Reducing Outdoor Water Use

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The Need for Conservation

- This is a semi-arid region
- We’re in a drought
- The region is using more than the renewable supply
- Basin population is growing
Historical Project Supply and Groundwater Levels

Historically, groundwater levels would drop during low supply years, then recover when the Project has enough water.

Source: “Groundwater Levels in the LRG”, Peggy Barroll, NM OSE, October, 2013
Groundwater Levels did not recover after 2003-2004 drought

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The choices

A. Find more water
   ◦ Buy it or bring it from elsewhere
   ◦ Treat low-quality water
     • Desalination
     • Wastewater reclamation

B. Use less water
   ◦ Conserve

Water conservation is usually the least expensive way to extend the supply . . .
Breakdown by Type of Use

Las Cruces Water Use 2012–2013

- Residential Use 67%
- Non-Residential Use 33%

Residential Indoor vs Outdoor Use

- Indoor Use 67%
- Outdoor Use 33%

Source: Las Cruces Utilities data
Winter vs. Summer

Based on 2012–2013 water use data in Las Cruces:

- Average winter use (proxy for indoor use) is 73.3 GPCD
- Average summer use (indoor plus highest outdoor use) is 146.5 GPCD

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<th>Dec, Jan, Feb</th>
<th>Jun, Jul, Aug</th>
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<td>2012–2013 Average</td>
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Source: Las Cruces Utilities data
Infrastructure efficiency

- Toilets (19.6 gpcd)
- Clothes washers (15.9 gpcd)
- Showers (12.3 gpcd)
- Leaks – a special case (10.0 gpcd avg.)
Outdoor Residential Water Uses

- Swamp coolers
- Miscellaneous Uses
  - Wash vehicles
  - Clean sidewalks and driveways
  - Clean up spills
- Landscape irrigation
  - Irrigation systems
  - Smart controllers
  - Hose timers
  - Schedules
- Landscapes with different water requirements
Keeping Your Cool

- Swamp coolers
  - Traditional
  - Master cool
  - Don’t bleed!
- Air Conditioners
  - Beware the
  - energy–water nexus!
Miscellaneous Uses – Washing Vehicles

- Make sure no water runs off the property
- By law, if using a hose, it must have a shut-off
- Or go to a car wash that recycles water
- Better:
  - A bucket of soapy water and a rag to wash
  - A bucket of clean water and a towel to dry
Clean sidewalks and driveways

- It’s tempting to use a hose . . .
- By law, you must use a hose with a shut-off
- Make sure no water runs off the property
- Better: use a broom or leaf blower

Hoses can spend 8 to 10 gals of water per minute
Cleaning up spills

- Grease spots and other spills
  - Try kitty litter, broom, and dust pan
  - Some hazardous materials will have to be cleaned with water
4 Types – and water requirements
  - Traditional turf-based – high
  - Lush Xeric – moderate, but can be as high as traditional
  - Xeric – low
  - Zero scapes – low, but not visually appealing
Irrigation Systems

- Hand watering
- Sprinkler on a hose
- Drip systems
- Sprayers and rotors
Hand watering

- Done with buckets or a hand-held hose
- Very labor intensive
- Probably not effective for large areas
- May be effective for occasional watering of established drought-tolerant plants
Sprinkler on a hose

- Coverage is typically not uniform – wastes water
- Requires constant attention to move sprinklers
- Be sure to use a hose timer so it shuts off automatically
Sprayers and rotors

- Necessary for turf grass
- May be appropriate for some groundcovers
- When properly installed, require 40%–100% more water than xeriscape
- When improperly installed can require 2 to 3 times more
- Uniform coverage is essential
Drip Systems

- Usually paired with xeriscapes
- Will “spot water” plants or small areas
- Typically run longer because application rate is slower
- You can retrofit a spray system to xeriscape
- Be sure to adequately water trees
- When correctly calibrated, saves 30%–50% from traditional turf-based