



Southern California Regional Watershed Supply Opportunities

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Southern California Water Committee

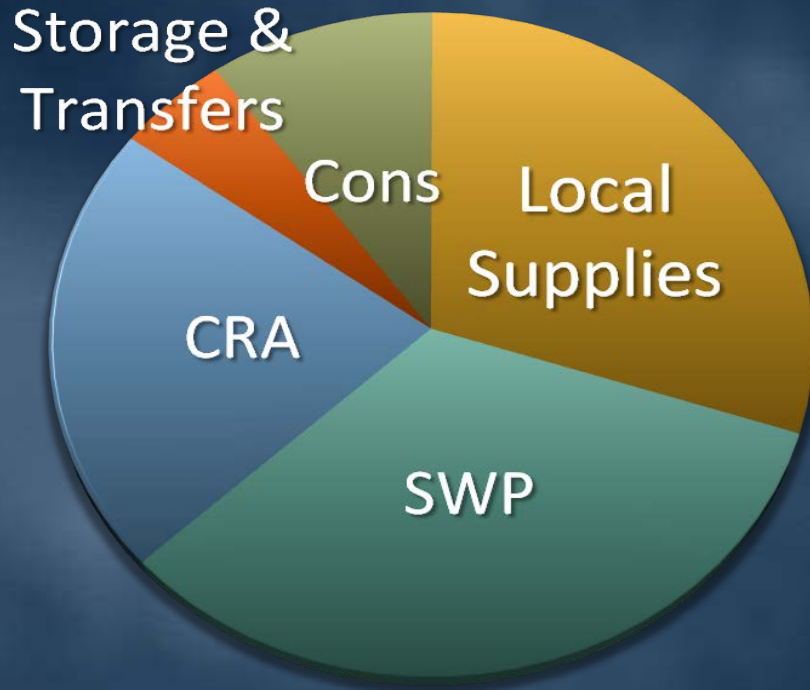
Water 101

Water Education Foundation

October 2, 2014

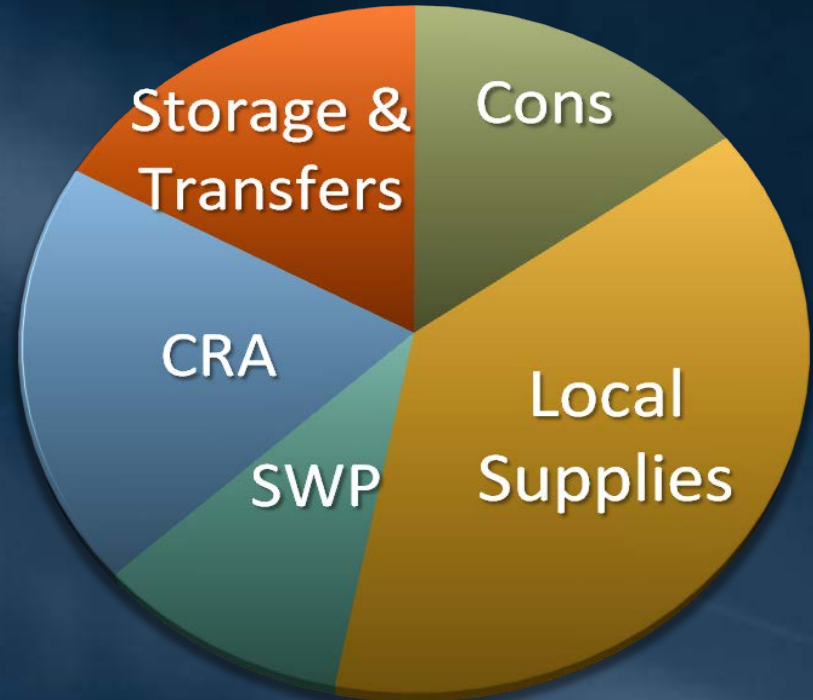


MWD's Balanced Approach Dry-Year Strategy



Early 1990's

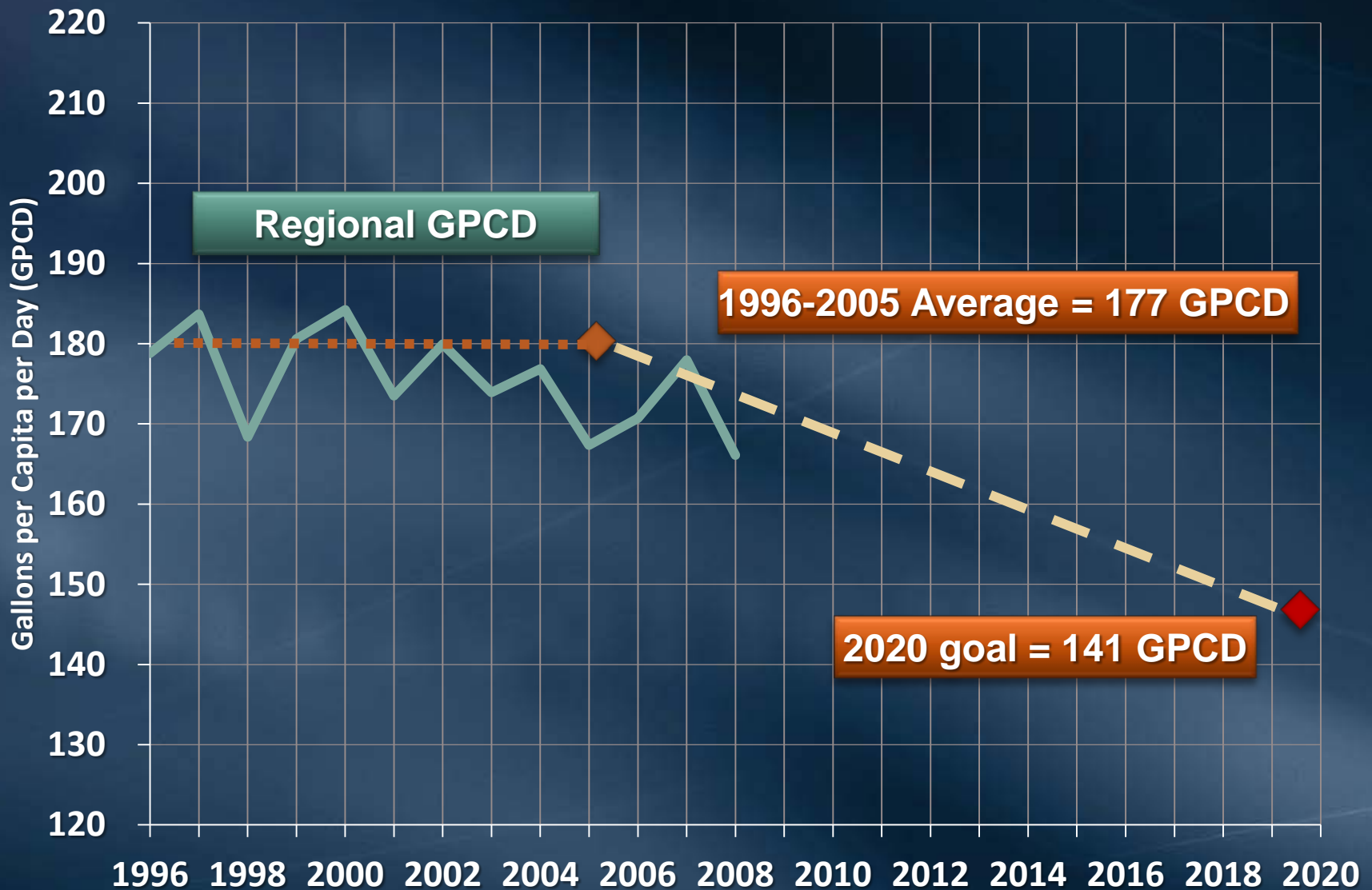
Heavy dependence on imported supplies



Current Strategy

Emphasis on conservation, local supplies, storage & transfers

Regional Per Capita Water Use



Conservation Goals



Pursuing Market Transformation

- Lasting change in market for water-efficient technologies and services
- Changing consumer preferences
 - Public messaging and education
 - Collaboration
 - Technology and incentives
 - Retail water rates
- Advancing water efficiency standards



Collaboration

- Regional Efforts

- Regional programs, supply chain relationships, technical assistance, research, regulation, codes and standards

- Local Efforts

- Local programs
- Retail agency compliance with 20x2020
- Conservation-based rate structures
- Conservation ordinances
- Outreach



Strategic Focus Workgroup

- FY 11/12: proper irrigation control
 - Common themes and messages throughout region
 - Work with irrigation manufacturers, landscape industry

ESP-LX Series Controllers and IQ™ v2.0

Mobile Resource Center

- Features Video
- Manuals
- Troubleshooting
- Online Configurator Tool

www.rainbird.com/ESPLXSeries



WaterSmart SC
MORE WITH LESS
rainbird.com/WaterSmart

WaterSmart Guide: How To Control Your Controller


5 Steps

- 1) Make a map & label zones!
- 2) Look @ WaterSmart Watering Guide for watering times
- 3) Use multiple programs (e.g. grass is Prog. A, shrubs, Prog. B)
- 4) Use multiple start times to cycle/soak (ex. cut 8 min. into 2 cycles of 4 min.)
- 5) Fine tune & adjust for runoff!



WATER WATCH

Get control of your controller!



BEFORE TURNING ON AUTOMATIC IRRIGATION:

- Make sure the soil has dried out to a depth of at least an inch (In some parts of the yard, this may be weeks after the last rain)
- Manually run each station
- Look for leaks, broken heads, runoff
- Try a once-a-week schedule this spring
- Short run times, with repeats, are most effective

This is the first of a series on how to use and understand your irrigation controller "clock." More information: Follow the "water conservation" link at www.sanjuancapistrano.org.

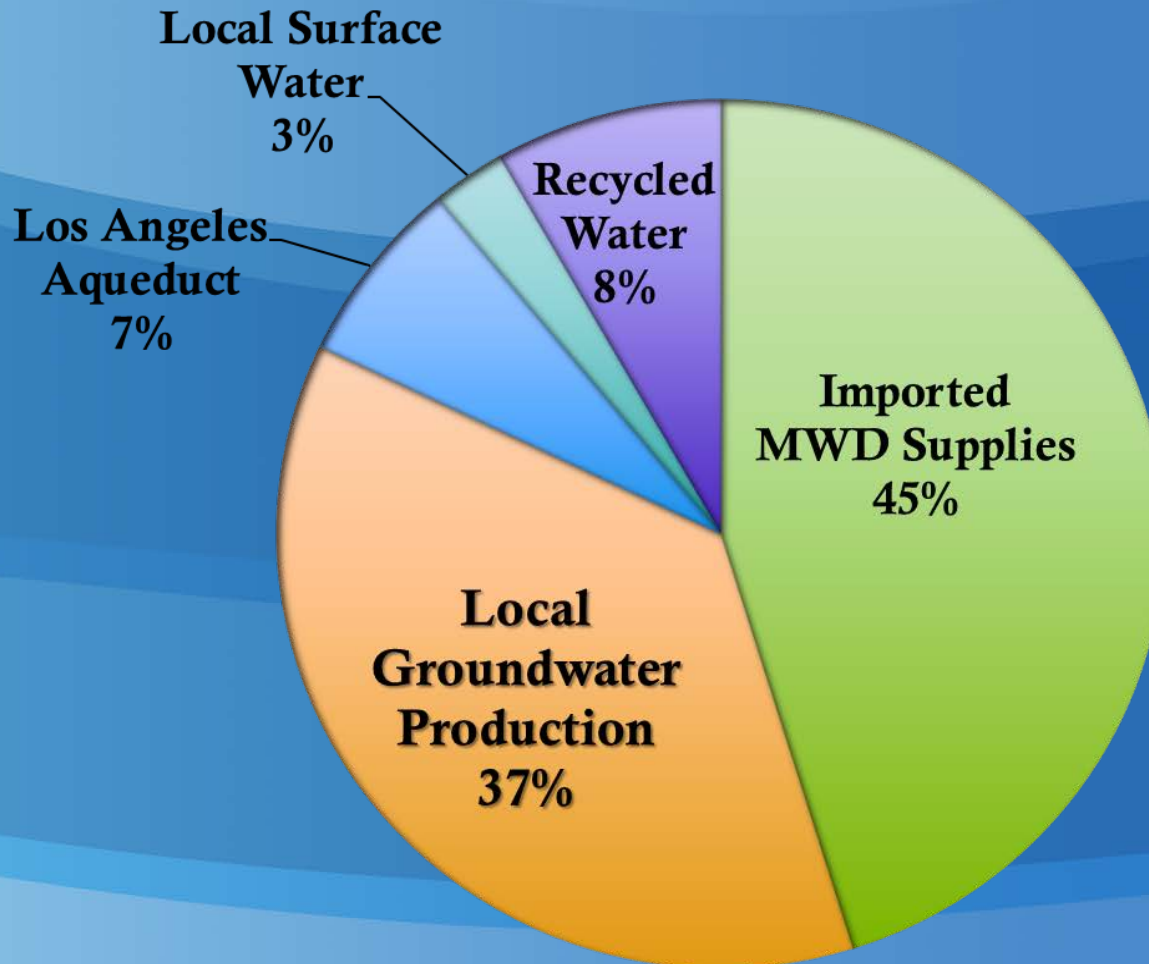
Sign up for the City's News to stay apprised of the latest news and information at www.sanjuancapistrano.org.



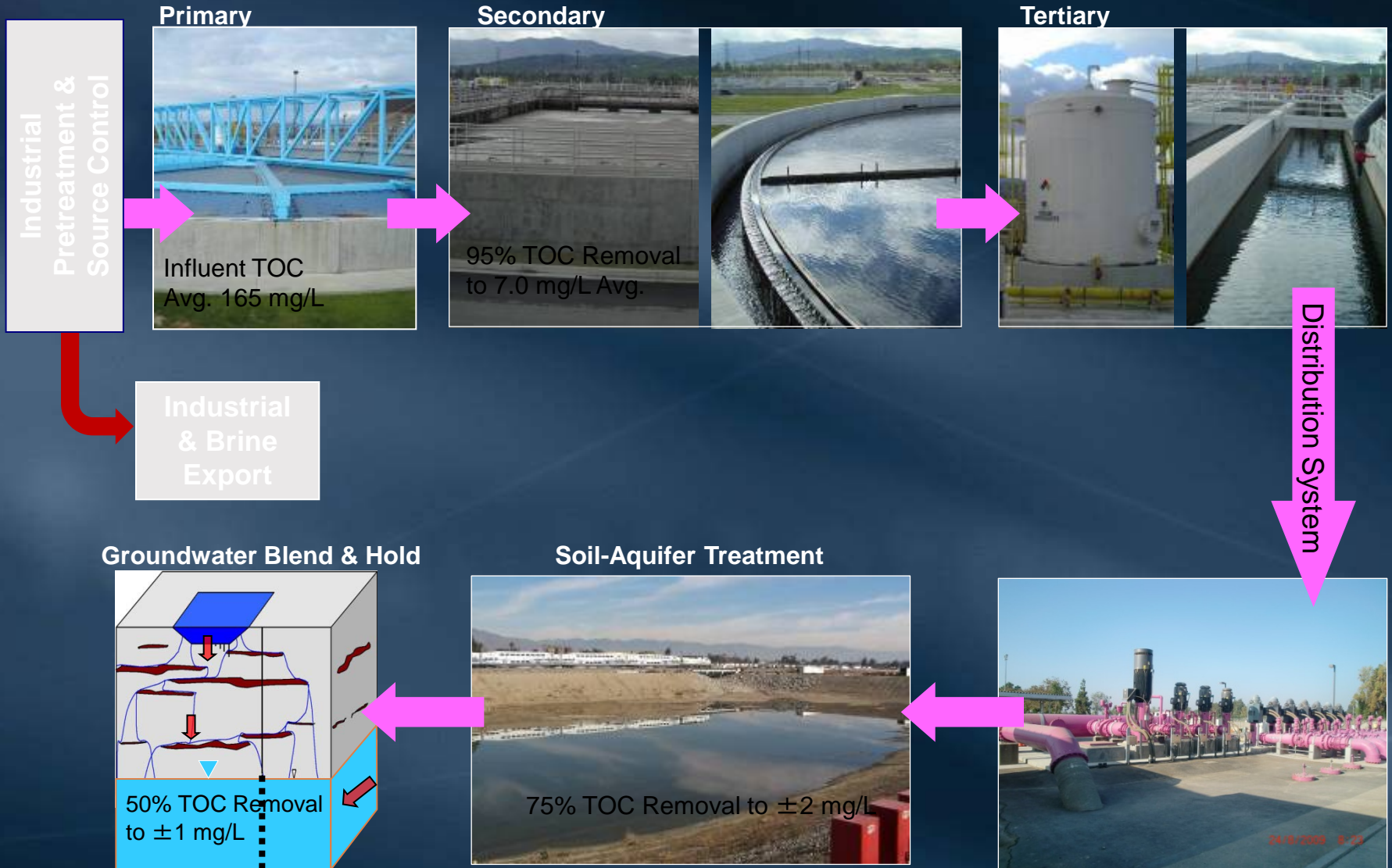


2010 Service Area Water Supplies

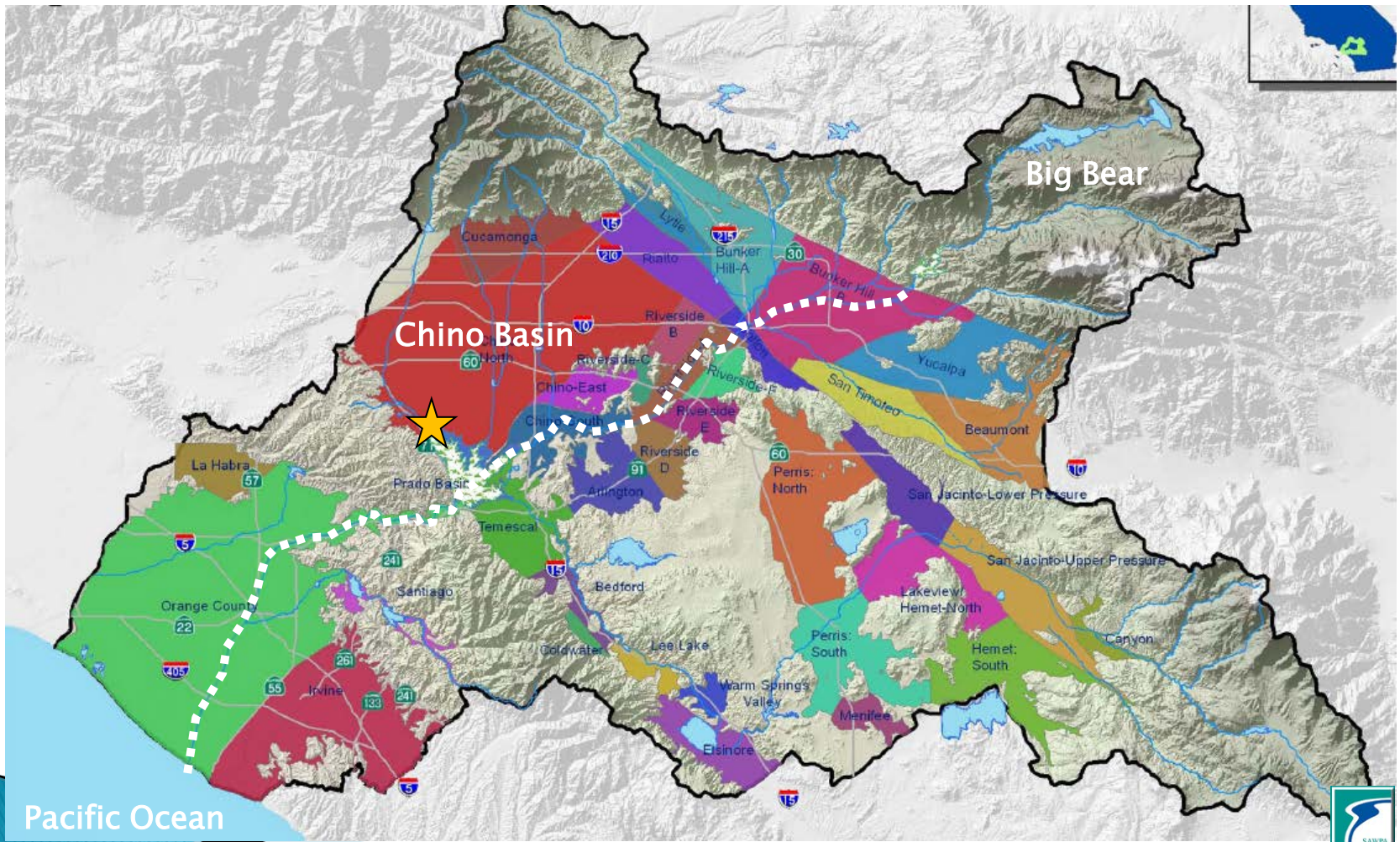
Total Retail Demand: 3.6 MAF



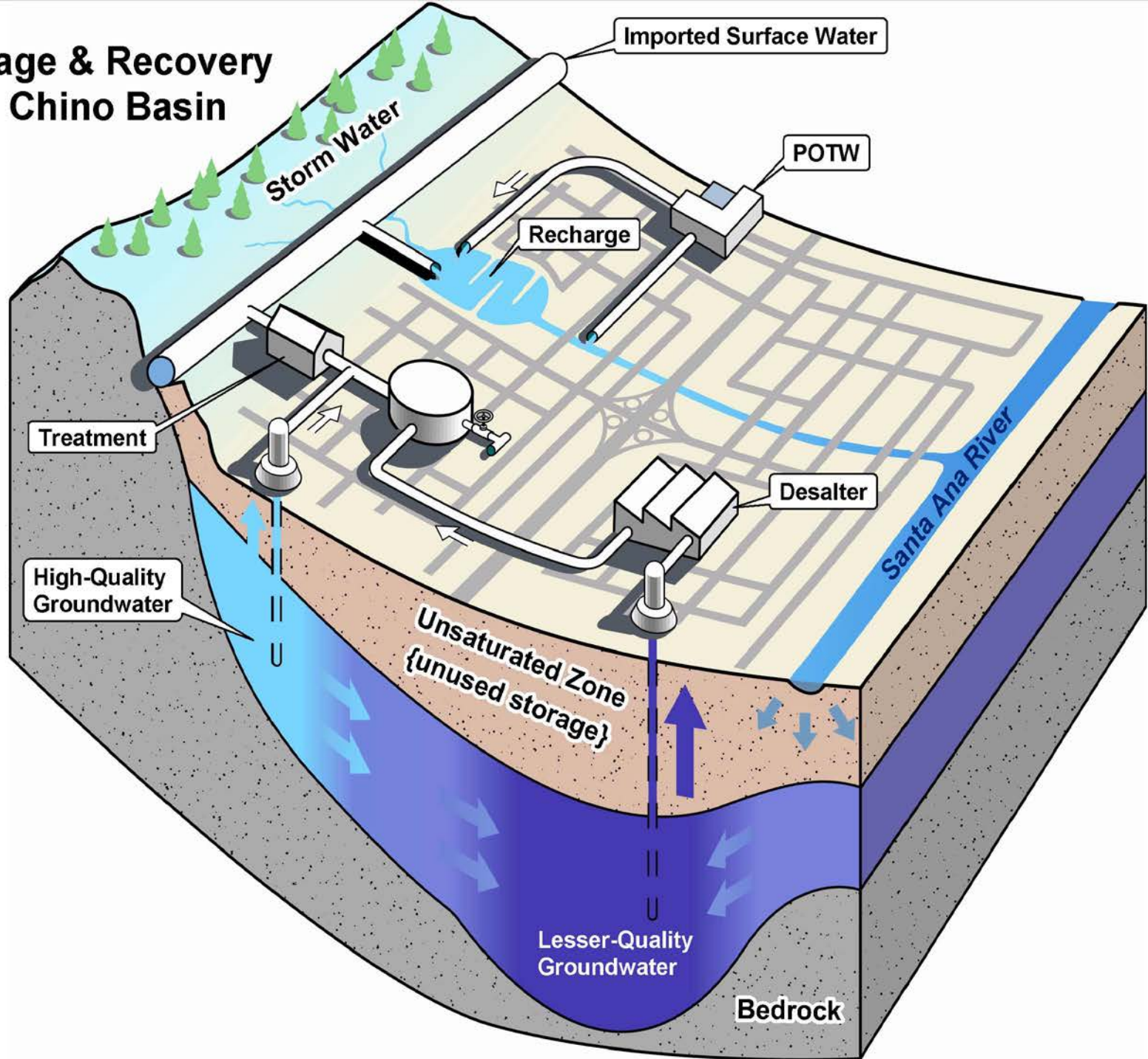
San Gabriel River Recycled Water Production Cycle



Santa Ana River Watershed

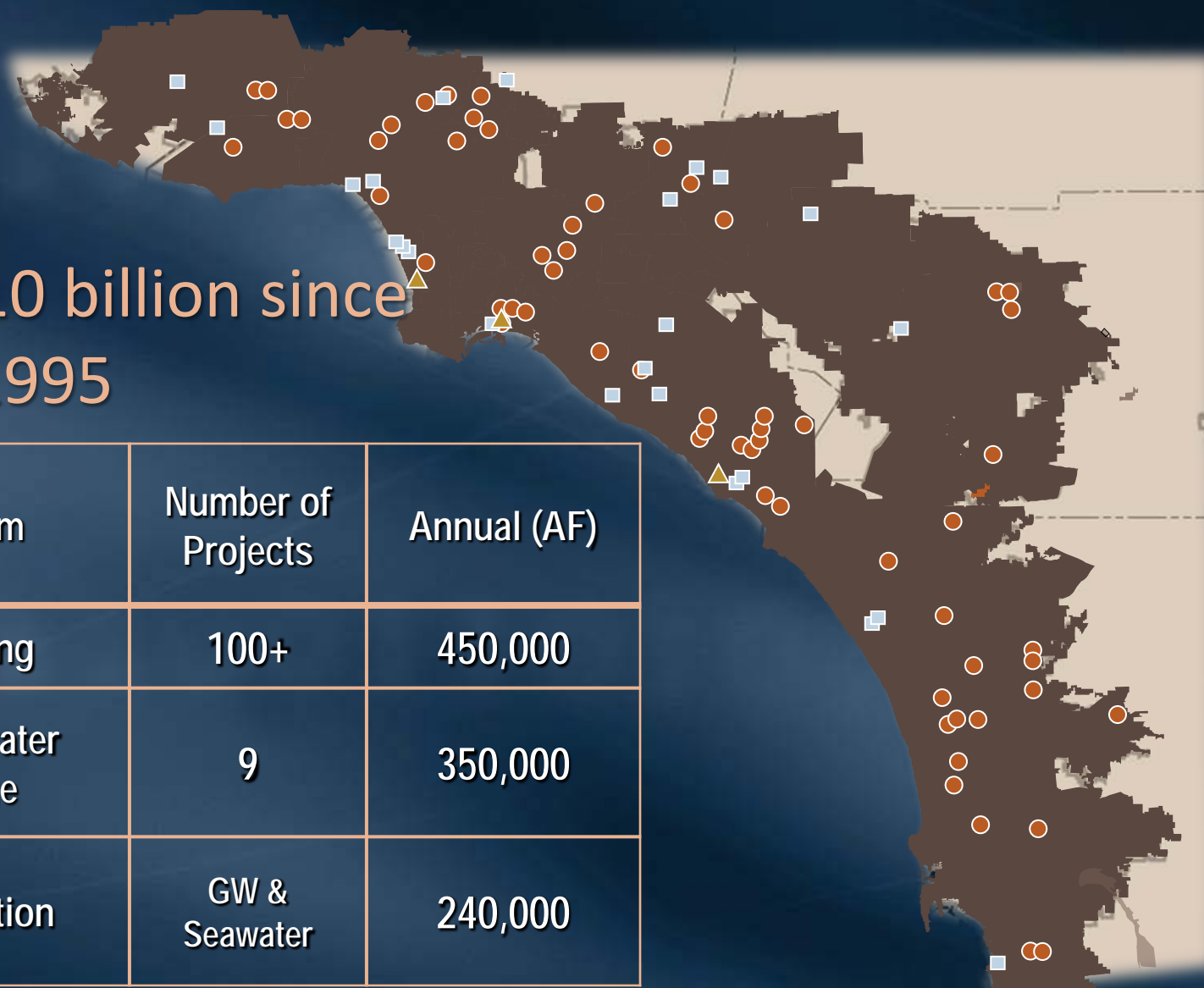


Storage & Recovery in Chino Basin



Investment in Local Water Projects

Invested \$10 billion since
1995



	Program	Number of Projects	Annual (AF)
●	Recycling	100+	450,000
■	Groundwater Storage	9	350,000
▲	Desalination	GW & Seawater	240,000



History of Groundwater Adjudications

- 1940s Raymond Basin
- 1950s West Coast Basin
- 1960s Central Basin
- 1970s San Fernando, Main San Gabriel, Chino
- 1980s Fox Canyon GMA
- 1990s Six Basin and Temecula



A topographic map of Southern California showing various water basins highlighted in different colors. The basins are color-coded to match the table below: Northwest MWD (dark green), San Fernando Valley (blue), LA County Coastal Plain (light green), San Gabriel Valley (orange), Orange County (red), Inland Empire (yellow), Eastside MWD (cyan), and San Diego County (purple). The ocean is shown in blue, and the land is in shades of gray and brown.

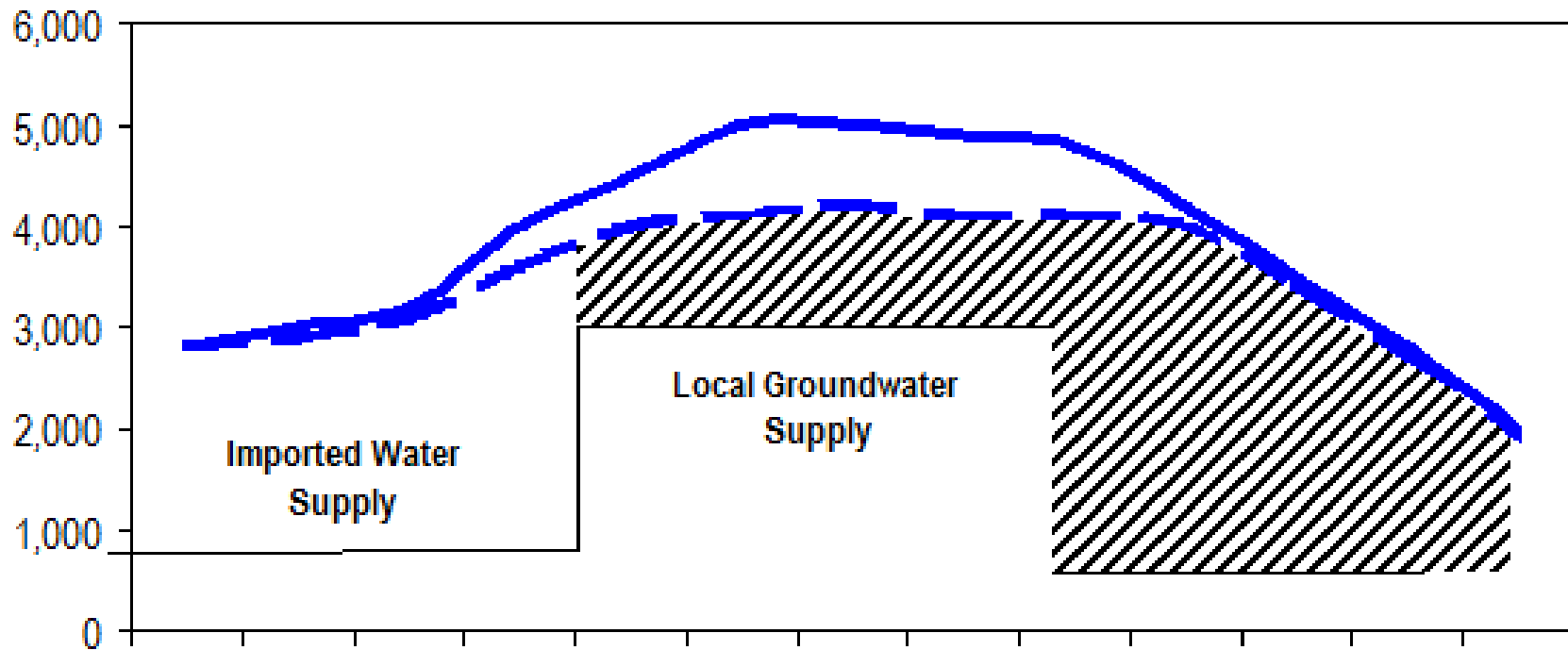
~ 3 MAF of Available Storage Space

2011

Northwest MWD Service Area Basins	NA
San Fernando Valley Basins	510,000
LA County Coastal Plain Basins	484,300
San Gabriel Valley Basins	353,000
Orange County Basins	218,000
Inland Empire Basins	500,000
Eastside MWD Service Area Basins	600,000
San Diego County Basins	NA



Conjunctive Use Operations in 1991



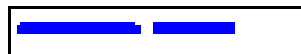
Jan

Apr

July

Oct

Dec



Drought 10% reduced demand



Increase Well Pumping

RESULT: Minimal MWD deliveries during drought



Multi-Use Project Types

Flood Protection and Drainage



Site Specific LID -- Water Supply and Water Quality



Traditional Water Supply



Water Quality Streetscape



Habitat and Environment

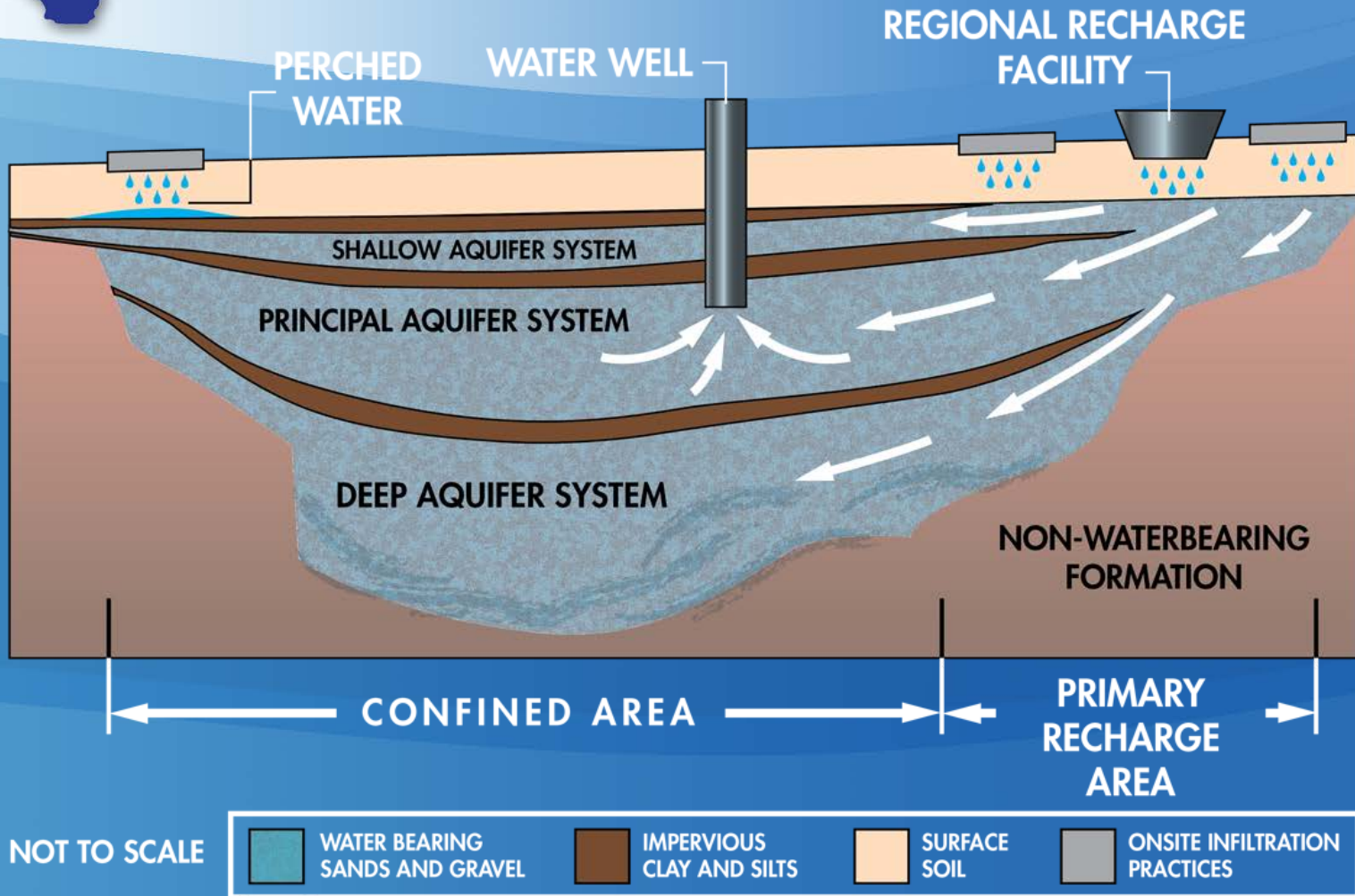


Recreation Trails and Education





Deep Percolation of Stormwater





Stormwater: A Smart & Sensible Solution

- 450,000 acre-feet of stormwater is currently captured and recharged into So Cal groundwater basins per year (enough water for 3 million people/year)
- Billions of gallons are lost every year because we don't have enough stormwater capture systems
- Capturing stormwater is viable, cost-effective and environmentally preferable
- Capturing stormwater provides numerous benefits, including:
 - Creating more local water supplies
 - Reducing polluted run-off
 - Providing a cost-effective water supply option





Stormwater Capture Types

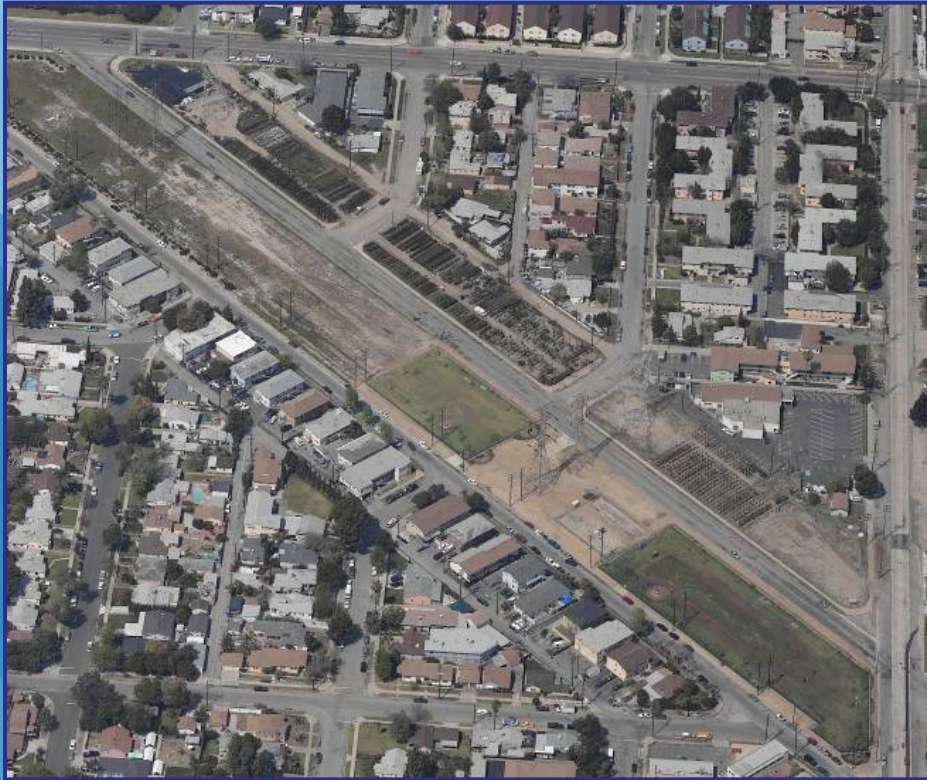


- Individual
- Neighborhood
- Large Scale





Small Scale Projects



Whitnall Highway Power Line Easement Project

- LADWP Project.
- Conceptual plan being developed.
- Project expected to increase groundwater recharge by more than 110 acre-feet per year.
- Goal is to capture and infiltrate stormwater beneath LADWP power lines using swales and ponds.
- Designs expected in 2013.

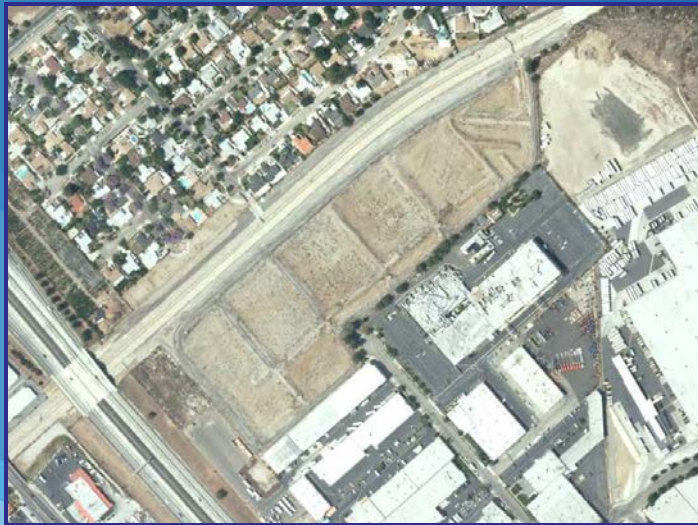




Large Scale Projects

Pacoima Spreading Grounds Project

- LACFCD/LADWP Project.
- Estimated cost \$32 million.
- Increased recharge by 2,000 acre-feet annually.
- Designs expected in late 2012.



Lopez Spreading Grounds Project

- LACFCD/LADWP Project.
- Increased recharge by 750 acre-feet annually.
- Designs expected in 2013.
- Estimated cost \$8 million.





Planning For Uncertainty



Water Quality



Endangered Species



Natural Disaster



Climate Change



Thank You!

Richard Atwater
Southern California Water Committee

