



# Tools for Local Governments: Land Use and Water Efficiency



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*Water Supply Planning*

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# Executive Order Summary

## **The Colorado Water Plan is necessary to:**

- Ensure Coloradans have a secure supply of water
- Manage Drought
- Preserve our agriculture by minimizing the unacceptable rate of buy and dry of agricultural land
- Ensure water quality
- Protect compact entitlements



# Executive Order Directives

## **The Colorado Water Plan Will:**

- Reflect Colorado's values
- Align projects, studies, funding
- Align State's role in project permitting
- Utilize the work of the IBCC and BRTs
- Work with other agencies
- Affirm prior appropriation



## Colorado's Water Plan will support

- A productive economy that supports vibrant and sustainable cities, viable and productive agriculture, and a robust skiing, recreation, and tourism industry;
- Efficient and effective water infrastructure promoting smart land use; and
- A strong environment that includes healthy watersheds, rivers and streams and wildlife.



## Land Use and the Colorado Water Plan

- Land use is governed at the local level and Colorado's Water Plan will not change that.
- There may be opportunities, however, where the state can provide incentives or benefits to encourage development to occur in a way that maximizes water efficiency and conservation.
- Incentivizing development that is more water-sustainable is one of our tools that can help ensure that Colorado enjoys a secure water future.



## Emphasizing Water Conserving Land Use Patterns and Practices

- For example, a comprehensive plan can explain that per capita water conservation will be achieved by increasing the proportion of :
  - Multi-family housing
  - Town houses,
  - Small lot single family houses,
  - Infill development,
  - Transit station area plans,
  - PUDs,
  - Mixed-use developments



## Building and Landscaping Techniques that Conserve Water

- Comprehensive plans can refer to specific interior building techniques and exterior landscaping methods of reducing water consumption
  - Reference to encouraging and/or requiring new developments to incorporate water saving measures, such as xeriscape landscaping
  - Adopting standards such as WaterSense efficiency specifications for interior appliances or fixtures



## What about Land Use Planning in current water conservation plans?

- There are landscaping measures in all water efficiency plans but no (or very few) explicit land use strategies
  - Lawn permits, irrigation standards and landscape ordinances could be placed in the comprehensive plan with implementation measures targeted to subdivision and site plan regulations
  - Landscape efficiency measures including water rates, water budgets and incentives could be included in the land use review and approval system through site plan and subdivision provisions



# Water Element in Land Use Planning

## Water Conservation and Building Regulation

Water Conservation Measures	Comp Plan	Zoning Regulations	Subdivision Regulations	Site Plan	Building Code	Plumbing Code
<b>LAND USE</b>						
Urban Growth Boundary	x					
Denser Development (more homes/acre)	x	x	x	x		
Cluster Development (reduce lot size)	x	x	x	x		
Mixed- Use Development	x	x	x	x		
Mixed Housing types	x	x	x	x		
Compact mixed use	x	x	x	x		
Demand based tap fees	x					

# Water Element in Land Use Planning

## Water Conservation and Building Regulation

	Comp Plan	Zoning Regulations	Subdivision Regulations	Site Plan	Building Code	Plumbing Code
<b>LANDSCAPE</b>						
Landscape codes matched to land use type	x		x	x		
Landscape plan requirements	x	x	x	x		
Soil amendment requirements	x		x	x		
Plant list	x		x	x		
Turf limitations	x		x	x		
Irrigation system efficiency requirements	x		x	x		x
Water waste rules	x		x	x		
Rain sensors	x		x	x		x
Water harvest	x		x	x		x
Water loss limits	x		x	x		x

# Land Use Element in Water Efficiency Planning

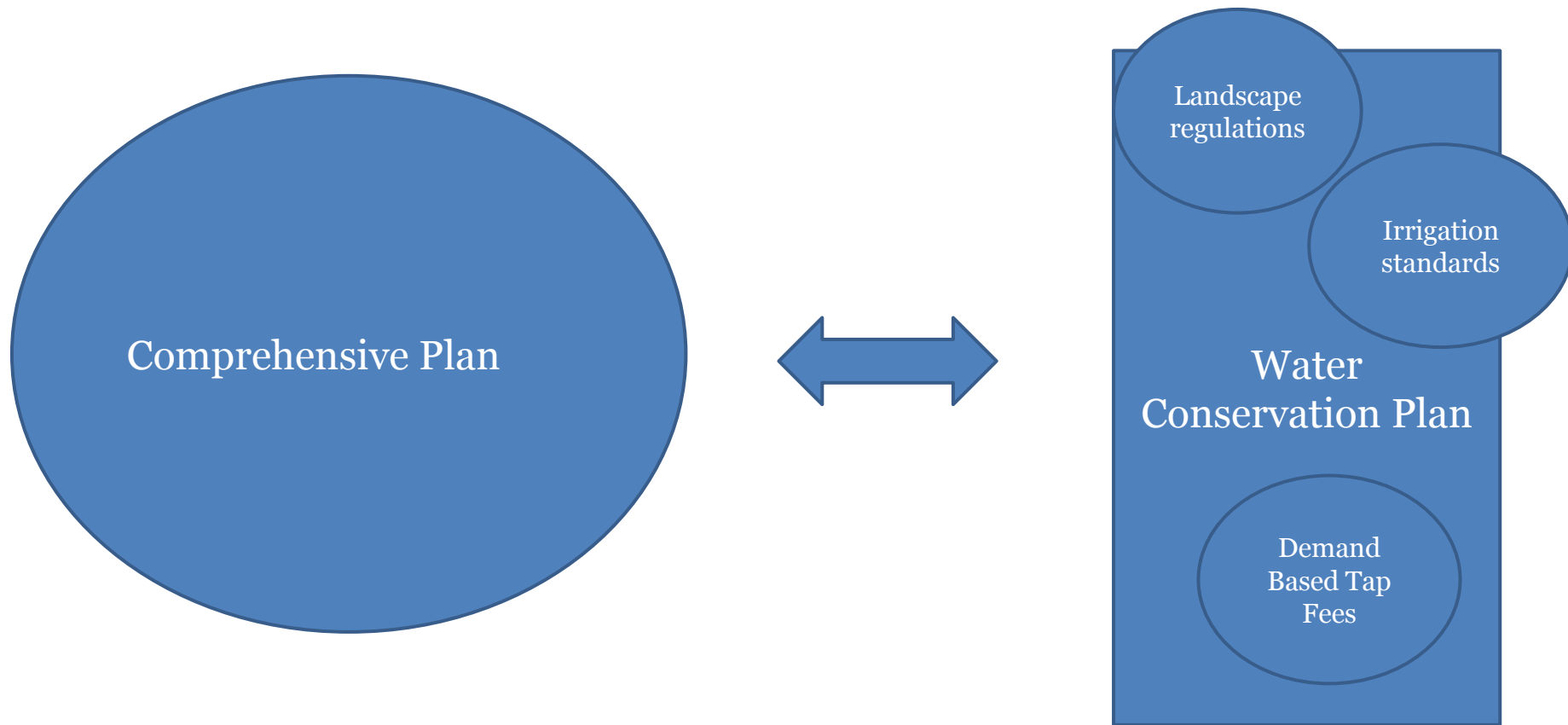
## Water Efficiency Plan Components

Land Use Element	Water Supply	Demand Projections	Goals/ Objectives	Foundation	Incentives/ Assistance	Regulatory	Education	Monitoring/ Evaluation
<b>LAND USE</b>								
Urban Growth Boundary		x						
Denser Development (more homes/acre)		x	x		x			x
Cluster Development (reduce lot size)		x	x		x			x
Mixed- Use Development		x			x			x
Mixed Housing types		x			x			x
Compact mixed use		x			x			x
Demand based tap fees		x	x	x	x	x		x

# Land Use Element in Water Efficiency Planning

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Landscape codes matched to land use type		x			x	x	x	
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Soil amendment requirements					x	x		
Plant list						x	x	x
Turf limitations		x				x	x	
Irrigation system efficiency requirements		x				x	x	
Water waste rules		x				x	x	
Rain sensors		x			x	x		
Water harvest		x						
Water loss limits		x	x	x		x		

# More integration





# Examples

- Civano, AZ
  - Summer use 40-50% lower than average customer base in Tucson
  - Winter use 20% lower than average customer base in Tucson
  - 85 gpcd vs 130 gpcd
- Sterling Ranch
  - .08 afy outdoor estimated demand per household
  - .14 afy indoor estimated demand per household
  - 5 units/ acre



# Current Resources

- Water Efficiency Grant Funds
  - Grants for water efficiency planning and implementation
- Water Supply Reserve Account Grants
  - Technical assistance regarding permitting, feasibility studies and environmental compliance; -
  - Studies or analysis of structural, nonstructural, consumptive and nonconsumptive water needs, projects or activities; and -
  - Structural and nonstructural water projects or activities
- Land Use Leadership Alliance (LULA)

# Questions?

