

# **INTEGRATING WATER INTO LAND USE PLANNING**

## ***INTEGRATING WATER CONSERVATION INTO ZONING***

Presented by:

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



# WHY WE ARE HERE



## Workshop Objectives

1. How to use zoning to reduce water consumption:
2. Clear understanding of best practices, including:
  - Promoting water conserving land uses
  - Creating water conserving landscapes
  - Incorporating water conserving fixtures
3. How to incorporate density in areas for water-efficient growth while:
  - Maintaining neighborhood character and open space
  - Improving the economics of the municipality
  - Protecting property rights

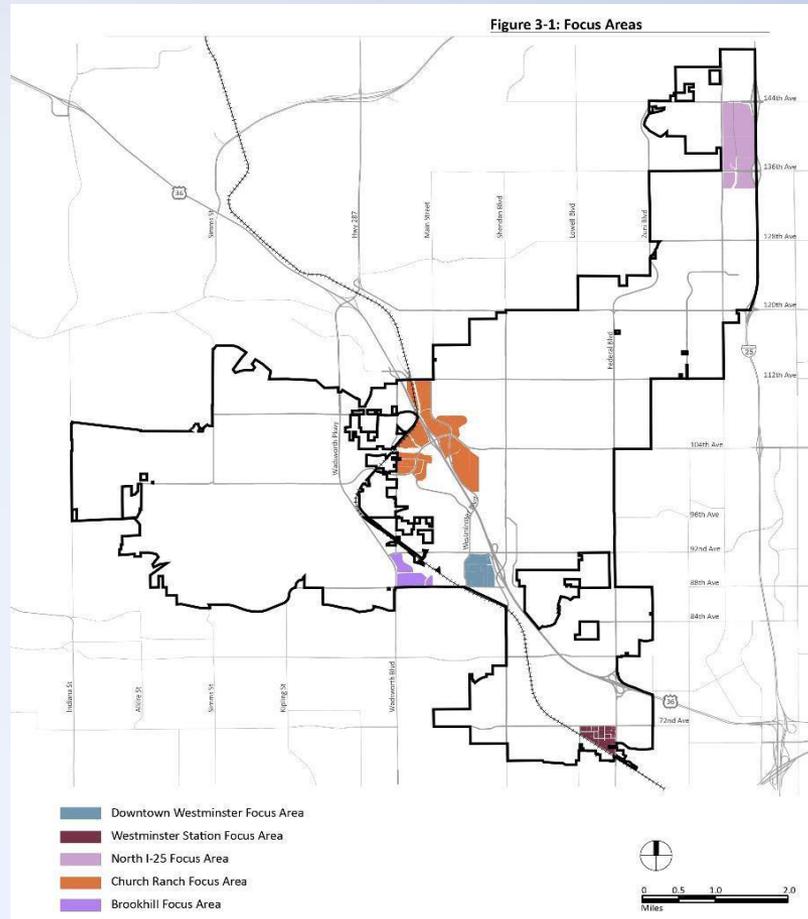
# WHO'S ON THE CALL



- Local gov't admin
- Local gov't planners
- Elected officials
- Planning or zoning board member
- Water Providers
- Community members
- Others?



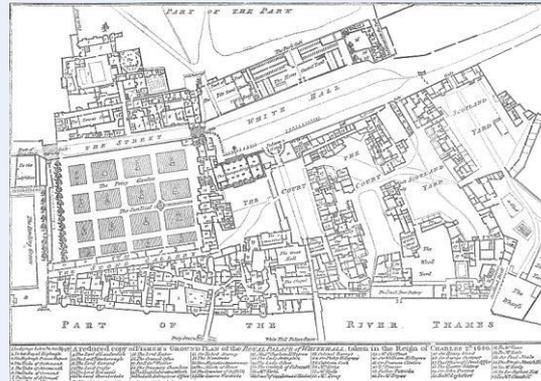
# WATER CONSERVATION AND THE LAND USE SYSTEM



# THE LAND USE SYSTEM



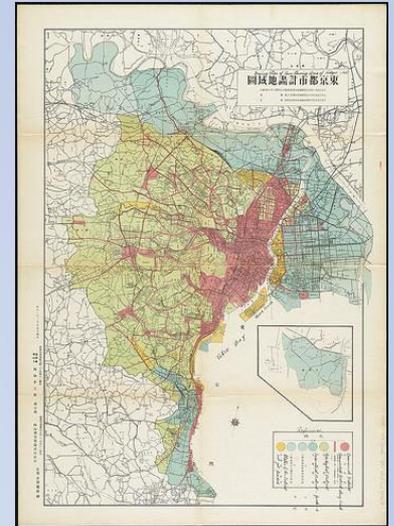
- State Delegation of Powers
- Comprehensive Plan establishes community's vision
- Zoning must conform to comprehensive plan
- Comprehensive plan can focus on water conservation



# 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 and can be allowed by amending zoning
- Water conservation standards can be added too



# MATRIX OF WATER CONSERVATION METHODS

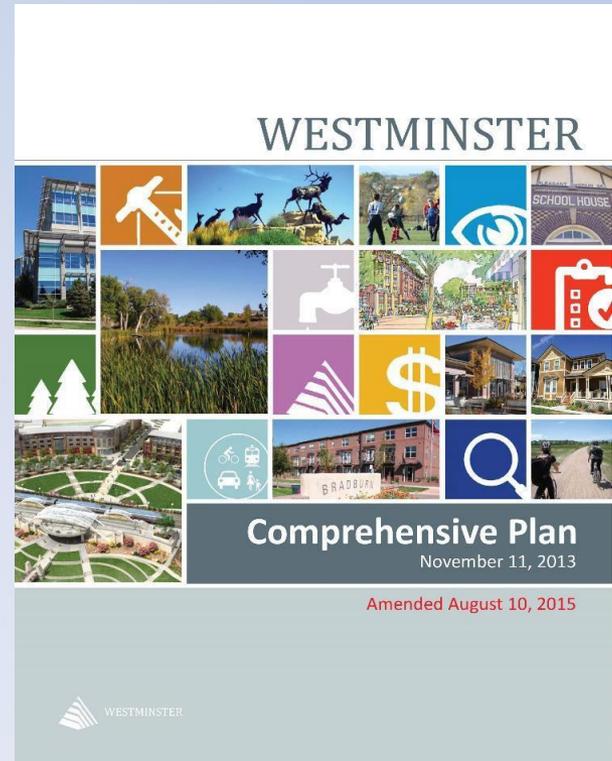
WATER CONSERVATION IN THE LAND USE SYSTEM						
Water Conservation Measures	Comp Plan	Zoning Regulations	Subdivision Regulations	Site Plan	Building Code	Plumbing Code
<b>LANDUSE</b>						
Urban growth boundary	✓					
Denser development(more homes/acre)	✓	✓	✓	✓		
Cluster development (reduce lot size)	✓	✓	✓	✓		
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	✓		✓	✓		

# CASE STUDY



## The City of Westminster

- Growth management explicitly tied to water
- Point system limits annual developments
- Points awarded based on water efficiency
- Competitive development proposal system
- Points awarded for going beyond the code
- Proposal with the most points gets permit



# BEST PRACTICES



## **Incorporate water-conserving land uses into as-of-right permitted uses by:**

- Zoning to Limit Lot Size
- Clustering of Permitted Homes
- Emphasize use of in-fill development
- Compact Mixed Use Zoning Districts



# CLUSTERING OF PERMITTED LOTS



## Conserves Water Because:

- Tends to result in smaller home sizes
- Results in smaller yards and less landscaping
- Results in preserved open space, enhances ecosystem services, and groundwater recharge

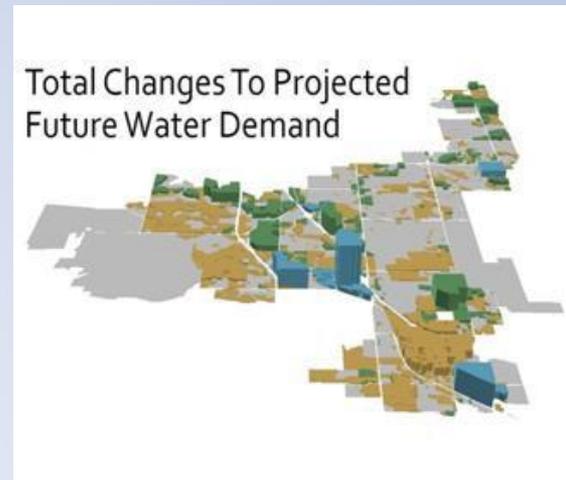


# BEST PRACTICES



## Foster water-efficient densities by permitting accessory dwelling units.

- Permit construction of an Accessory Unit
- Limit Accessory Units by:
  - Amount of space
  - Occupancy
  - Parking
- Accommodate growing population without extending infrastructure
- Accessory units often do not require additional water for landscaping



# BEST PRACTICES



## **Incorporate water-conserving measures into conditionally permitted uses**

- Land uses may be permitted as conditional uses rather than by-right
- All conditions placed on the use must be met in order to be permitted
- Water conserving measures can be added to the zoning code's provisions for conditional uses

# EXAMPLE: CONDITIONAL USES IN SINGLE FAMILY ZONES

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- Diversifies types of housing:
- Small lot homes
- Attached homes
- 2-3 family homes, designed to look like existing single family homes
- Small multi-family
- Standards can include: landscaping plans, compatible design, conserving landscaping fixtures

# BEST PRACTICES



## Conditionally permit water-intensive uses upon water-conservation measures

- Zoning can designate land use as conditional, rather than by-right
  - Examples - car washes, nurseries, small-scale farming, etc.
- Zoning can impose conditions on uses that limit water consumption
- Zoning can also require recycling of water by these businesses



# BEST PRACTICES



## Condition rezoning on water-conserving practices

- Legislature can impose any reasonable condition on rezoning approval
- Locality may impose any condition that reduces water consumption
- Such measures may include:
  1. landscaping practices and fixtures
  2. water recycling
  3. grey water systems
  4. limit the amount of natural vegetation



# IMPLEMENTING CONDITIONAL REZONING



To support it, add to the comprehensive plan:

- Goals and objectives
- Appropriate locations
- Examples of standards to be applied

**Why is this not illegal “spot zoning?”**

**Because it conforms with the  
Comprehensive Plan**

# BEST PRACTICES



## **Bonus density zoning as water conservation incentive**

- Home rule localities may permit developers added density
- Incentivize public benefits by awarding bonus density zoning permits
- Techniques for awarding higher density include:
  1. Rezoning
  2. Planned Unit Developments(PUD)
  3. Simply providing more density by right
- Localities must carefully balance
  - Value of added density v. Cost of water conservation measures

# ASHEVILLE, NORTH CAROLINA

## BONUS DENSITY ZONING

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Incentives include:

- Increased density, waivers of minimum lot size, setback, parking, and height
- In exchange for on site water efficiency, building fixtures, and other green building amenities
- Staff created point system to calculate incentives based on amenities offered

# BEST PRACTICES



## Use Planned Unit Development (PUD) regulations to foster water conservation

- PUDs permit developers flexibility in land uses in exchange for:
  - Extra quality,
  - Amenities; including water conservation measures, or
  - Other benefits the community would not get from uses permitted by-right
- PUDs must be comply with the locality's comprehensive plan



# PUD ZONING OF LARGE PARCELS



- Can allow mixed-uses, while requiring amenities, including water conservation techniques
- Highly negotiated arrangements
- Can include rain water harvesting, including xeriscaping and gray water systems

***Broomfield, CO*** uses a pre-application plan review meeting to negotiate amenities and includes local water planners in the meeting

# BEST PRACTICES



## **Create a water conservation floating zone**

- Floating zones may be created for certain types of development
- Floating zones are created in two steps:
  1. The local legislature creates a zone that “floats; then
  2. Developer may petition to affix zone to qualified parcel
- Floating zones permit uses that use less water per capita than others:
  - Compact, mixed use development; or
  - Small lot single family residences
- Developer may be required to incorporate water conserving land use techniques

# FLOATING ZONE STANDARDS



- Can replace underlying zoning where applicable
- Can allow a new land use type or layout
- Can contain water conservation standards: climate tolerant plants, plant density, irrigation efficiency, storm water collection, water reuse
- Often require site plan layout and amenities to be included for floating zone to alight

# BEST PRACTICES



## Overlay Zoning

- Rather than rezone, a locality can create two overlay zones:
  - Zone 1: Priority Growth Areas, and
  - Zone 2: Priority Conservation Areas
- Overlay zones add provisions to existing zoning
- They impose new conditions on development in zone
- Overlay provisions supersede if stricter than underlying zoning

# OVERLAY ZONING



- May tailor water conserving measures to high density and mixed-use
- Provisions in lower density zones may be appropriate for those uses

# DOUGLAS COUNTY, COLORADO

## OVERLAY ZONES



- Divides the county into water supply zones
- Restricts use of nonrenewable water sources
- Identifies minimum water demand standards
- Identifies minimum water supply standards
- Sets up a procedure to determine matters
- Has an appeal process

# BEST PRACTICES



## **Establish a Transfer of Development Right(TDR) program with sending districts to preserve green infrastructure and receiving districts to channel economic development**

- Localities can designate:
  - Priority growth districts as receiving districts; and
  - Environmentally valuable districts as sending zones
- TDR allows the transfer of rights from sending to receiving zones
- Intended net result is to:
  - Limit development in sending districts; and
  - Boost development in receiving districts

# EXAMPLE TDR



- ***Adams County***: Voluntary TDR Program
  - Encourages development in areas with adequate infrastructure and
  - Preserves diminishing farmland and open space
  - Uses a variety of overlay zones to designate several environmentally sensitive areas



# WESTMINSTER CITY COUNCIL STRATEGIC PLAN OBJECTIVE

“Westminster is the next Urban Center  
of the Colorado Front Range”

# City of Westminster 2013 Comprehensive Plan

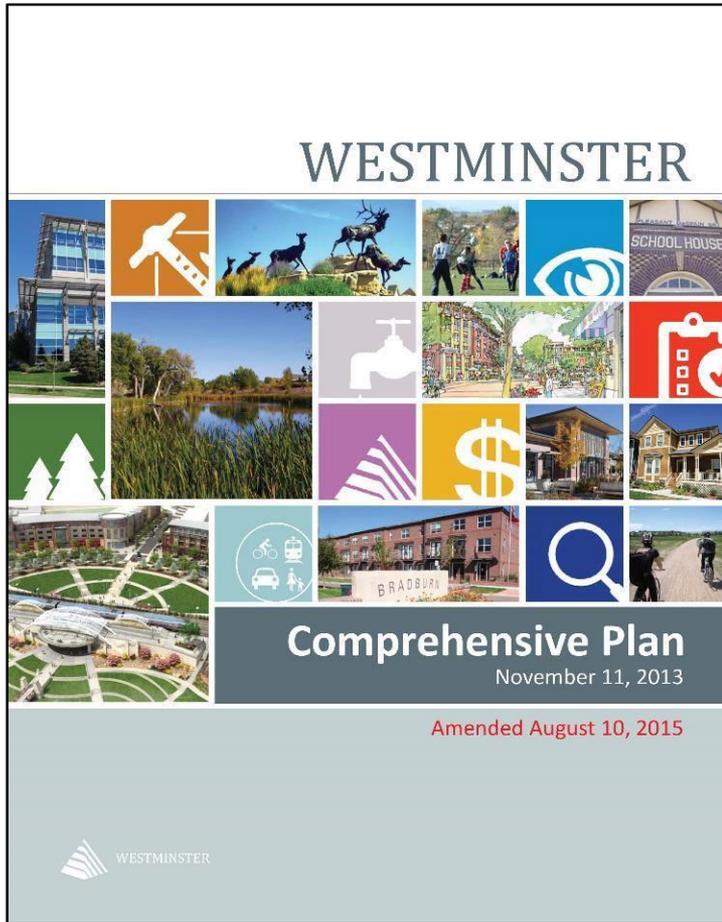
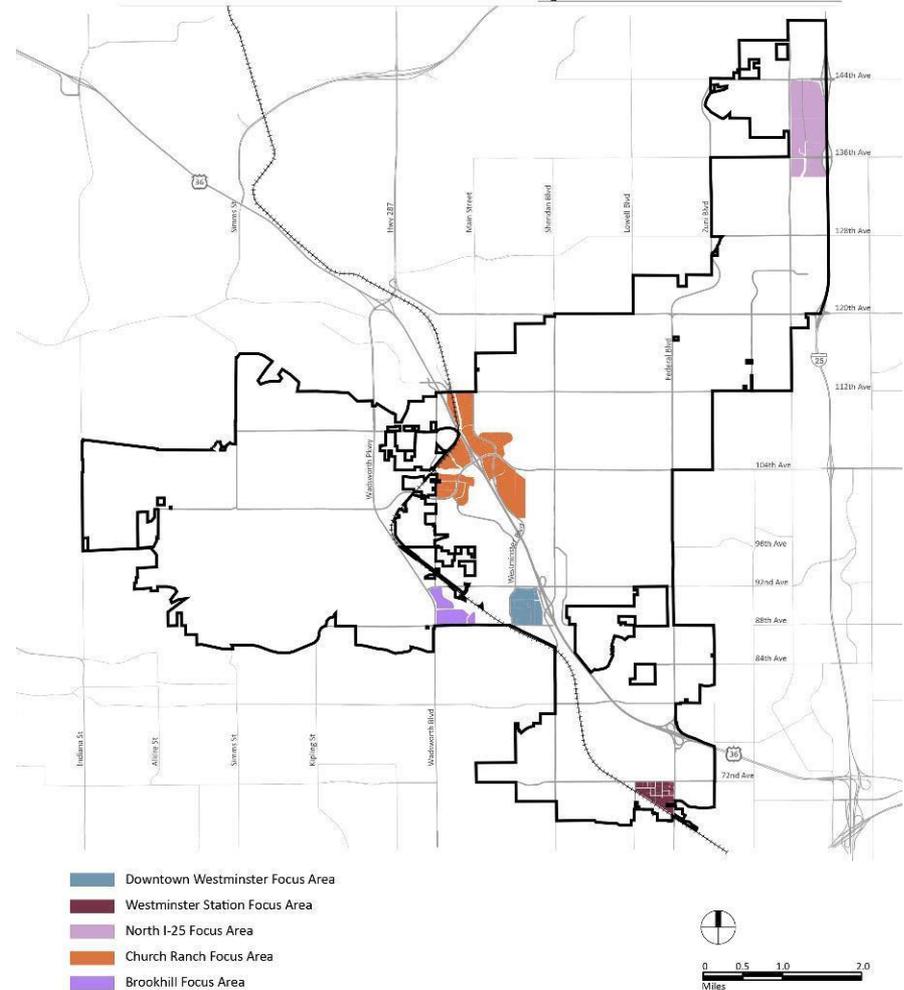


Figure 3-1: Focus Areas

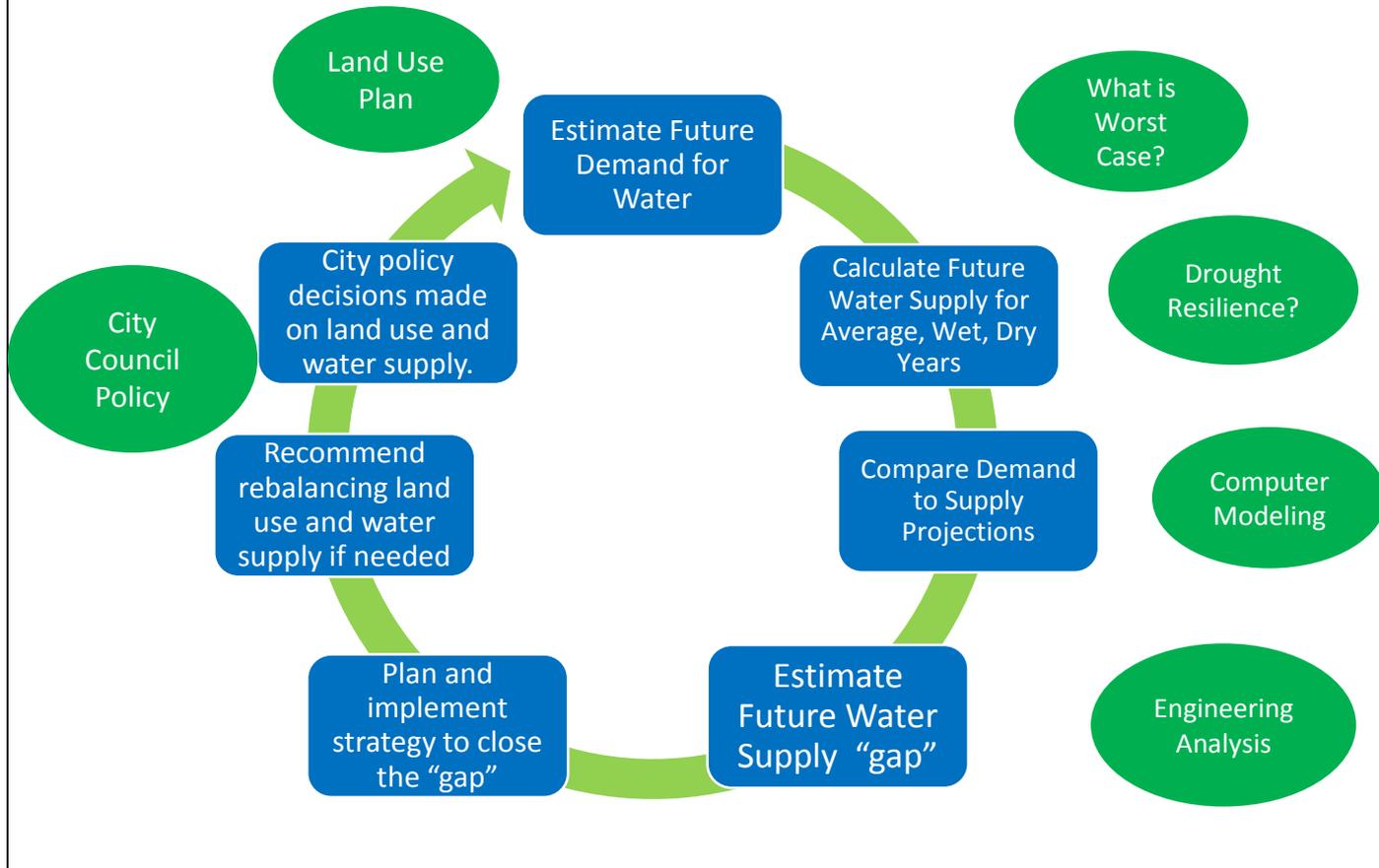


# Relationship between Land Use Planning and Water Planning

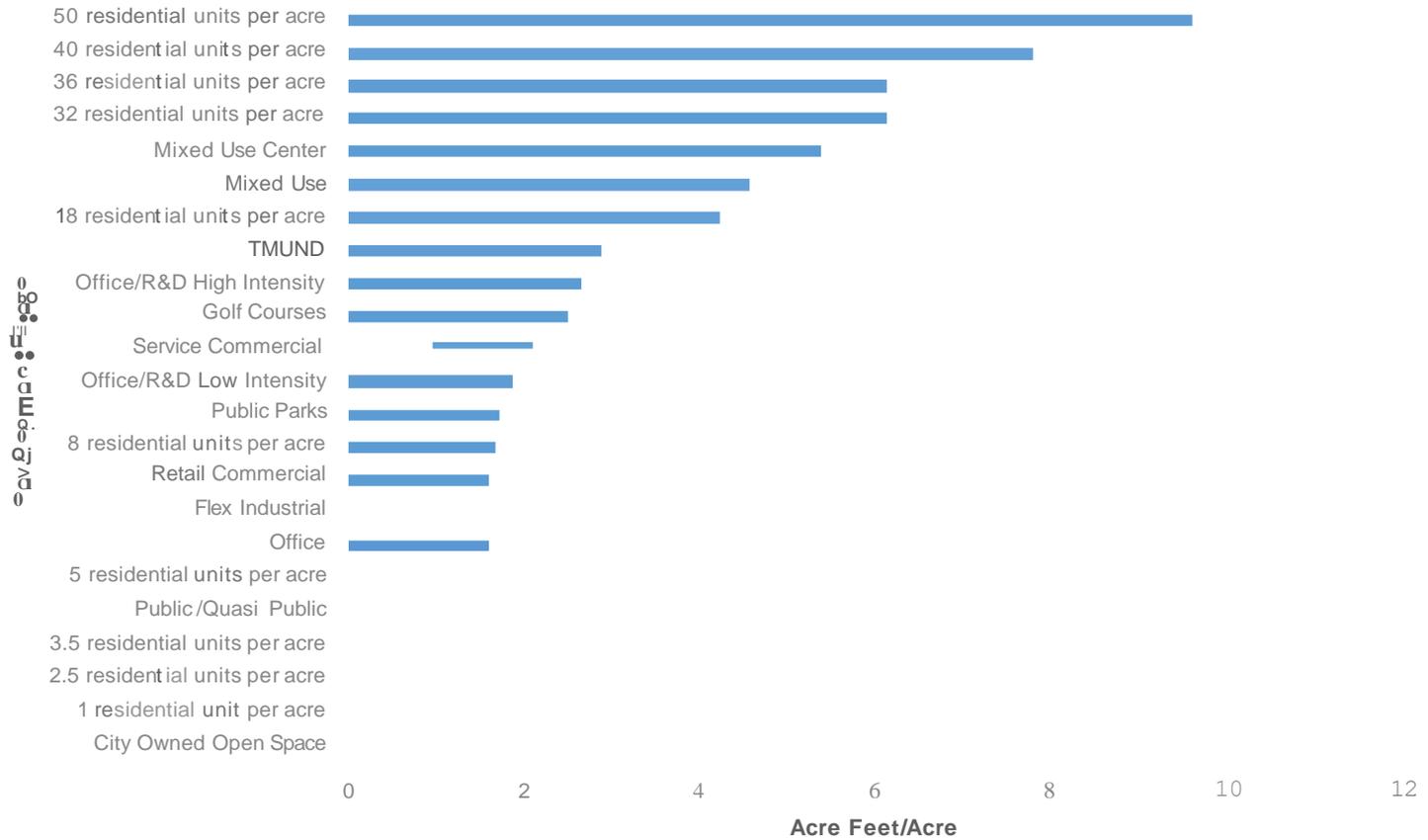


1. Consistent Coordination & Communication
2. Landscape Code
3. Inspections Process
4. Post Occupancy Permit Inspections
5. Audits
6. Right Pricing of Utilities
7. Comprehensive Plan & Comprehensive Water Supply Plan updates

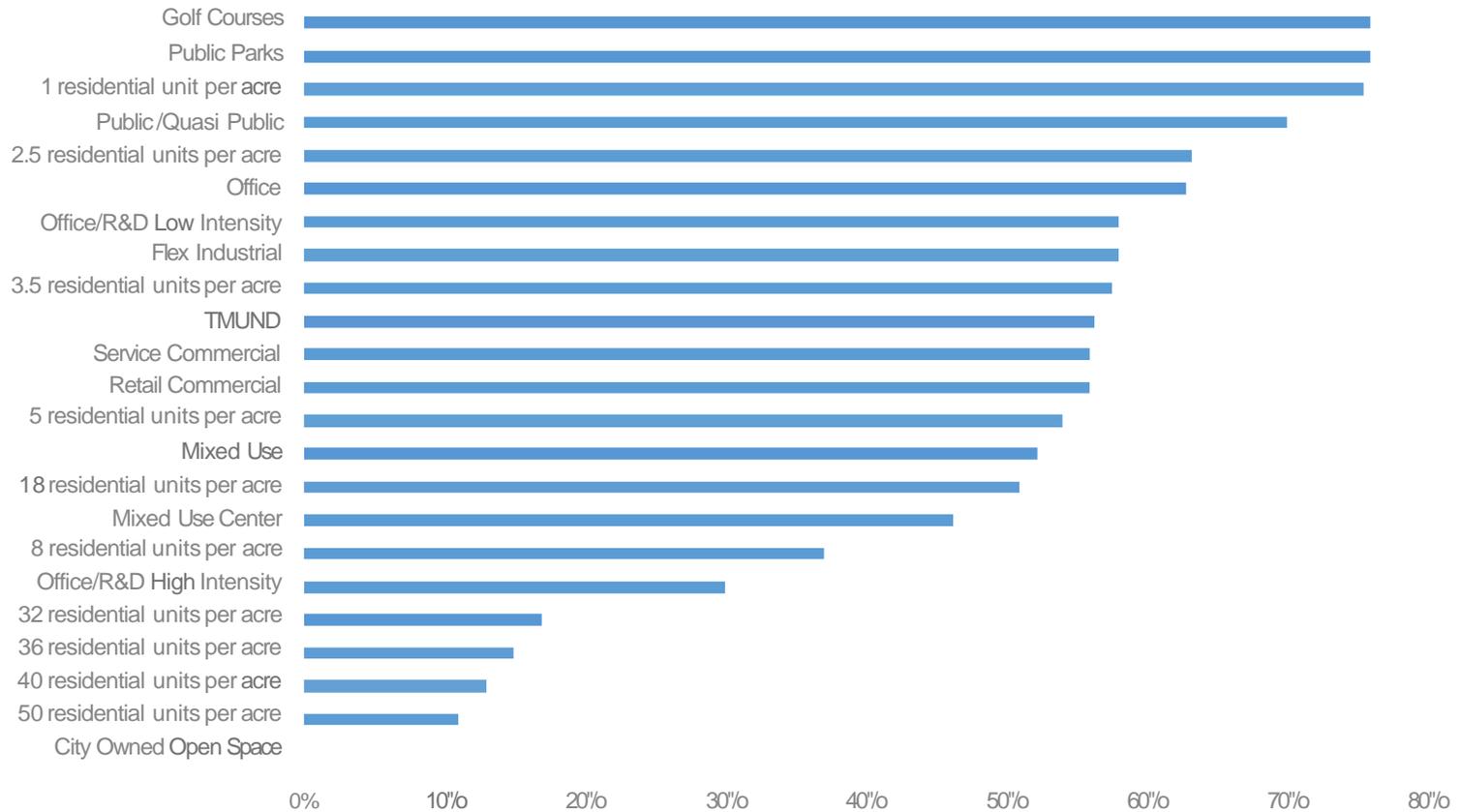
# Municipal Water Supply Planning



## Development Category Water Use Acre Feet/Acre (Water Sense)



## Outdoor Water Use Percentage



# Landscape Code

Adopted 2004

- Westminster was the first metro-area city to require Irrigation Audits and Weather-Based Controllers (others have followed)
- Irrigation Audits assure efficiency
- Smart Controllers decrease chances of over-watering



Excessive  
Runoff +  
Overspray



## Requirements for certain types of irrigation methods and equipment eliminate unnecessary and/or over-watering:

- rain sensors
- irrigation scheduling and water budgeting
- prohibiting watering between 10 am and 6 pm
- Requiring subsurface drip irrigation in areas less than 8' wide



High Water Zone	4,000 SF	x 18 Gallons/SF/Season	= 72,000 Gallons/Season
Moderate Water Zone	1,000 SF	x 10 Gallons/SF/Season	= 10,000 Gallons/Season
Low Water Zone	5,000 SF	x 3 Gallons/SF/Season	= 15,000 Gallons/Season
TOTAL Gallons Needed by all Zones			= 97,000 Gallons/Season
TOTAL Square Feet of all Zones (SF)			= 10,000 SF
Average Gallons per SF per Season for all Zones			= 9.7 Gals./SF/Season
*26 week season			

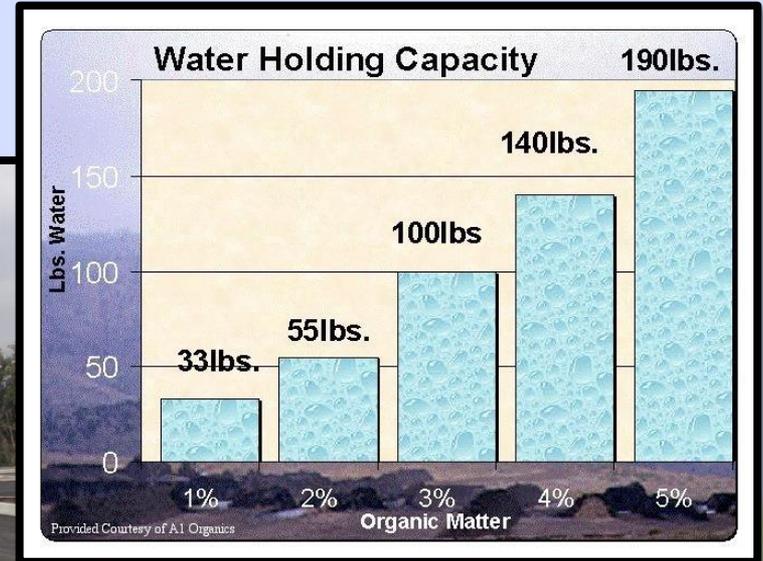


- 20% reduction on tap fee for sites using reclaimed water.
- System takes pressure off of the potable system by re-using wastewater.
- Providing reclaimed water reduces the demand on potable water system.



## Soil Amendment Inspections

Inspections required for soil amendments  
(pre- and post-tilling)



Soil amendment  
requirement (5 yards/1,000  
sf) increases plant  
survivability while using less  
water

# GROWTH MANAGEMENT



- Water Rights
- Relationship with the Comprehensive Plan
- Service Commitment Competition



# New Residential Competition Process

- Based on Service Commitments (SCs)
- One SC is the unit of measure-equivalent for one single-family detached (SFD) unit
- Other unit types calculated as follows:
  - 0.7 per single-family attached (SFA) unit
  - 0.5 per multi-family (MF) unit
  - 0.35 per senior housing unit
- 600 SCs available for 2017 competition process

# General Submittal Requirements

1. Application Form
2. Cover Letter
3. Sketch Plan & Conceptual Elevations
4. Location Map
5. Legal Description
6. Competition Score Sheets
7. Three copies of each (12 for TMUND)
8. 8 ½" x 11" unbound format
9. Electronic Submittal – PDF on Disk

## 2017 SERVICE COMMITMENT ALLOCATIONS

<b>CATEGORY</b>	<b>DESCRIPTION</b>	<b>PROPOSED ALLOCATIONS</b>
<u>Potable</u>		
<b>A and L</b>	<b>All Active Residential and Legacy Ridge</b>	<b>1969</b>
<b>B</b>	<b>New Residential (for competition process)</b>	<b>500</b>
<b>C</b>	<b>Non-Residential</b>	<b>500</b>
<b>D</b>	<b>Outside City Contracts</b>	<b>25</b>
<b>E</b>	<b>Senior Housing (for competition process)</b>	<b>100</b>
<b>F</b>	<b>Public and Contingency</b>	<b>100</b>
<b>F</b>	<b>Downtown Westminster</b>	<b><u>650</u></b>
<b>W</b>	<b>Total – Potable</b>	<b>3844</b>

# New Residential Competition Process

- Quality-based competitive system
  - Based on design guidelines
    - Score Sheets (n/a for TMUND)
  - Minimum requirements versus incentive items
    - Minimums must be met – no points
    - Points scored by choosing incentives
- Level of Detail
  - To reduce developer's time and expense, engineering plans and studies not required
  - Preliminary site plan necessary

# New Residential Competition Process

## Evaluation of Submittals

- Focus on quality design
- Total points scored
- Jury for TMUND

City Council awards (by resolution) to specific projects through build-out

- Conditions, terms
- Letter of Intent

# TENTATIVE SCHEDULE FOR 2017

## SERVICE COMMITMENT COMPETITION

<b>DATE</b>	<b>DAY</b>	<b>ITEM</b>
10/10/2016	<b>Monday</b>	<b>City Council authorizes competition and allocates Service Commitments</b>
10/11/2016	<b>Tuesday</b>	Notice to Developers
10/11/2016	<b>Tuesday</b>	Application packets available
10/19/2016	<b>Wednesday</b>	General information meeting (5:00 – 6:00pm)
<b>11/30/2016</b>	<b>Wednesday</b>	<b>5:00 p.m. deadline for applications</b>
12/5/2016	<b>Monday</b>	City staff review of applications begins
12/15/2016	<b>Thursday</b>	Judging for TMUND competition
<b>1/23/2017</b>	<b>Monday</b>	<b>City Council awards service commitments to winning projects (date subject to change)</b>

# Relationship between Land Use Planning and Water Planning



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



Visit:

<https://www.colorado.gov/pacific/cowaterplan/integrating-water-land-use-planning>

Contact: [kevin.reidy@state.co.us](mailto:kevin.reidy@state.co.us)