This presentation premiered at WaterSmart Innovations

watersmartinnovations.com
Water Smart from the Start
How to Integrate Land Use and Water Planning

Water Smart Innovations
October 8, 2014

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WESTERN RESOURCE ADVOCATES
Water Supply Gap – Colorado River

Land Use Affects Water Use

Highlands Ranch

Stapleton (Redevelopment)

Glass House (Downtown)
Historical Paradigm

BRAND CAMP

SILO FARMING

NOPE, FREE RANGE WON'T WORK. THEY'RE HAPPIER IN SEPARATE PENS WHERE THEY CAN BLAME EACH OTHER WHEN THINGS GO WRONG.

CREATIVE

SALES

OPS

MARKETING

© 2008

TomFishburne.com
New House, New Paradigm

- Integration of
  - smart planning,
  - green building, and
  - on-going programs

- Existing developments
  provide case-studies
SNWA’s Water-Smart Homes

## Water Use and Density

<table>
<thead>
<tr>
<th>People</th>
<th>Density</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
<td>Medium</td>
</tr>
<tr>
<td>Single family</td>
<td>7,000</td>
<td>5,000</td>
</tr>
<tr>
<td>Small multifamily</td>
<td>2,000</td>
<td>3,000</td>
</tr>
<tr>
<td>Large multifamily</td>
<td>717</td>
<td>2,124</td>
</tr>
</tbody>
</table>

| Water Use (AF) | 3,141 | 2,828 | 2,514 |
| Difference (AF) | 314 | 627 | -10% | -20% |

| Population | 25,000 | 25,001 | 25,002 |

Land Use Leadership Alliance Training Program (LULA)

- Educating local land use decision-makers on legal tools and techniques and collaborative decision-making to address complex land use issues
Participants

- Water and Land Use Planners
- State and Regional Water Specialists
- Planning Commissioners
- City Managers
- City Councilors
- Developers
Integration - Land Use Terms

- **Comprehensive Plan**
  - Community goals/aspirations for future development. Dictates public policy for transportation, utilities, land use, recreation, and housing. Big scale, long-term.

- **Zoning Ordinances**
  - Separate uses of land based on mapped zones. Often includes building height and lot coverage.

- **Subdivision/Site Plan Regulations**
  - Divide property into legal parcels. Establish position of streets, drainage, parking, utilities, landscaping, etc…
Comp Plan (1 of 2)

- Water Element!
  - Goal
    - Absorb market demand w/o increasing total water use
  - Objective
    - Drop per capita use 15% in 15 years
  - Strategy
    - Reduce indoor water use
  - Technique
    - Incentivize replacement of toilets
- Promote density
Comp Plan (2 of 2)

- Incorporate Conservation Plan “by reference”
- Include data on water use per land use type
- Use same growth projections
- Urban growth boundary
20 Questions (27, really)

- Does your comprehensive plan contain a water element?
- Does water element identify water conservation strategies and implementation techniques?
- Is the water element consistent with the policies of your water provider?
- Does comprehensive plan quantify the water demand that would result from projected population growth?

Available at: www.westernresourceadvocates.org/water/landuse.php
Zoning

- Denser Development (more du/acre)
  - Expand multi-family options
- Mixed Use Development
- Overlay Zones/Transit Oriented Develop.
- Infill (make it easy)
- PUDs are a “deal” so plug them full of conservation measures
Subdivision/ Site Plan

- Cluster Development (reduce lot sizes)
- Landscape Code
  - Plant list, turf limits, soil amendment, irrigation system reqs.
  - Landscape plan check
  - Irrigation plan check
- Avoid “scattered DNA”
Water Techniques

- Incorporate land use in demand projections
  - Discuss land use as demand management strat.
- Demand-based tap fees
- Plumbing/Building Code
  - WaterSense or equivalent
  - Submetering
- Take the lead!
  - SNWA-led land use regulations
  - EBMUD service rules
Post-LULA Work

- **Aurora**
  - Integrating LID/stormwater into lands. code
  - Determine water use per land use

- **Arvada**
  - Adding a water element

- **AWWA Journal article – Sept 2014**
- **Land Use Manual – spring 2015**
What You Can Do

- Read your comprehensive plan
  - Use the 20 questions!
  - Look at zoning code
- Meet your planner
- Talk to your friends
- Use this presentation
- Develop water demands per land use
- Get involved
Questions & Comments

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