



COLORADO

# INTEGRATING WATER INTO LOCAL COMPREHENSIVE PLANNING

RMLUI Conference  
March 8, 2018



COLORADO

Department of Local Affairs

# THE IMPORTANCE OF WATER PLANNING

- Planning for a reliable, safe, and affordable water supply is critical to the future of every community in Colorado
- Strategic integration of water into long-range planning is an emerging field





# WATER STRESS BY MOST POPULOUS RIVER BASINS

This map shows the average exposure of water users in each river basin to water stress, the ratio of total withdrawals to total renewable supply in a given area. A higher percentage means more water users are competing for limited supplies.

**Map Key:** 1 Qom (Namak Lake - Iran), 2 Yongding He (China), 3 Brantas (Indonesia), 4 Harirud (Afghanistan), 5 Tuhai Hu (China), 6 Sabarmati River (India), 7 Helmand (Afghanistan), 8 Sirdaryo (Central Asia), 9 Rio Maipo (Chile), 10 Dead Sea (Jordan), 11 Solo (Bengawan Solo - Indonesia), 12 Indus (Central Asia), 13 Daliao He (China), 14 Colorado River (United States), 15 Palar River (India), 16 Bravo (Rio Grande - United States), 17 Liao He (China), 18 Huang He (Yellow River - China)

## WATER STRESS LEVEL

Low Low to Medium Medium to High High Extremely High

ratio: withdrawal / available supply

< 10%

10% - 20%

20% - 40%

40% - 80%

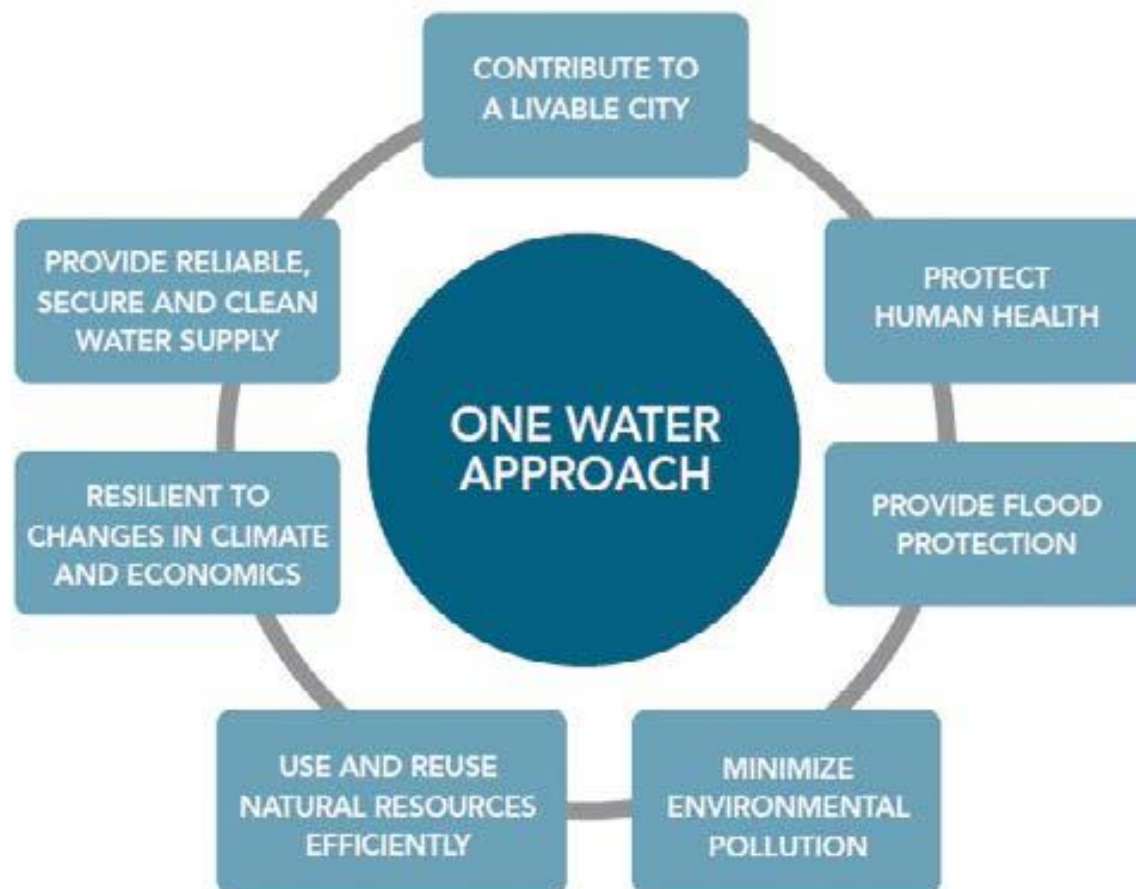
> 80%

# THE ONE WATER APPROACH



- “An integrated planning and implementation approach to managing finite water resources for long-term resilience and reliability, meeting both community and ecosystem needs.” - *Water Research Foundation*
- Considers the water cycle as an integrated system:
  - ✓ Surface and groundwater supply
  - ✓ Stormwater
  - ✓ Wastewater
  - ✓ Energy

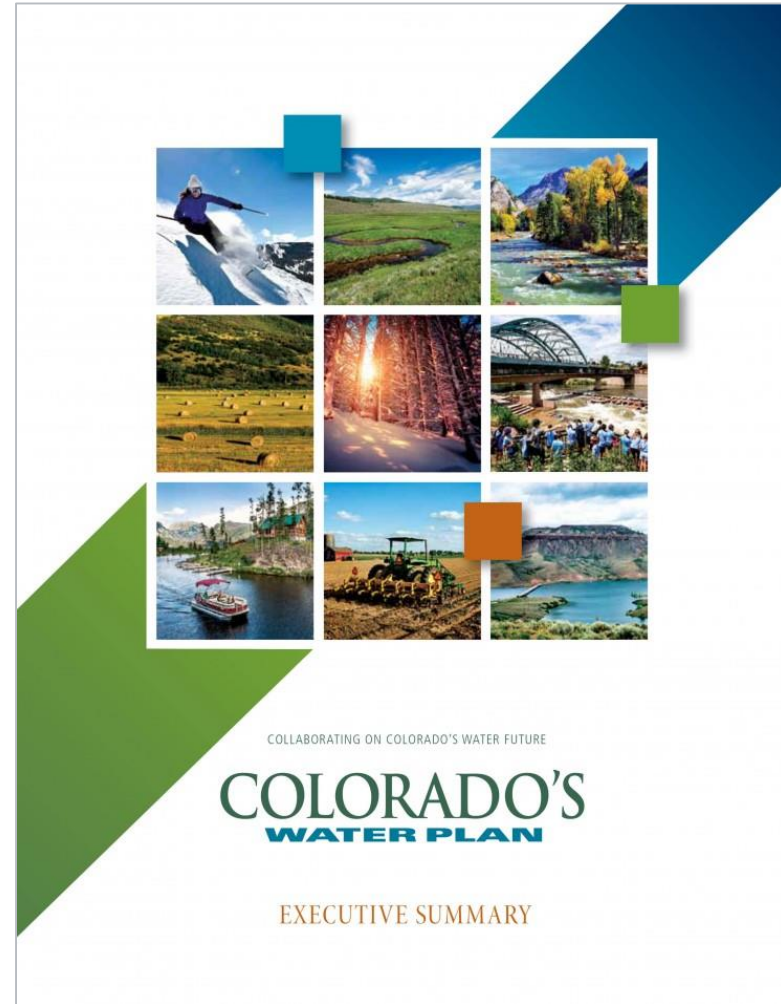
# ONE WATER APPROACH



Source: Water Environment & Reuse Foundation

# COLORADO WATER PLAN

- There is a projected gap in water supply
- Colorado's Water Plan
  - ✓ By 2025, 75 percent of Coloradans will live in communities that have incorporated water-saving actions into land-use planning
- How will we achieve this goal?



# INTEGRATING WATER & LAND USE: WHERE IS YOUR COMMUNITY AT?



Getting Started

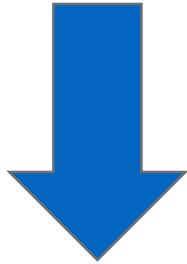


Full Integration

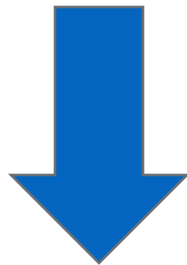


# PREPARING FOR THE COMPREHENSIVE PLAN

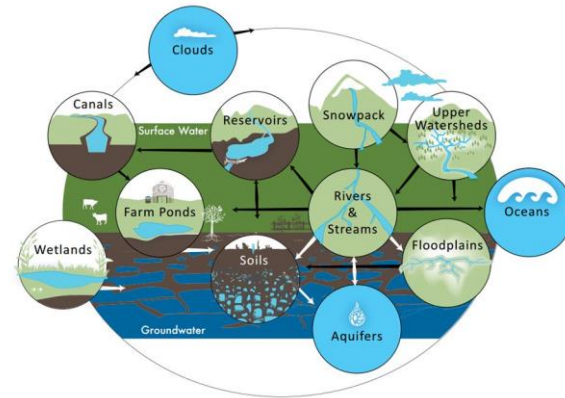
## UNDERSTAND



## PLAN



## ACT





# RESOURCES

## ➤ Colorado's Water Plan - Integrating Water and Land Use

- ✓ Webinars
- ✓ Training Modules
- ✓ Land Use and Water Planning Story Map

Link:

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

### INTEGRATING INTO THE

The comprehensive plan that achieves comprehensive community development for development adoption. Further, comprehensive advisory implementation of zoning plan. Con charges to they cons

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<sup>1</sup> In Colorado legislature Rev. Stat., §  
<sup>2</sup> Colo. Rev. plan...").  
<sup>3</sup> Condiotti

1. Encourag  
2. Examin

of new residents", a community could, through reference to the Matrix, include the following implementation technique in the comprehensive plan: Amend building and plumbing codes to require smart meters and sub-metering for multifamily units.

MATRIX OF IMPLEMENTATION TECHNIQUES						
Water Conservation Measures	Comp Plan	Zoning Regs	Subdivision Regs	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	✓	✓	✓	✓		
Transit oriented development (TOD)	✓	✓	✓	✓		
In-fill zoning	✓	✓				
Overlay zone	✓	✓				
Floating zone	✓	✓				
Setback requirements	✓	✓				
Highway intersection overlay zones	✓	✓	✓	✓		
Open space dedication	✓	✓	✓	✓		
Open space preservation	✓	✓	✓	✓		
Demand based tap fees	✓					
Other incentives	✓					
<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	✓		✓	✓		
Turf limitations (type and quality)	✓		✓	✓		
Artificial turf	✓		✓	✓		
Irrigation system efficiency requirements	✓		✓	✓		✓
Water waste rules	✓		✓	✓		



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## Contact Information:

Anne Miller, AICP  
Department of Local Affairs  
[Anne.miller@state.co.us](mailto:Anne.miller@state.co.us)