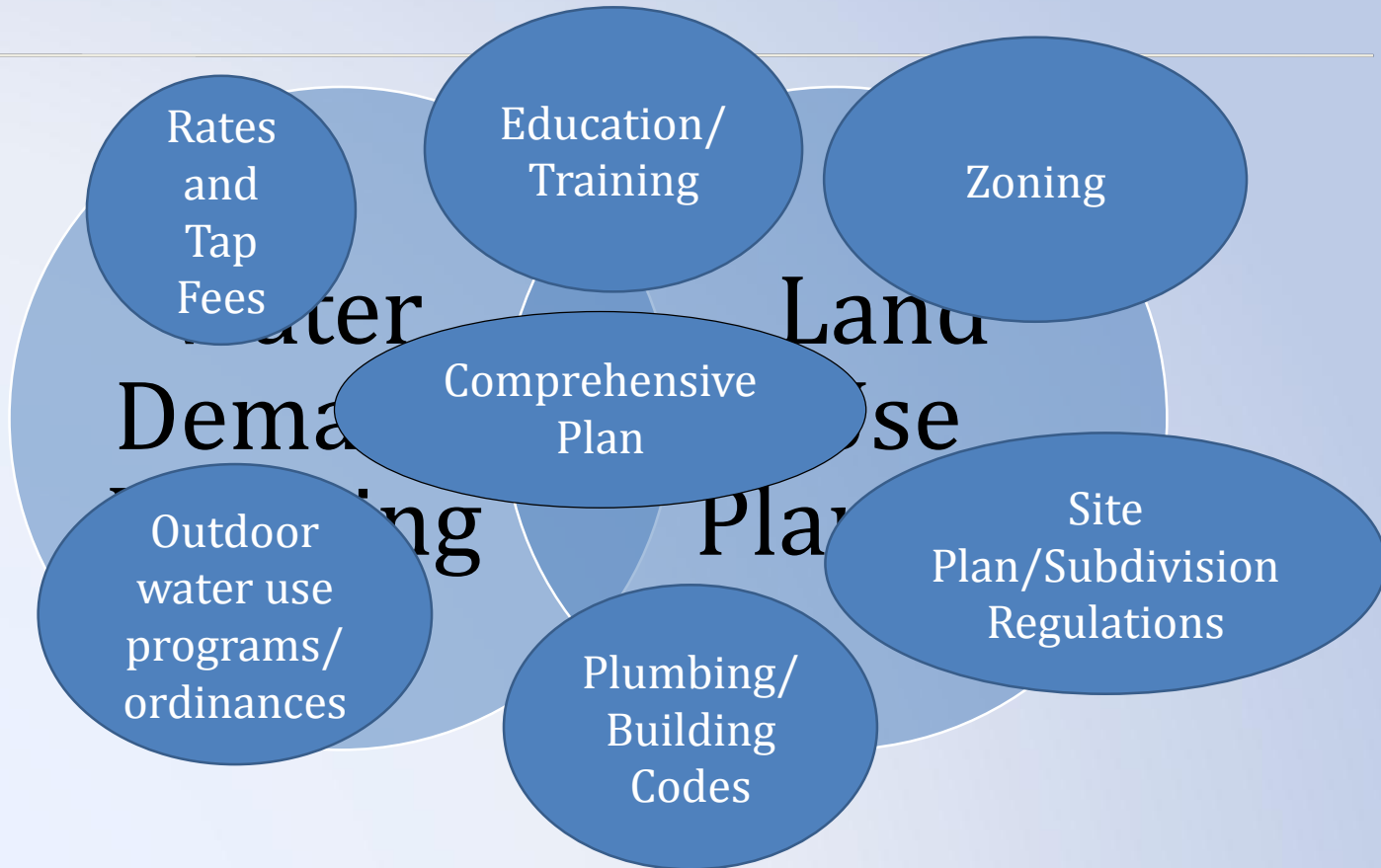
Water Efficiency Planning Process



Scenario Planning



Land Use-Water Nexus



THE LAND USE SYSTEM



Land Use Affects Water Use



Highlands
Ranch



Stapleton



Glass
House

Relevance of Land Use Planning to Water Conservation



- Large lot single-family housing without native vegetation and standard plumbing can result in over 225 gallons per capita of water consumption.
- Town houses with xeriscaping and water smart fixtures can lower that to 80 gallons per capita.
- Land use and building regulations can change the type of housing, plumbing, and landscaping allowed.



Water Planners and Housing Types



With Limited Water Supplies and the Population Projected to Double:

- The predominant housing type cannot be single-family homes on landscaped lots.
- More diverse housing types are needed along with regulations of fixtures and landscapes.

To understand this we have to understand the local land use system.

Land Use Planners and Landscaping



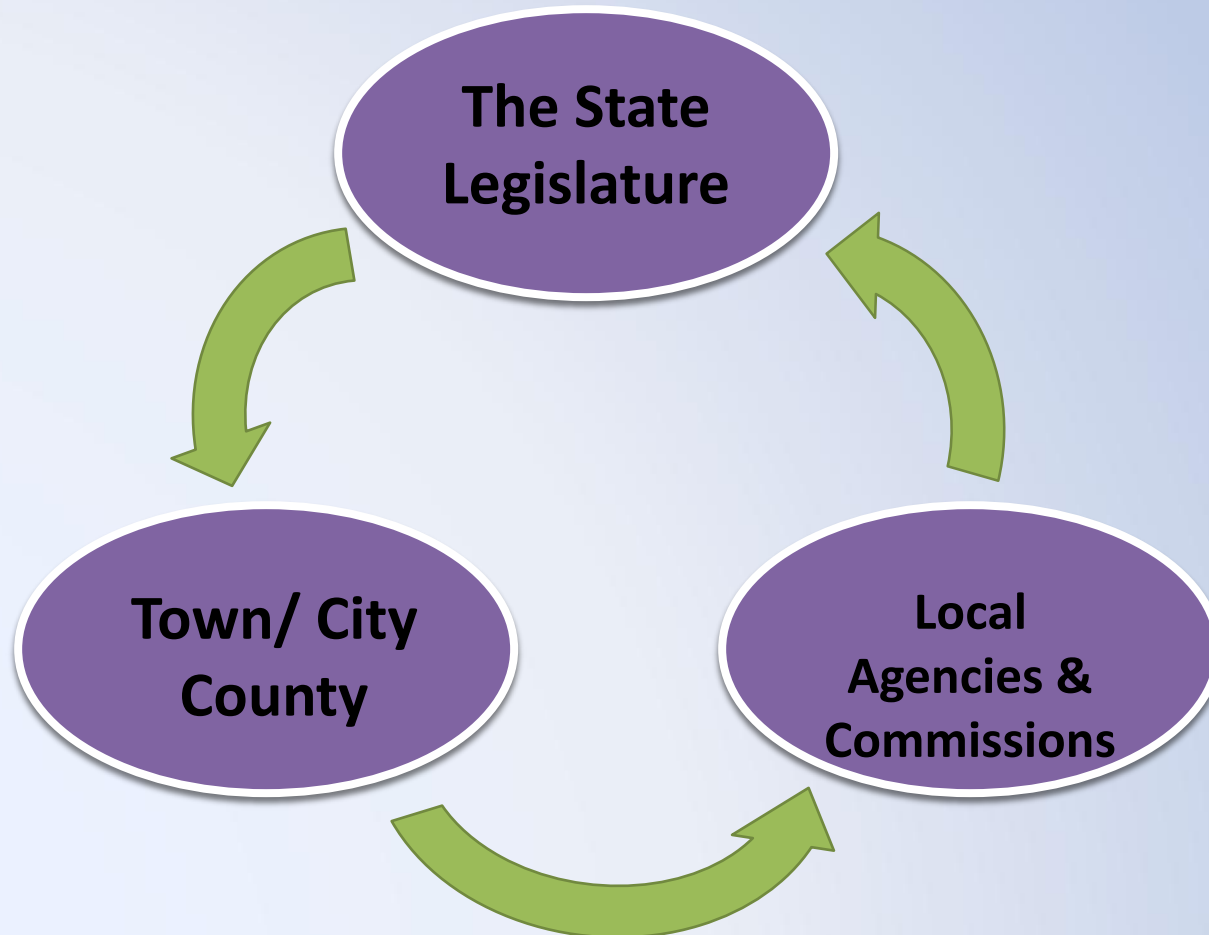
- Soil quality
- Water conserving plants
- Turf limitations
- Irrigation system efficiency
- Rain sensors
- Spray nozzles
- Water harvesting, etc.



THE LAND USE SYSTEM



Delegation of Legislative Authority



THE LAND USE LEGAL FRAMEWORK



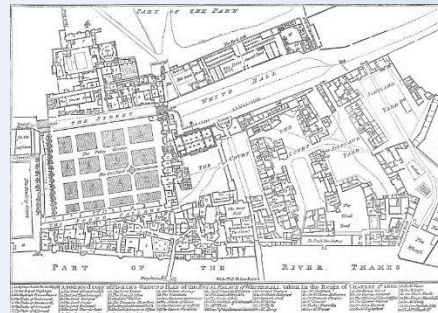
The Colorado State land use enabling act delegates authority to **LOCALITIES** to:

- Adopt comprehensive master plans
- Adopt zoning and land use regulations
- Approve subdivision and site plans
- Issue special use permits

COMPONENTS OF THE LAND USE LEGAL SYSTEM



- Comprehensive Master Plan establishes the local vision
- Zoning must conform to comprehensive master plan
- Zoning partitions the jurisdiction into zones and specifies housing types in each zone
- Subdivision regulations regulate site development, including landscaping



ROLE OF LOCAL BOARDS



LOCAL LEGISLATURE/GOVERNING BODY authorized
to adopt:

- Zoning ordinance,
- Subdivision regulations,
- Site plan regulations,
- Special permit provisions,
- Land Use protections, and
- Open space plans

ROLE OF LOCAL BOARDS



PLANNING COMMISSION

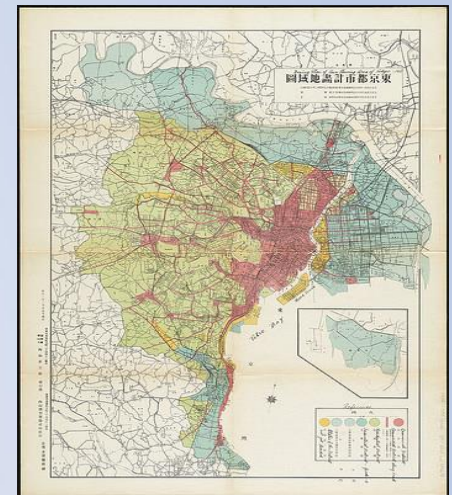
Delegated Authority To:

- Create and Approve the Comprehensive Plan
- Review and approve most development proposals

OVERVIEW OF COMPREHENSIVE PLANNING



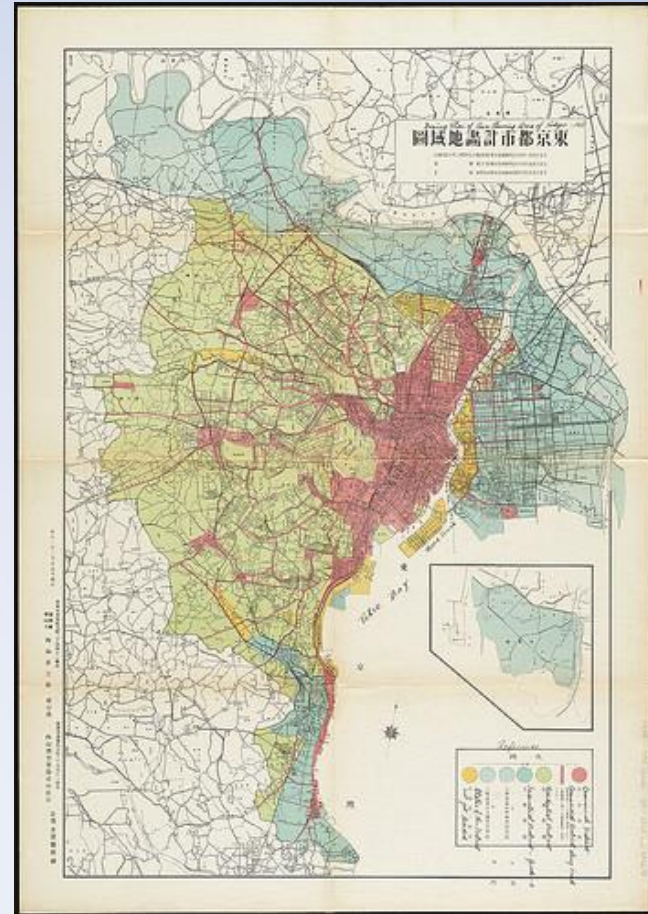
- Plans contain long term goals, short term objectives, strategies, implementation techniques (or best practices)
- They are adopted by local planning commissions; most Colorado communities are required to adopt a plan.
- Plans are visionary and advisory. In most cases they do not regulate directly.
- Since zoning, which determines land use types and densities, has to conform to the plan, the plan will have a critical effect on future water use.



OVERVIEW OF ZONING



- Zoning:
 - Permits certain land uses in designated districts; and
 - Prescribes dimensions for the construction and location of buildings.
- Certain land uses conserve more water than others.
- Those uses may be added to the zoning code.



COORDINATING WATER AND LAND PLANNING



- Step-by-step Understanding of the Process of Amending the Comprehensive Land Use Plan and Land Use Regulations
- Identifying the Land Planning Staff and Stakeholders
- Identifying the Water Planning Staff and Stakeholders
- Integrating Inputs Throughout the Process of Amending the Comprehensive Plan and Land Use Regulations

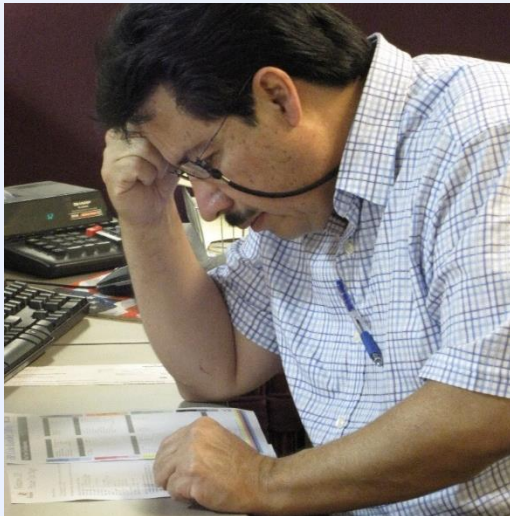
Best Practices and Lessons Learned

WATER CONSERVATION IN THE LAND USE SYSTEM						
Water Conservation Measures	Comp Plan	Zoning Regulations	Subdivision Regulations	Site Plan	Building Code	Plumbing Code
LANDUSE						
Urban growth boundary	✓					
Denser development(more homes/acre)	✓	✓	✓	✓		
Cluster development (reduce lot size)	✓	✓	✓	✓		
Mixed-use development	✓	✓	✓	✓		
Mixed housing types	✓	✓	✓	✓		
Compact mixed use	✓	✓	✓	✓		
EQUIPMENT						
Green plumbing code	✓		✓	✓		✓
Indoor fixture efficiency standards	✓				✓	✓
Reuse of water	✓				✓	✓
Smart meters	✓				✓	✓
Sub metering multifamily units	✓				✓	✓
Incentives	✓					
LANDSCAPE						
Landscape codes matched to land use type	✓		✓	✓		
Landscape plan requirements(xeriscaping)	✓	✓	✓	✓		
Soil quality requirements	✓		✓	✓		
Plant list/Allowable plants	✓		✓	✓		
Tree size requirement	✓		✓	✓		

Best Practices and Lessons Learned

Water Conservation Management Plan Components				
Land Use Element	Water Supply	Demand Projections	Incentives	Ordinances/ Enforcement
LANDUSE				
Urban growth boundary		✓		
Denser development(more homes/acre)		✓		
Cluster development (reduce lot size)		✓		
Mixed-use development		✓		
Mixed housing types		✓		
Compact mixed use		✓	✓	
Transit oriented development (TOD)		✓		
LANDSCAPE				
Landscape codes matched to land use type		✓		✓
Landscape plan requirements (xeriscaping)		✓		✓
Soil quality requirements				✓
Plant list/Allowable plants				✓
Tree size requirement				✓
MONITORING AND ENFORCEMENT				
Penalties – civil and criminal				✓
Post occupancy violations				
Intermunicipal inspections and prosecutions				

Relationship between Land Use Planning and Water Planning City of Westminster



1. Consistent Coordination & Communication
2. Landscape Code
3. Inspections Process
4. Post Occupancy Permit Inspections
5. Audits
6. Right Pricing of Utilities
7. Comprehensive Plan & Comprehensive Water Supply Plan updates

Questions?

NEXT STEPS & UPCOMING TRAININGS



Visit: <http://cwcb.state.co.us/WATER-MANAGEMENT>

Contact: kevin.reidy@state.co.us

Upcoming Webinars

October 4, 2016 *Integrating Water Efficiency into Comprehensive Planning*

November 1, 2016 (changed from Oct. 25th) *Integrating Water Efficiency into the Zoning Code*