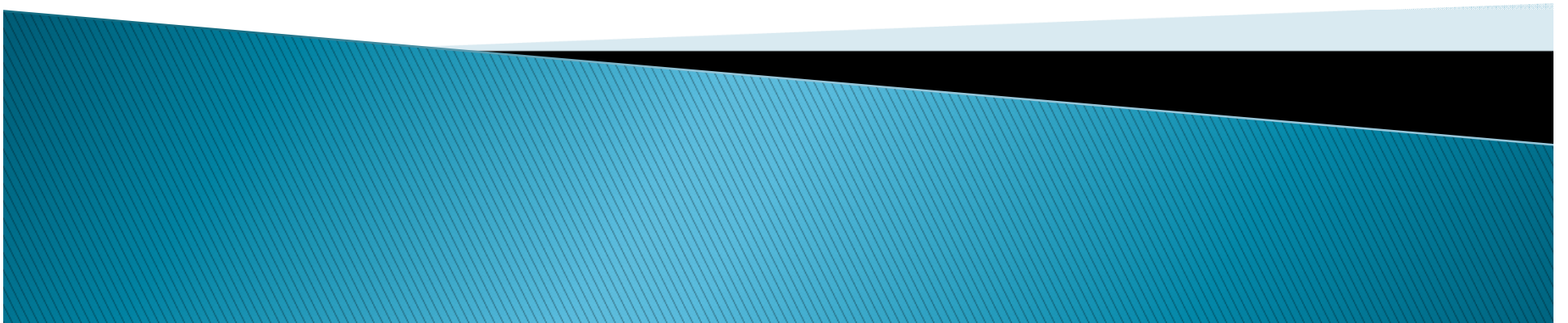
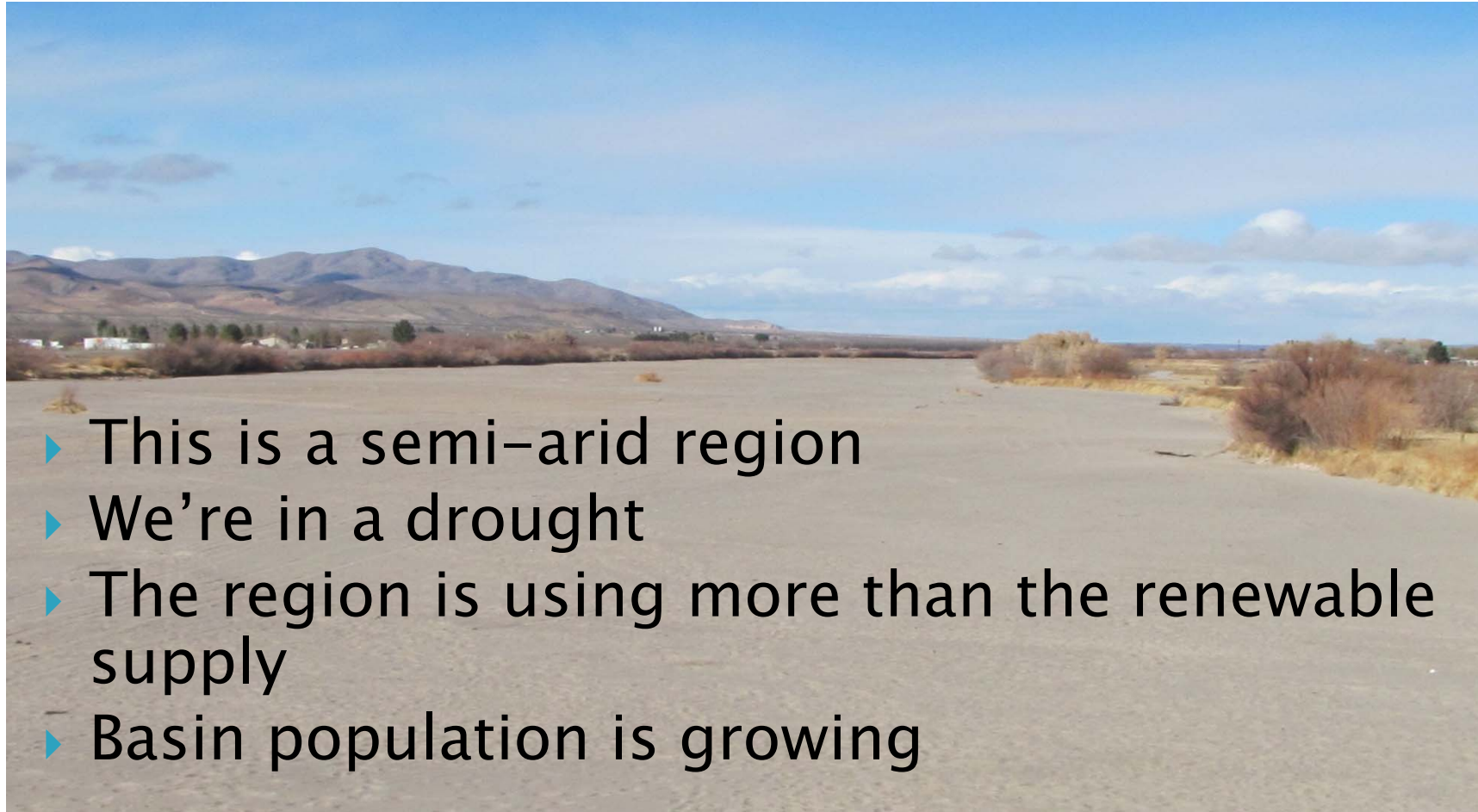


# Reducing Outdoor Water Use

Leslie R. Kryder  
Water Conservation Coordinator  
City of Las Cruces Utilities



# The Need for Conservation

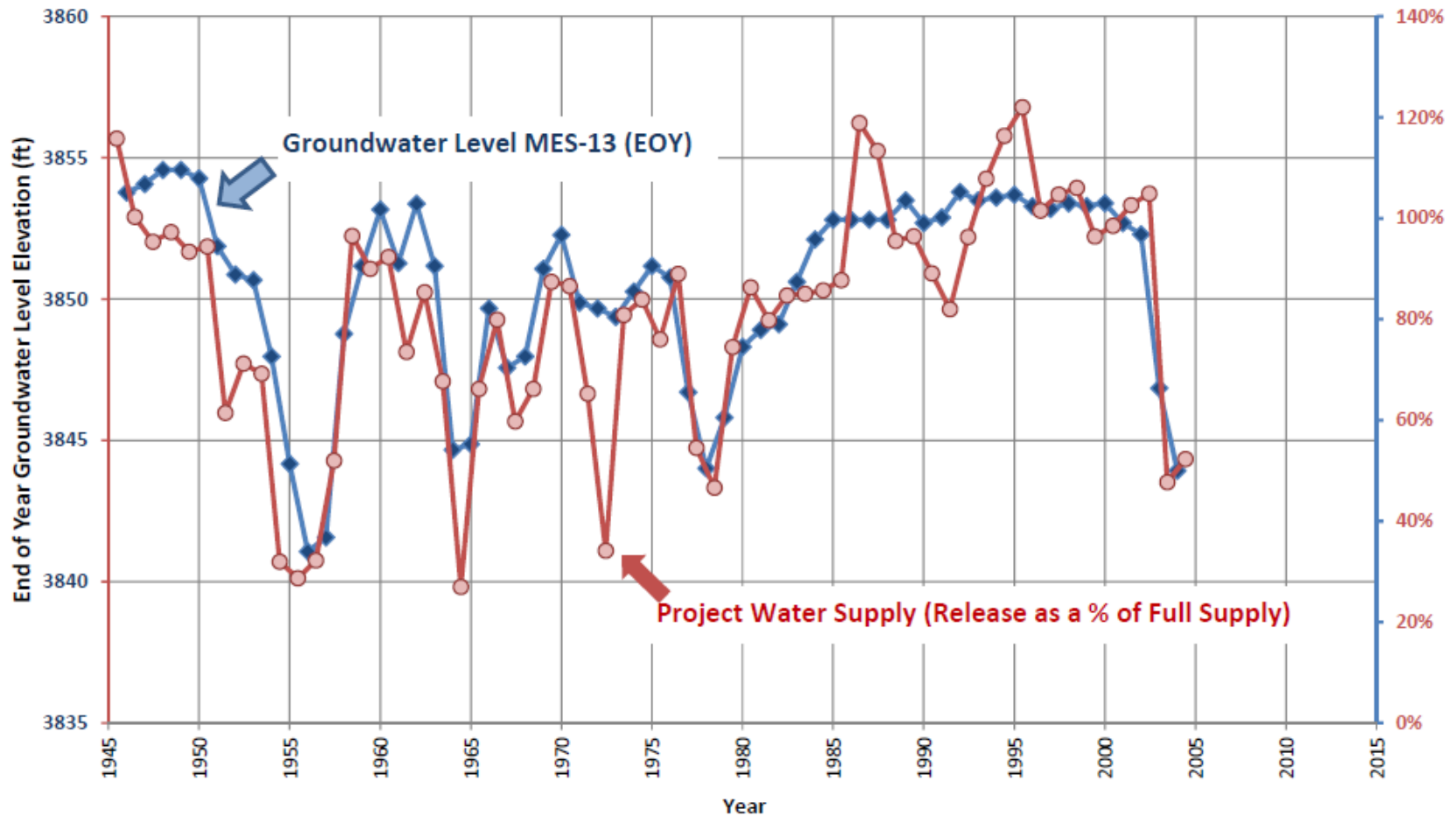


- ▶ This is a semi-arid region
- ▶ We're in a drought
- ▶ The region is using more than the renewable supply
- ▶ Basin population is growing

Rio Grande, Fall, 2013

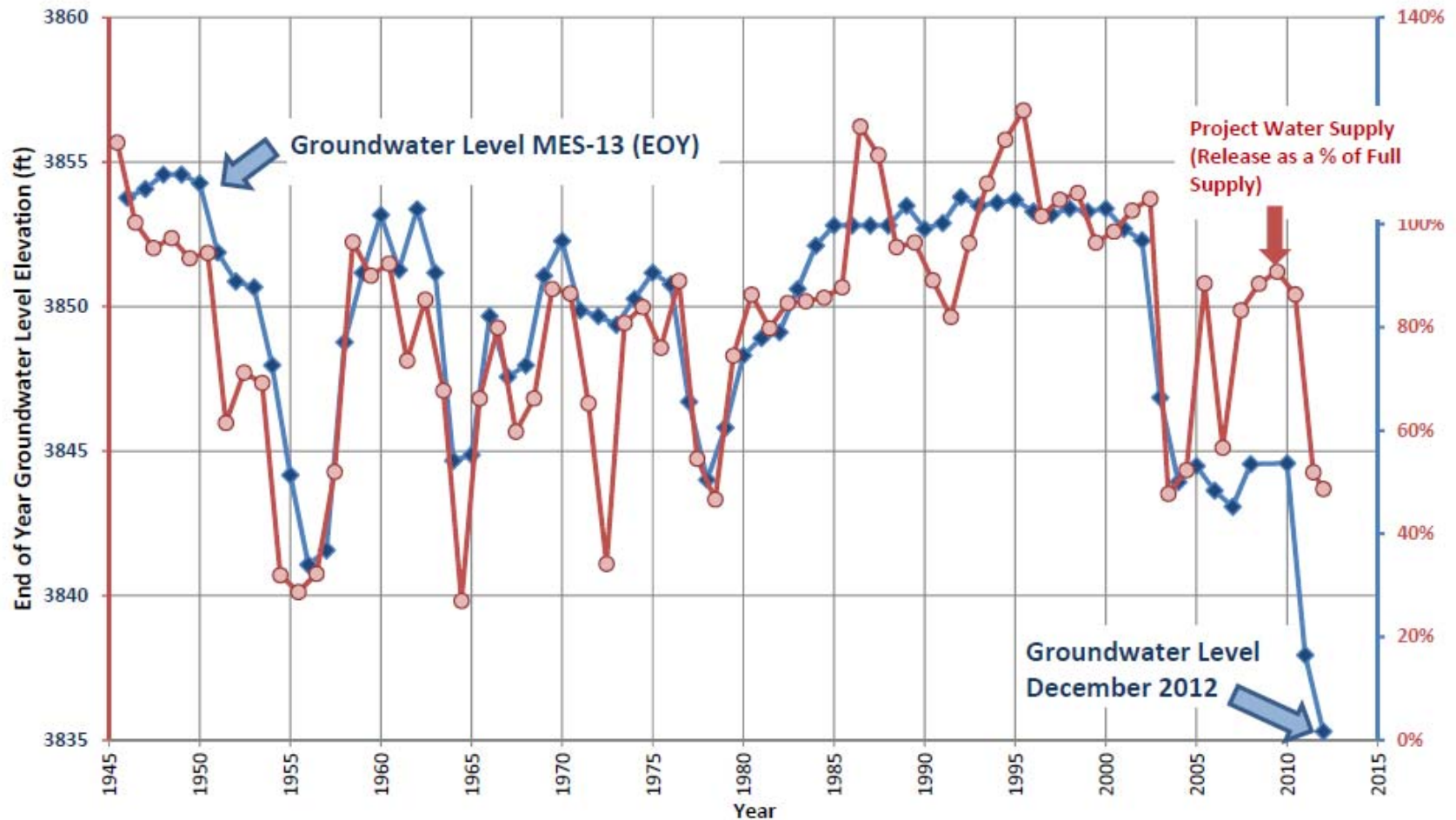
# Historical Project Supply and Groundwater Levels

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



Source: "Groundwater Levels in the LRG", Peggy Barroll, NM OSE, October, 2013



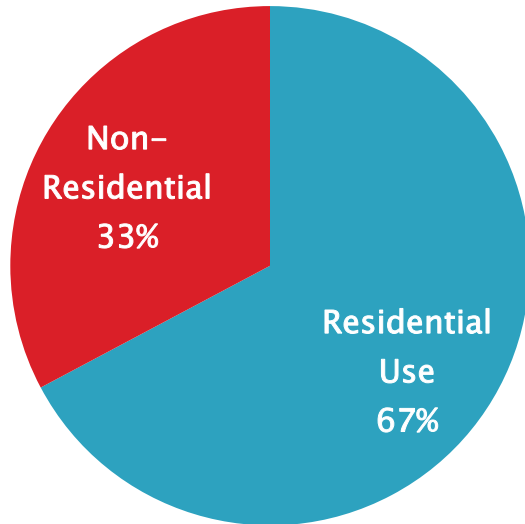
# The choices

- ▶ A. Find more water
  - Buy it or bring it from elsewhere
  - Treat low-quality water
    - Desalination
    - Wastewater reclamation
- ▶ B. Use less water
  - Conserve

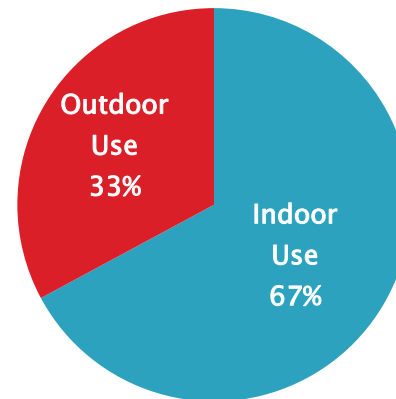
Water conservation is usually the least expensive way to extend the supply . . .

# Breakdown by Type of Use

Las Cruces Water Use  
2012-2013



Residential  
Indoor vs Outdoor Use

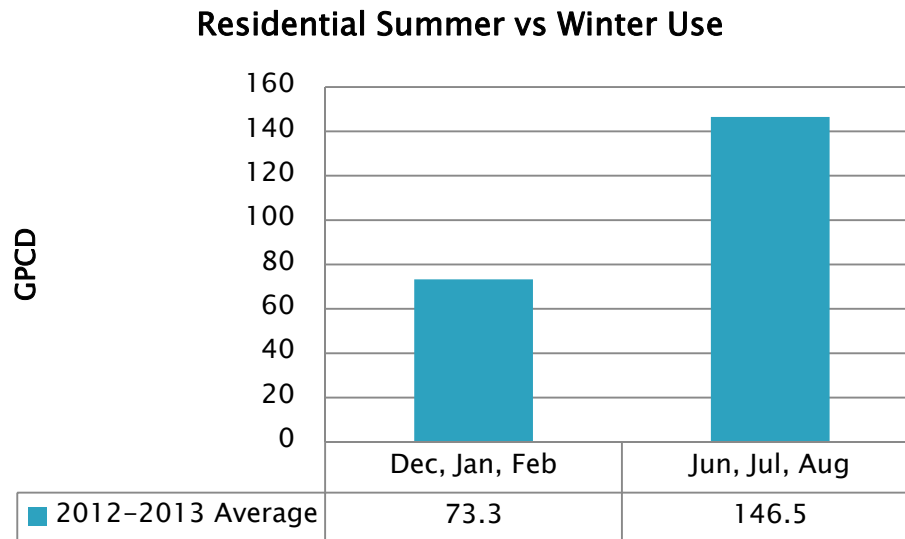


Source: Las Cruces Utilities data

# 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



Source: Las Cruces Utilities data

# Indoor Conservation

- ▶ Infrastructure efficiency
  - Toilets (19.6 gpcd)
  - Clothes washers (15.9 gpcd)
  - Showers (12.3 gpcd)
  - Leaks – a special case (10.0 gpcd avg.)

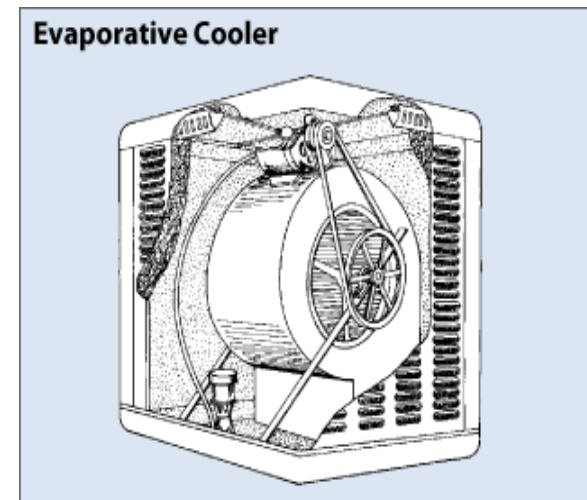


# Outdoor Residential Water Uses

- ▶ 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



# Landscapes

- ▶ 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 bec. 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