Can Landscape Changes Affect Water Use

Lyle Whitney
Water Conservation Supervisor
Aurora Water

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Agenda

• Background
• Landscape Code Changes
• Study
  – Parameters
  – Results
• Changing Landscapes Through Rebates
  – Results
CO Water & Growth Dialogue

1. Smaller lot sizes (more homes per acre)
2. Single family to multi-family
3. Denser multi-family
4. Change in irrigable area type (turf limits)
Landscape Code Changes

• Turf limitations – 2003
  – 40% - 50% high water-use turf in front yards
  – 45% high water-use turf in back yards

• Xeriscape option for front yards
  – 100% low water-use landscape

• Irrigation requirements – pre-2000?

• Chapter 146, Article 14
Study

• Mapped cohorts
• Statistically significant samples: 150-175/year
• Square footage of irrigable area
  – Cool season turf (high water-use)
  – Remainder classified as low water-use
• Water consumption from 2013 - 2016
Results

• Good news:

Percentage of High Water-Use Landscape by Year

- Turf Limitations in Code (‘03)
Results

• “Bad” news:

![Graph showing outdoor water use by residential homes from 1979 to 2011. The graph indicates a significant increase in water use starting around 2000.]

Why?
Theories

1. 1979-80 homes may not have irrigation systems
2. Income levels may influence behaviors
3. Education may need to play bigger role with irrigation system requirement
Turf Replacement Program

• In place since 2007
• Replaces cool season turf with low water-use plant material
Study

• Looked at participants and neighbors
• 623 customers (2007 – 2015)
• Removed outliers (no water use the year before)
• Normalized for weather
Results

Cumulative Savings from Water-Wise Rebate Program
2007 - 2016

1,468,185 gal cumulative savings

Why?
Theory

• Education
  – Classes, requirements, designs

• Motivated customers
Thoughts

• Landscape code can be effective
• Education is needed
  – Consider more outreach
  – Focus on new homeowners?
• Informed customers make the difference
Questions?

Lyle Whitney

gwhitney@auroragov.org
720-859-4372