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

  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?
• 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!

<table>
<thead>
<tr>
<th>Water Provider</th>
<th>State</th>
<th>Deliveries (AF)</th>
<th>Population</th>
<th>GPCD</th>
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<tbody>
<tr>
<td>Metropolitan Water Dist.</td>
<td>CA</td>
<td>-154,921</td>
<td>3,594,000</td>
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<tr>
<td>Salt Lake City</td>
<td>UT</td>
<td>-34,199</td>
<td>37,215</td>
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<td>Albuquerque</td>
<td>NM</td>
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<td>Fort Collins</td>
<td>CO</td>
<td>-2,876</td>
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<tr>
<td>Tempe</td>
<td>AZ</td>
<td>-840</td>
<td>31,000</td>
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The Water Planning Process
Integrated Water Resource Plan

- Water Demand Forecasts
  - Supply-Side Planning
    - Additional Supply Options
    - Environmental Impacts
  - Supply Reliability Evaluation
    - Form Resource Strategies
    - Evaluate Resource Strategies
  - Demand-Side Planning
    - Additional Conservation Options
- Financial Planning
- Integrated Water Resource Plan
- Public Input
- Evaluate Plan Options
Water Efficiency Planning Process

1. Profile of Existing Water Supply System
2. Profile of Water Demands & Historical Demand Management
3. Integrated Planning & Water Efficiency Benefits & Goals
   - Water Supply Planning
     - Modified demand forecast
   - Benefits
   - Goals
4. Selection of Water Efficiency Activities
   - Assessment, Identification, Qualitative Screening and Evaluation
   - Selection
5. Implementation & Monitoring Plans

Public Review & Adoption
Scenario Planning

Near-Term
No & Low Regret Actions

Longer-Term
Contingent/Adaptive Actions

Possible Futures in 2050

A
B
C
D
E

2015

Future Signposts
Land Use-Water Nexus

- Rates and Tap Fees
- Education/Training
- Zoning
- Comprehensive Plan
- Outdoor water use programs/ordinances
- Plumbing/Building Codes
- Site Plan/Subdivision Regulations

Outdoor water use programs/ordinances
Land Use Affects Water Use

Highlands Ranch

Glass House

Stapleton
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 State Legislature

Town/ City County

Local Agencies & Commissions
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

<table>
<thead>
<tr>
<th>Water Conservation Measures</th>
<th>Comp Plan</th>
<th>Zoning Regulations</th>
<th>Subdivision Regulations</th>
<th>Site Plan</th>
<th>Building Code</th>
<th>Plumbing Code</th>
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# Best Practices and Lessons Learned

## Water Conservation Management Plan Components

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<th>Water Supply</th>
<th>Demand Projections</th>
<th>Incentives</th>
<th>Ordinances/Enforcement</th>
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<td>Intermunicipal inspections and prosecutions</td>
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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