

# 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*



**COLORADO**  
Department of Local Affairs  
Division of Local Government



# 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?

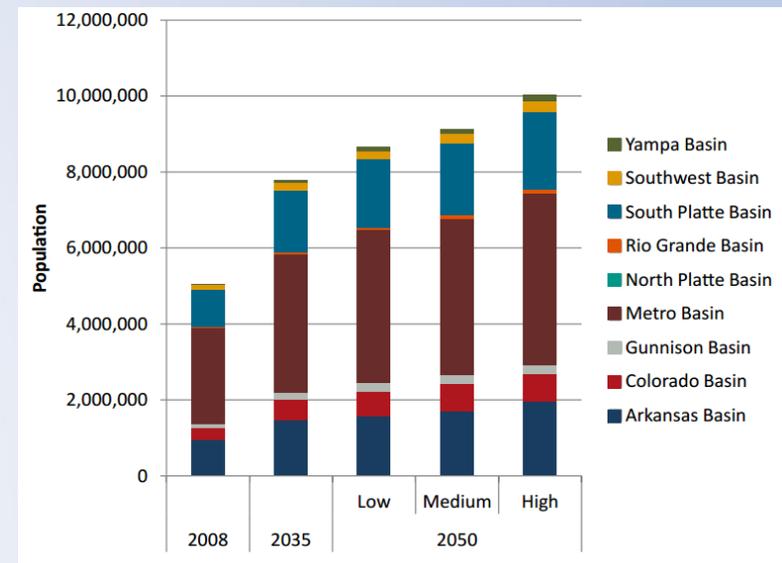


- A. Local gov't admin
- B. Local gov't planners
- C. Elected officials
- D. Planning or zoning board member
- E. Water Provider
- F. Community member
- G. Other

# Population Increasing



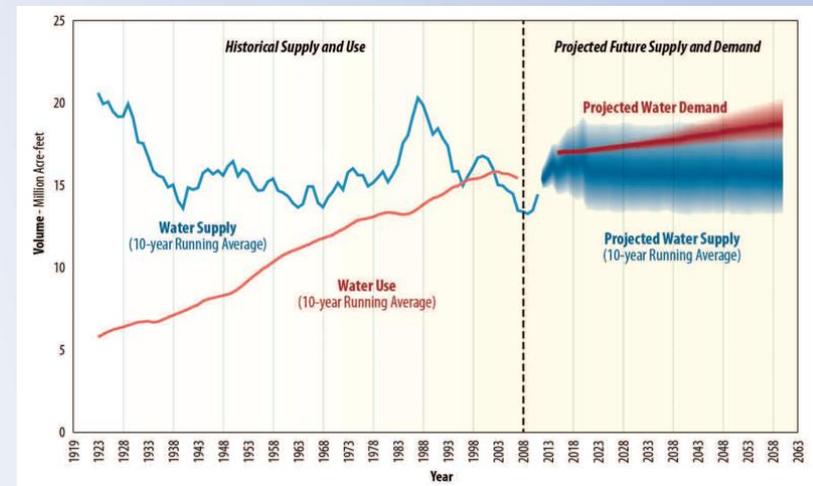
- Doubling of population 2010-2040
  - CO top 6 for growth last 35 yrs
- Lots of land use decisions to accommodate this growth



# 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 1<sup>st</sup> w/ this problem 😊

- 1) Education
- 2) Procedure for regular contact
- 3) Coordinated planning
- 4) Institutionalization



# Taking the Lead

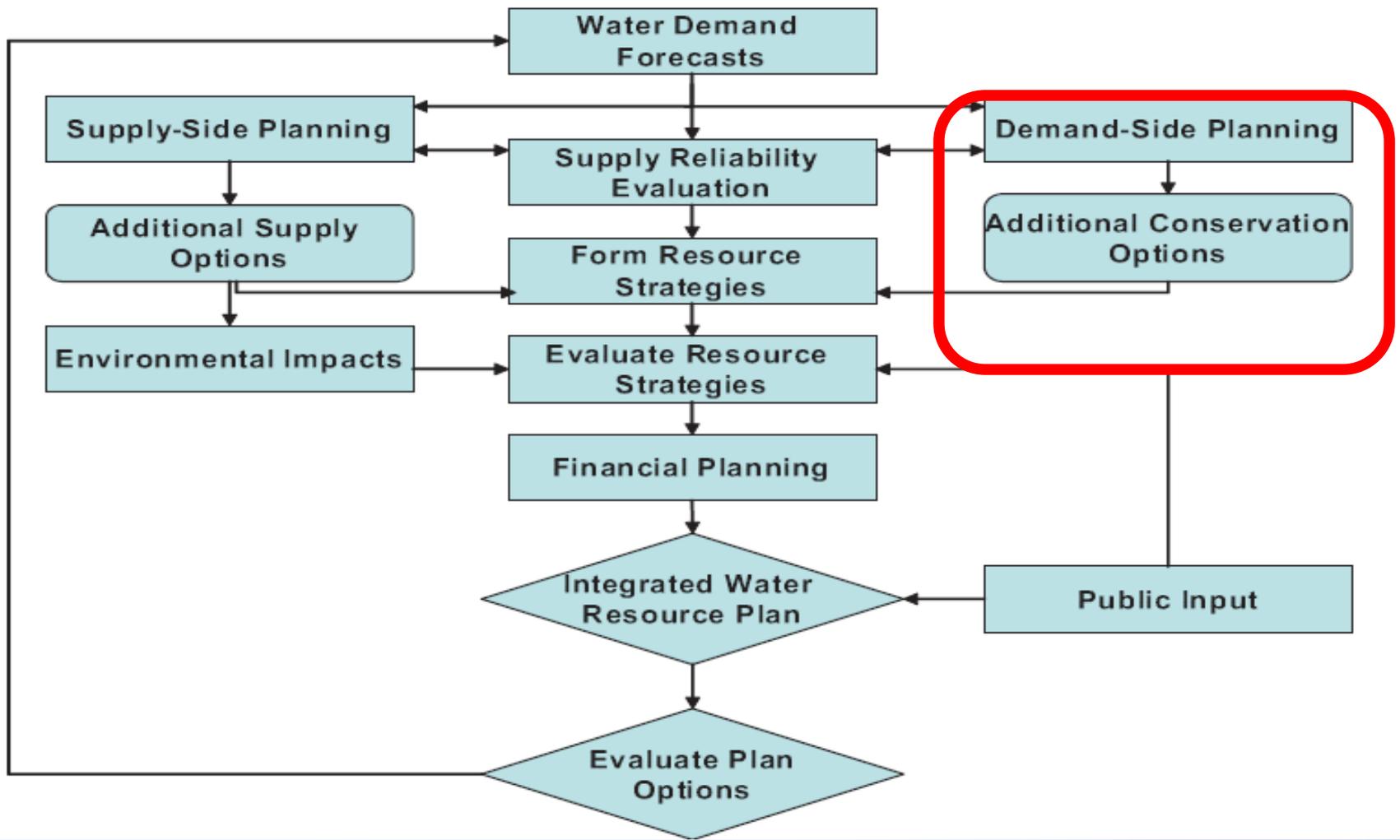


- Land use planners are integrating resiliency
  - water is key
- Traditionally a land use led activity, but...
- Many water providers have achieved great successes
  - No control is no excuse!

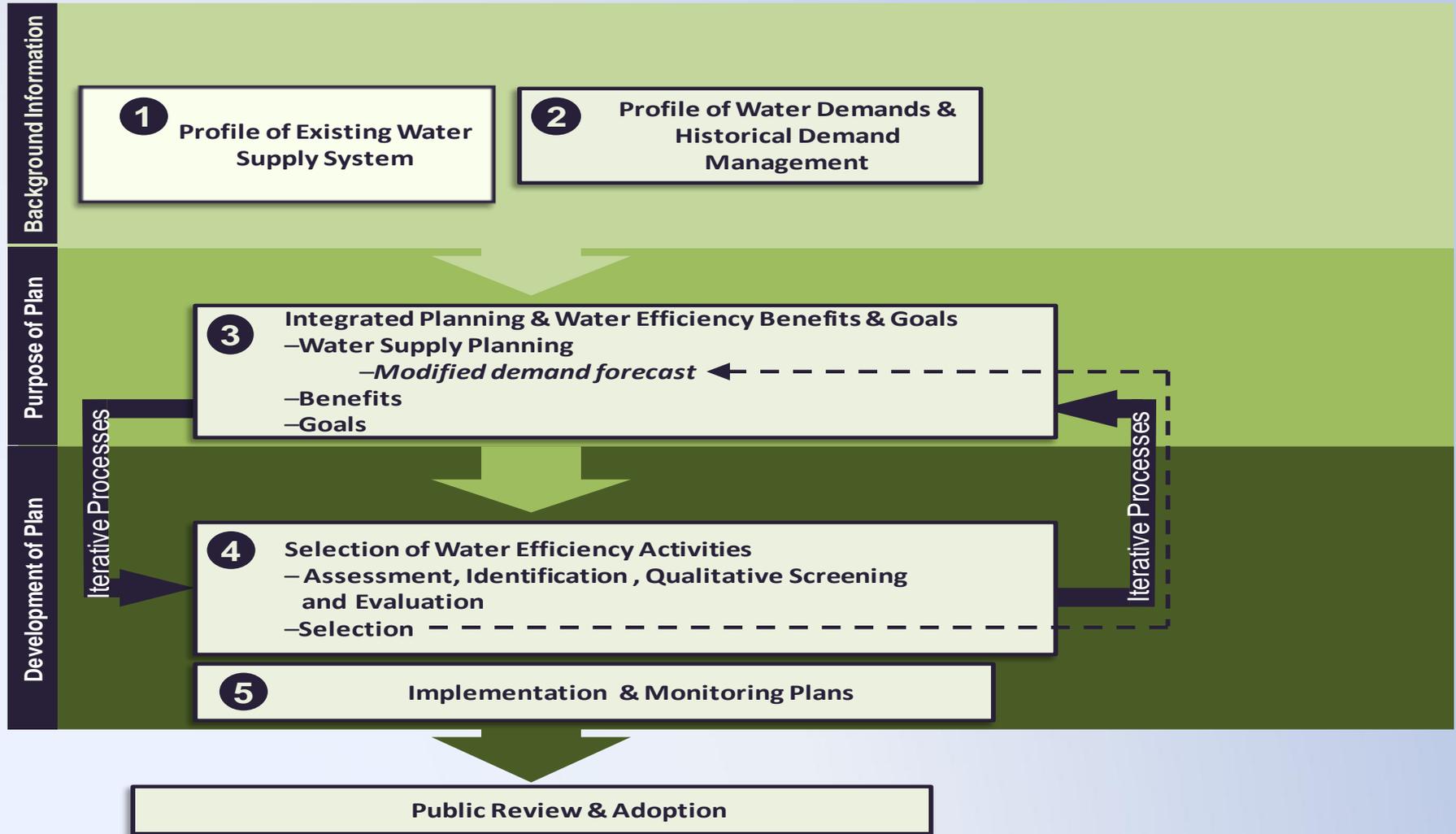
		Change from 1990-2010		
Water Provider	State	Deliveries (AF)	Population	GPCD
Metropolitan Water Dist.	CA	-154,921	3,594,000	-23%
Salt Lake City	UT	-34,199	37,215	-39%
Albuquerque	NM	-18,789	115,215	-34%
Fort Collins	CO	-2,876	32,800	-33%
Tempe	AZ	-840	31,000	-19%

# The Water Planning Process

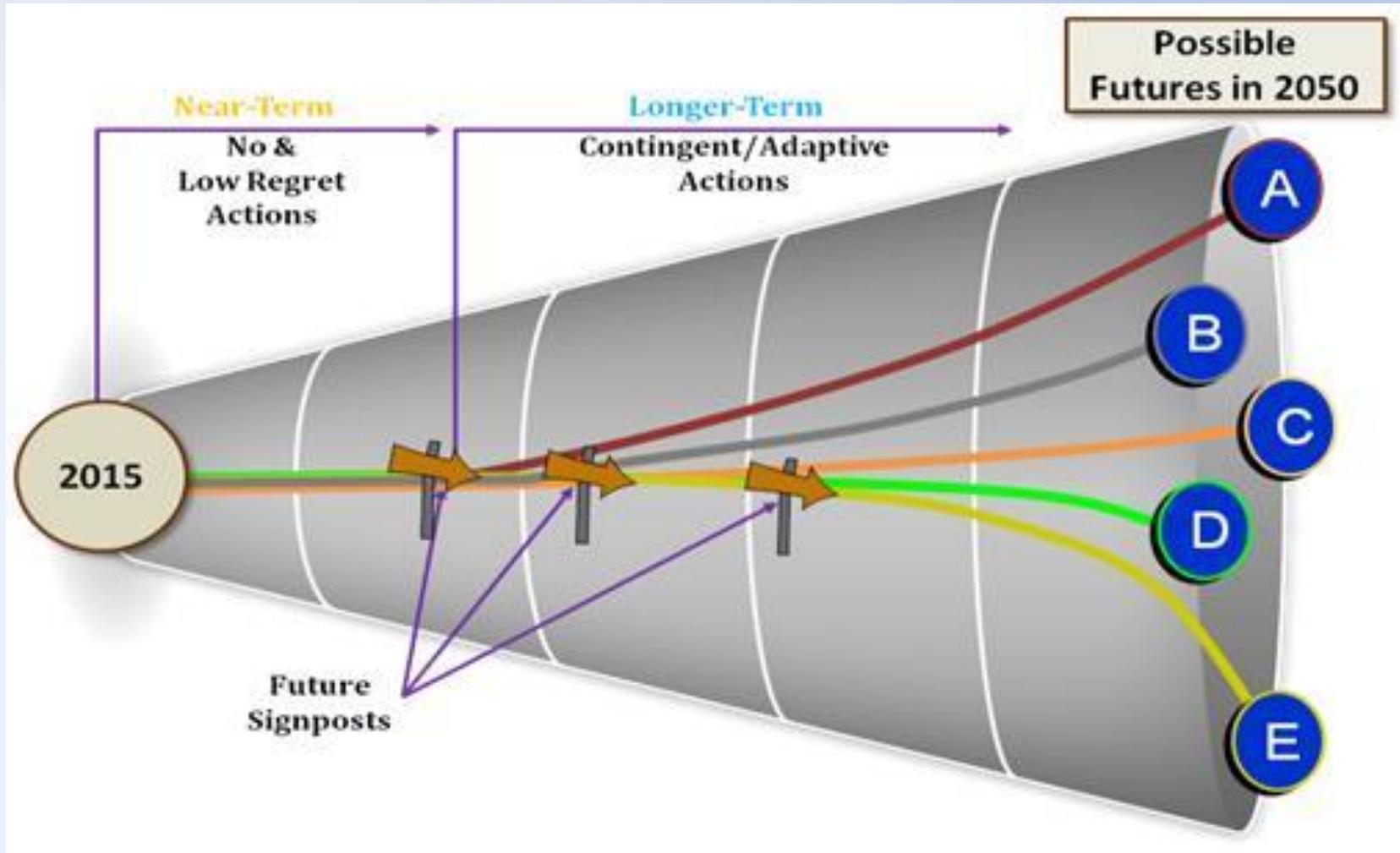
# Integrated Water Resource Plan



# 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



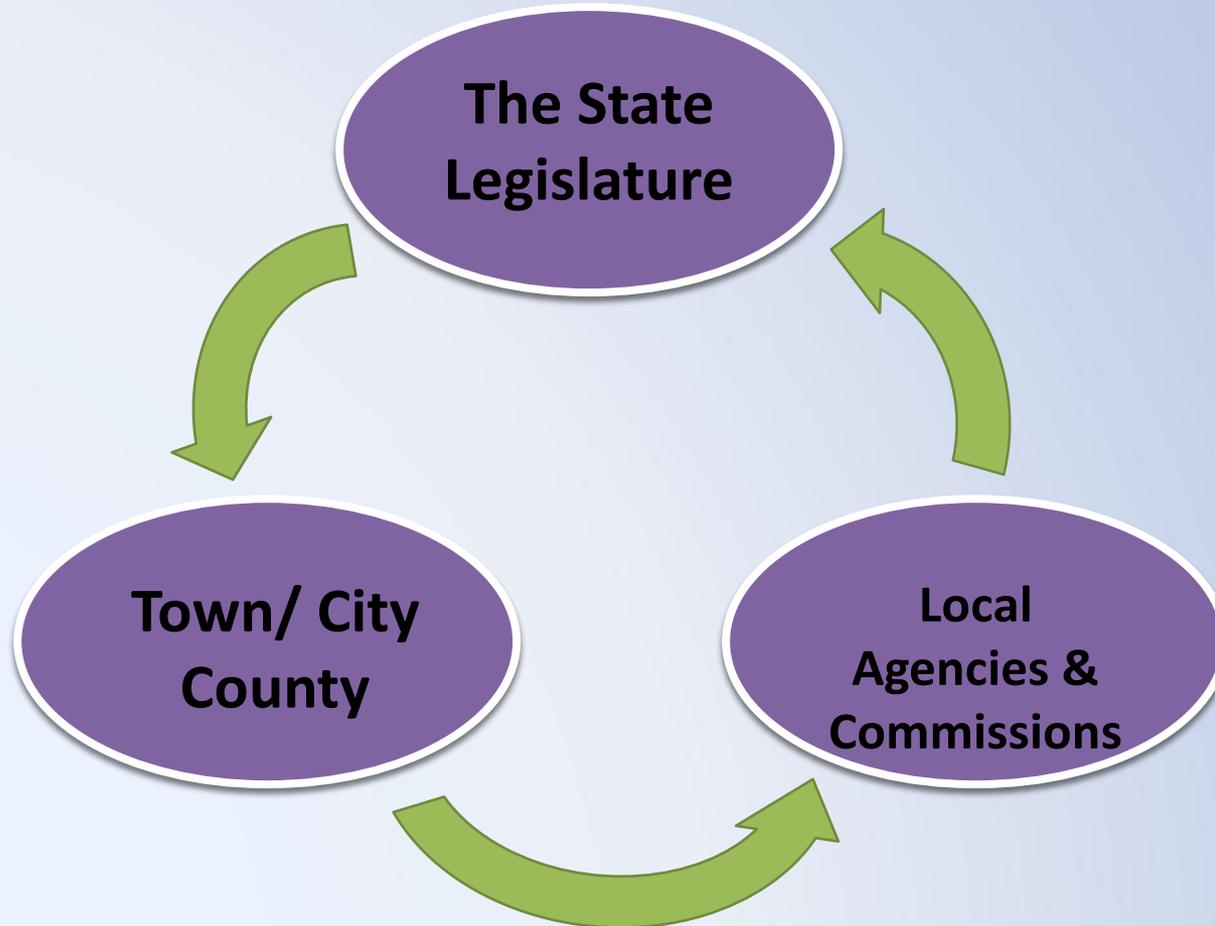
- Soil quality
- Water conserving plants
- Turf limitations
- Irrigation system efficiency
- Rain sensors
- Spray nozzles
- Water harvesting, etc.



# THE LAND USE SYSTEM



# Delegation of Legislative Authority



# THE LAND USE LEGAL FRAMEWORK

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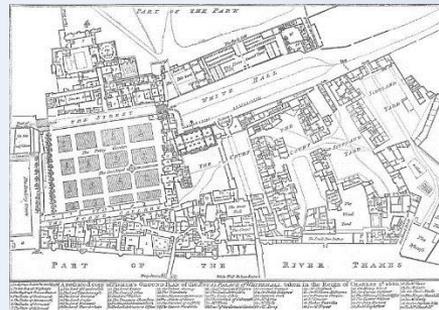
The Colorado State land use enabling act delegates authority to **LOCALITIES** to:

- 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

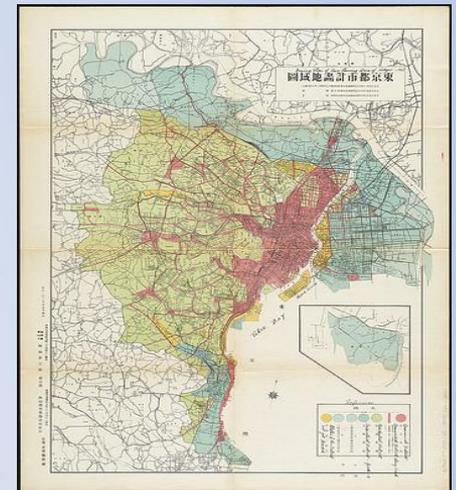
Delegated Authority To:

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

# OVERVIEW OF COMPREHENSIVE PLANNING



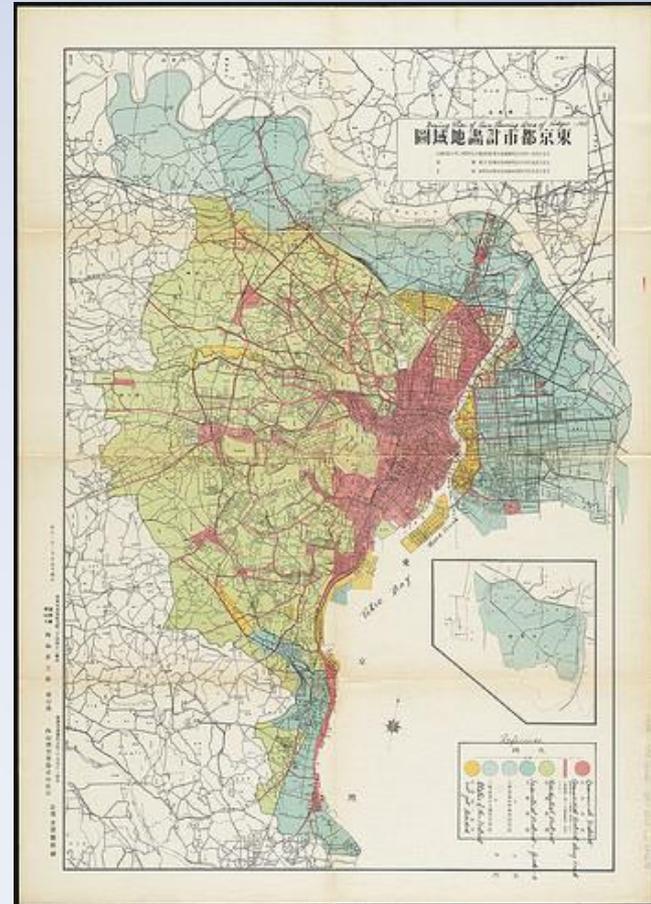
- Plans contain long term goals, short term objectives, strategies, implementation techniques (or best practices)
- They are adopted by local planning commissions; most Colorado communities are required to adopt a plan.
- Plans are visionary and advisory. In most cases they do not regulate directly.
- 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

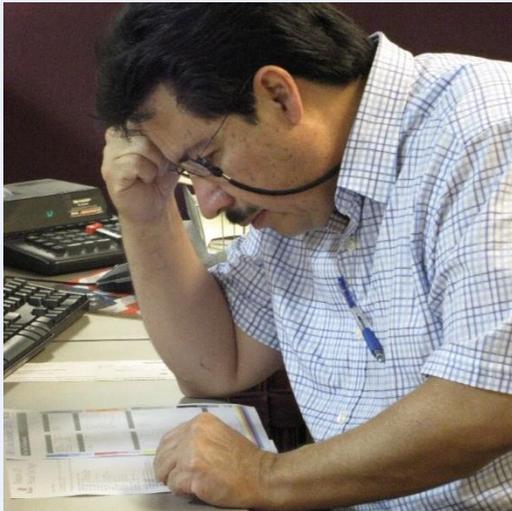
# Best Practices and Lessons Learned

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

## **Upcoming Webinars**

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

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