Southern California Regional Watershed Supply Opportunities

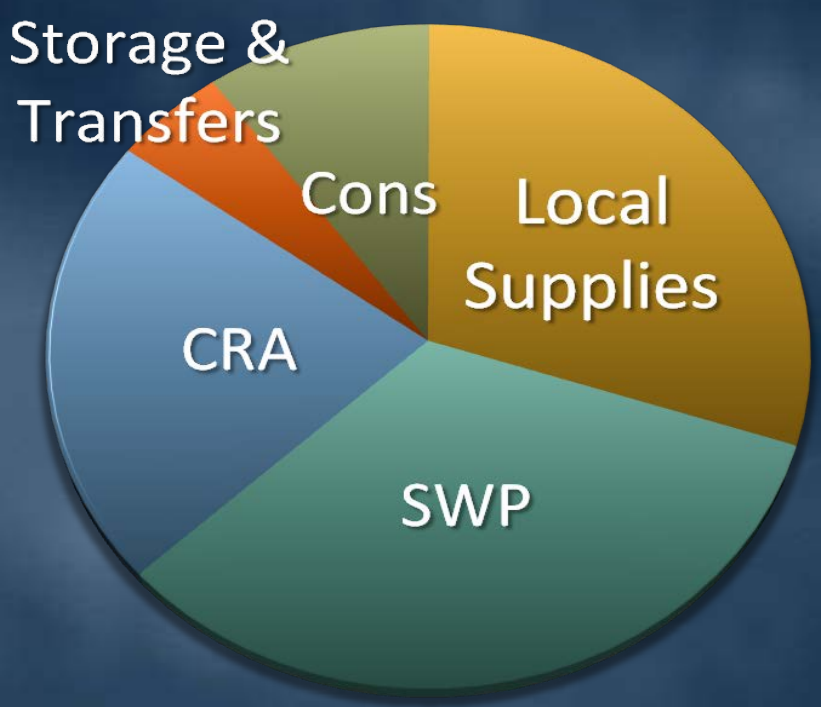
Richard Atwater, Executive Director
Southern California Water Committee

Water 101

Water Education Foundation

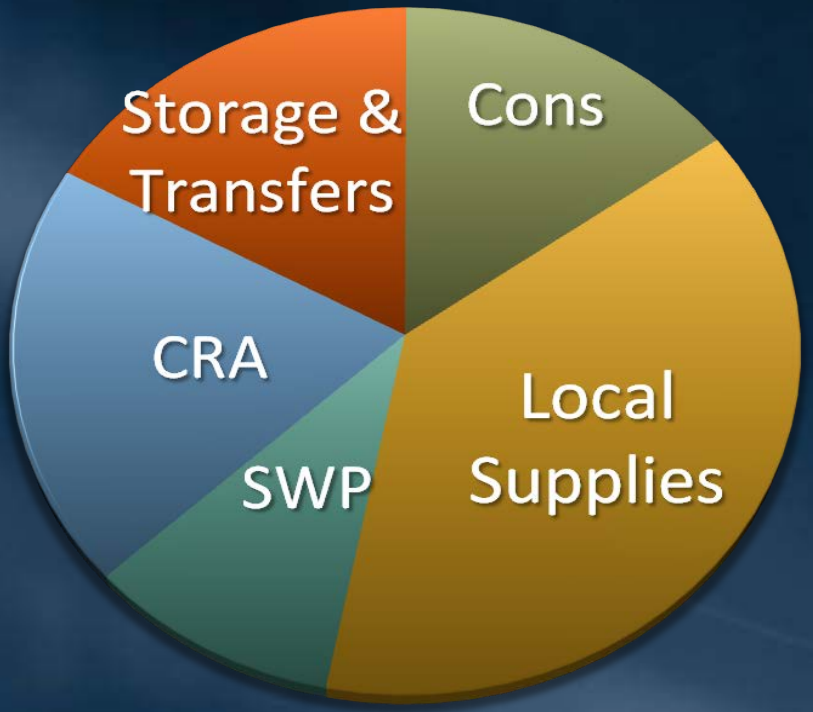
October 2, 2014

MWD's Balanced Approach
Dry-Year Strategy



Early 1990's

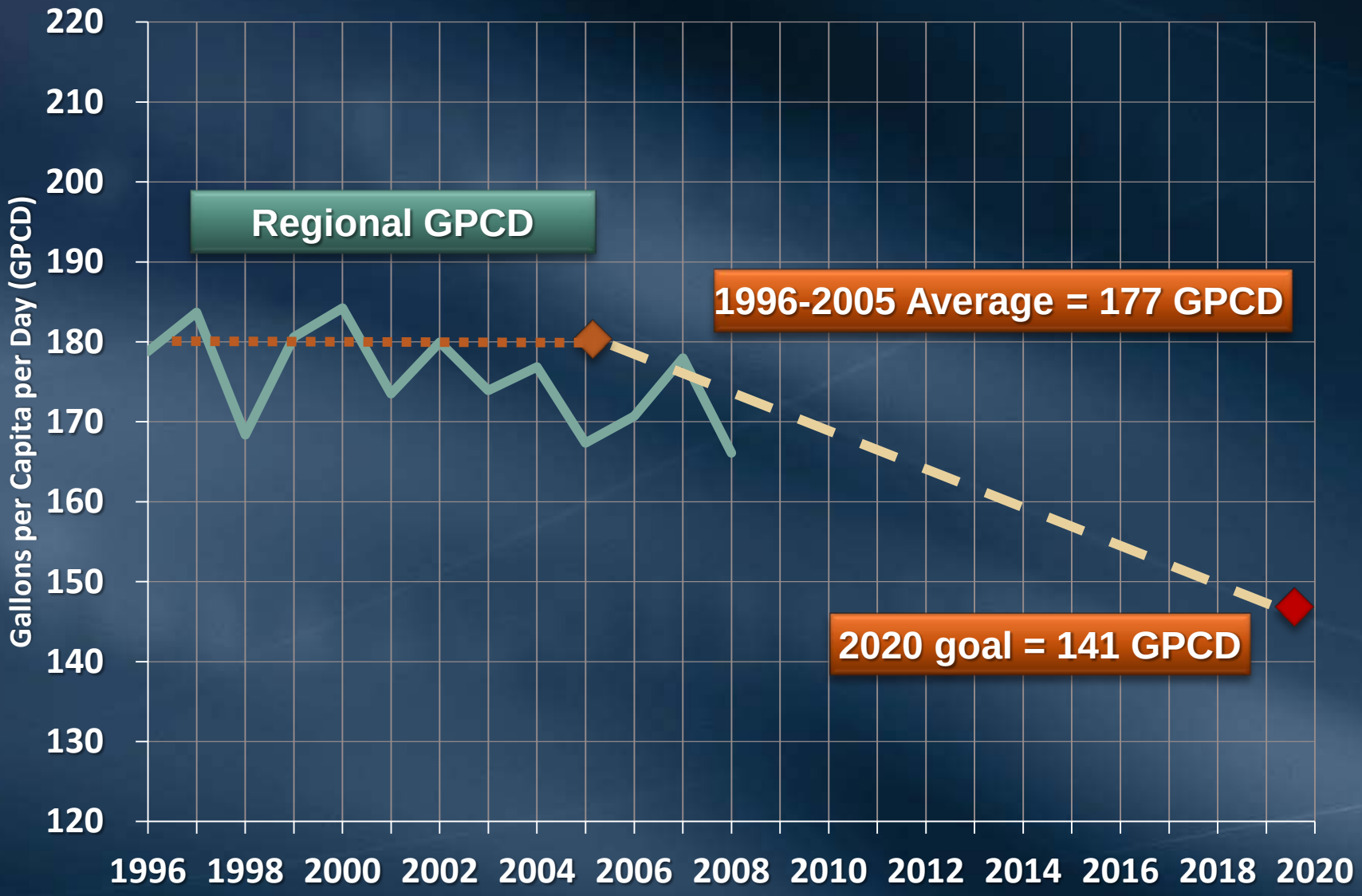
Heavy dependence on imported supplies



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

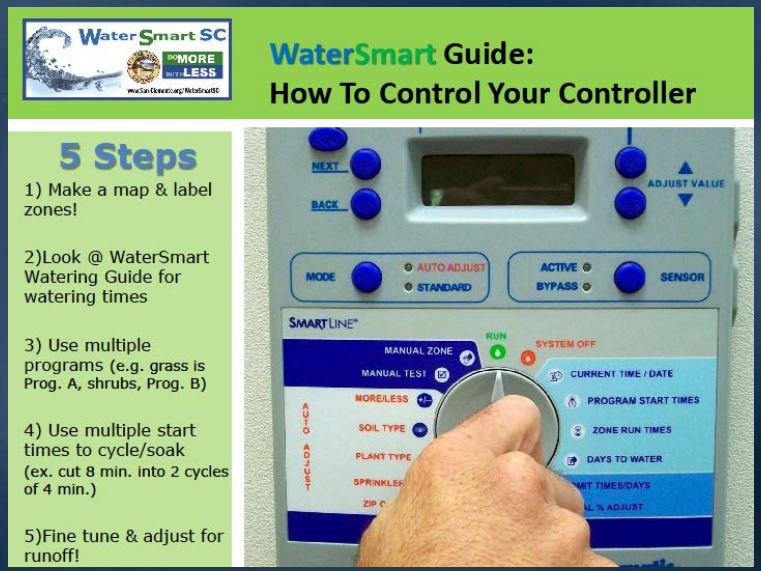
look for WaterSense Meets EPA Criteria

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

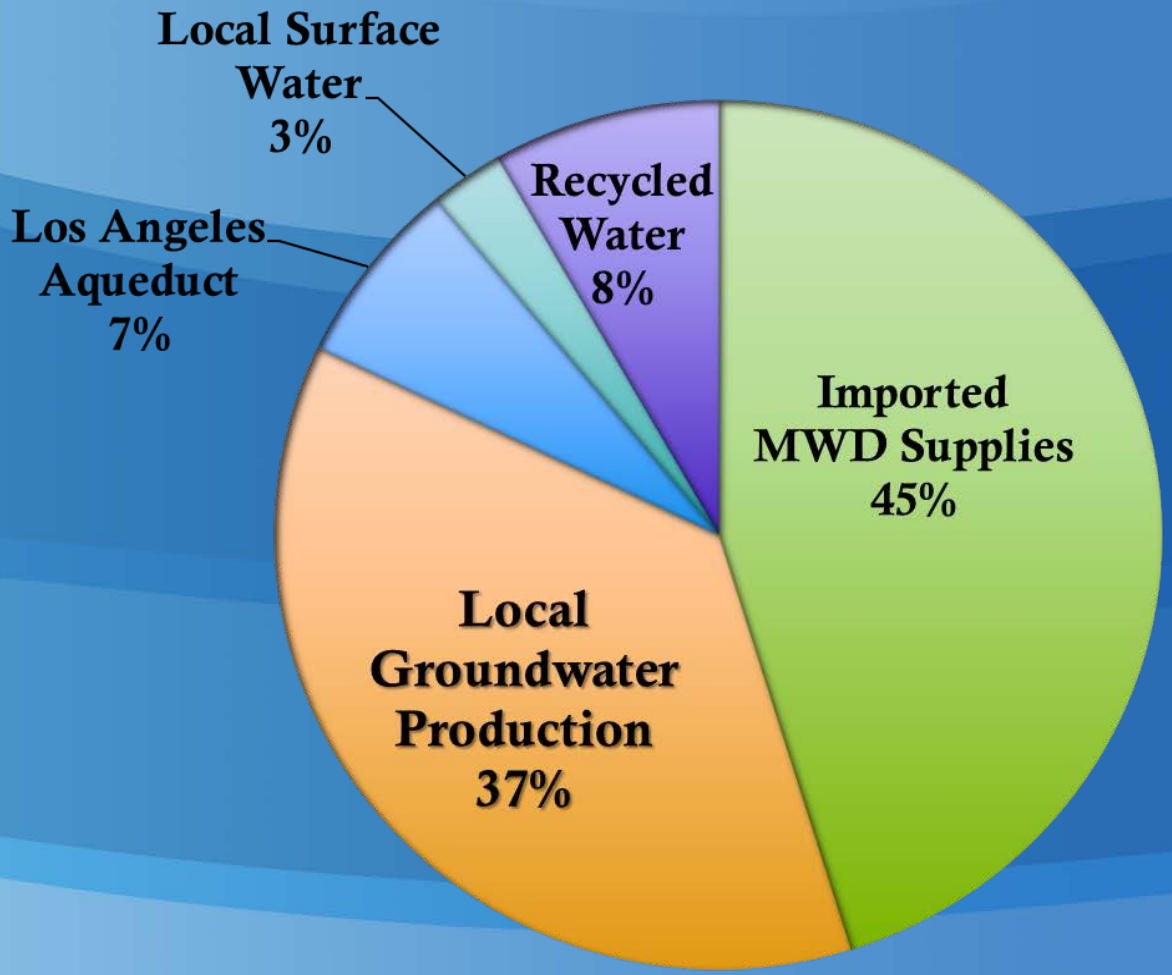
Strategic Focus Workgroup

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



2010 Service Area Water Supplies

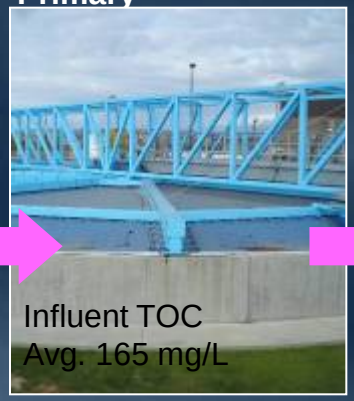
Total Retail Demand: 3.6 MAF



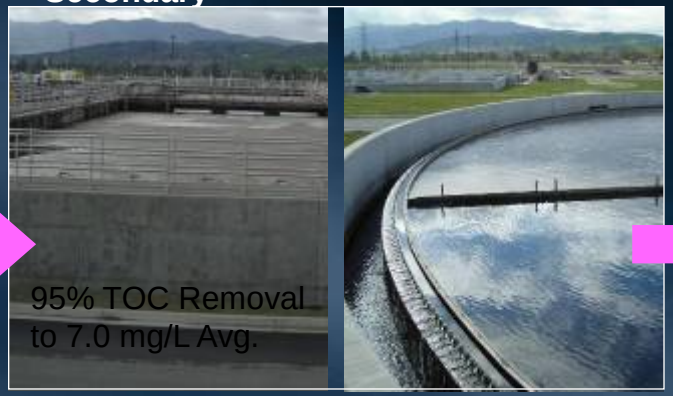
San Gabriel River Recycled Water Production Cycle

Industrial Pretreatment & Source Control

Primary



Secondary



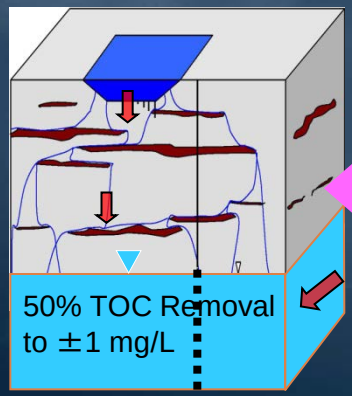
Tertiary

Distribution System

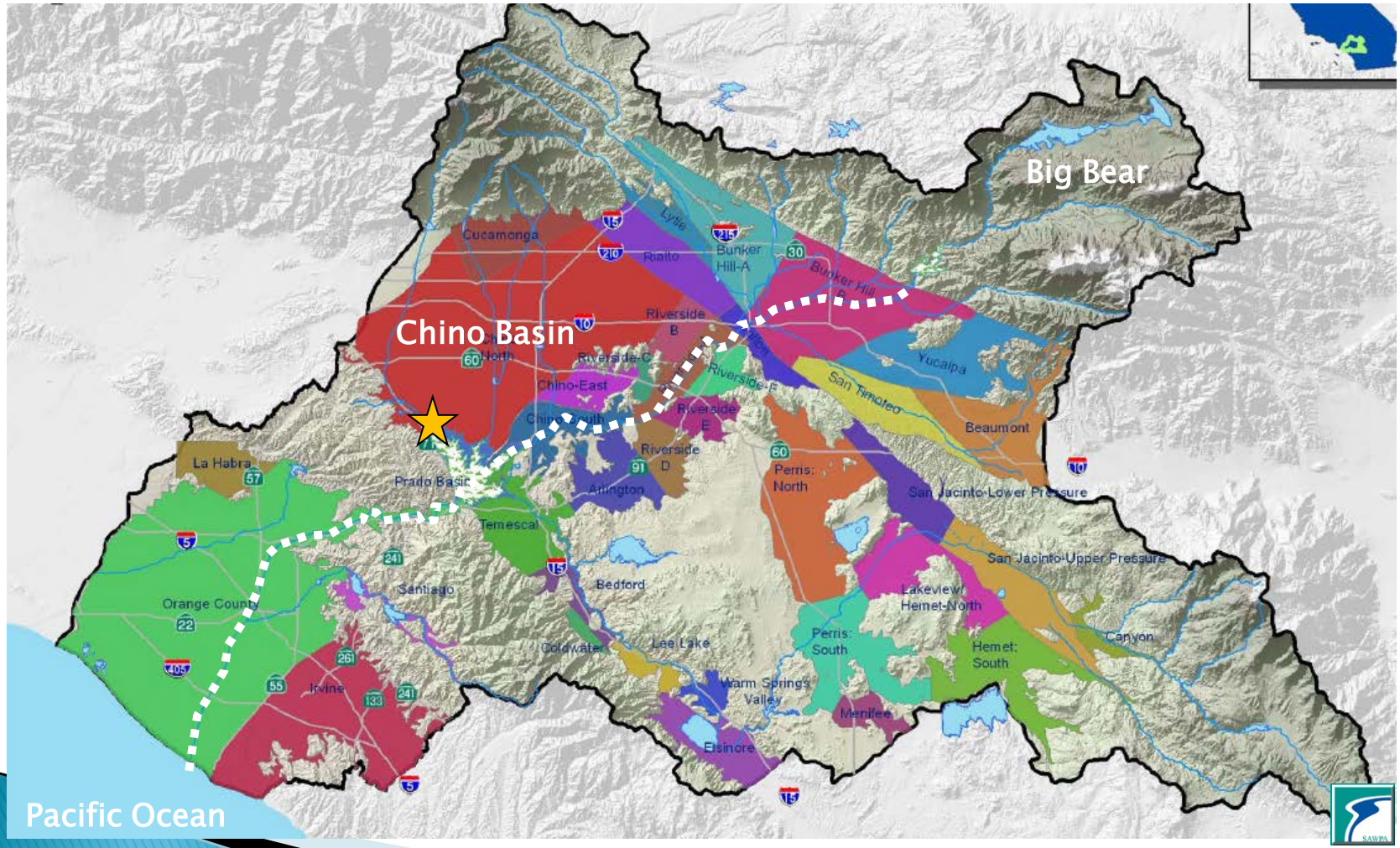
Industrial & Brine Export

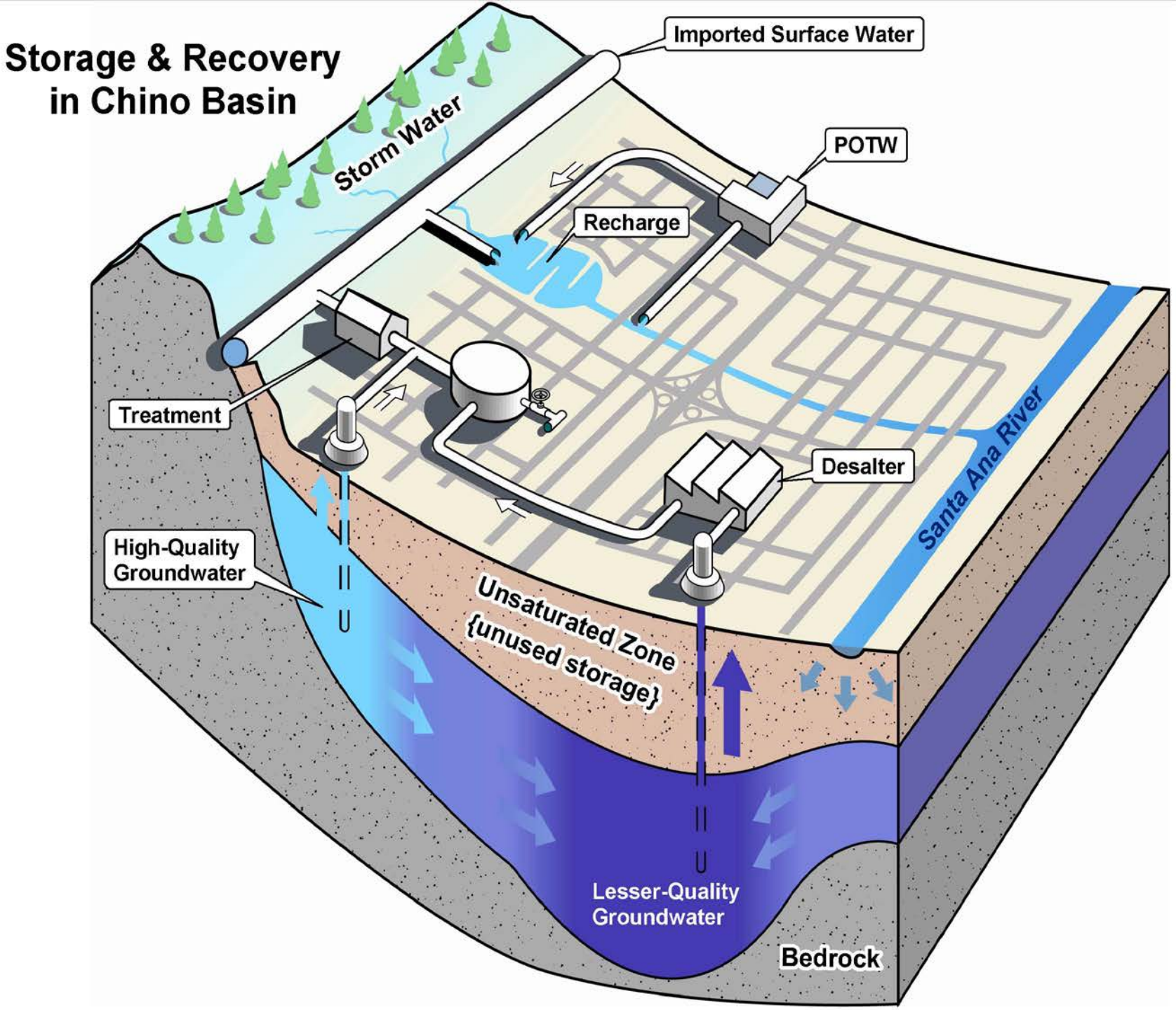
Soil-Aquifer Treatment

Groundwater Blend & Hold

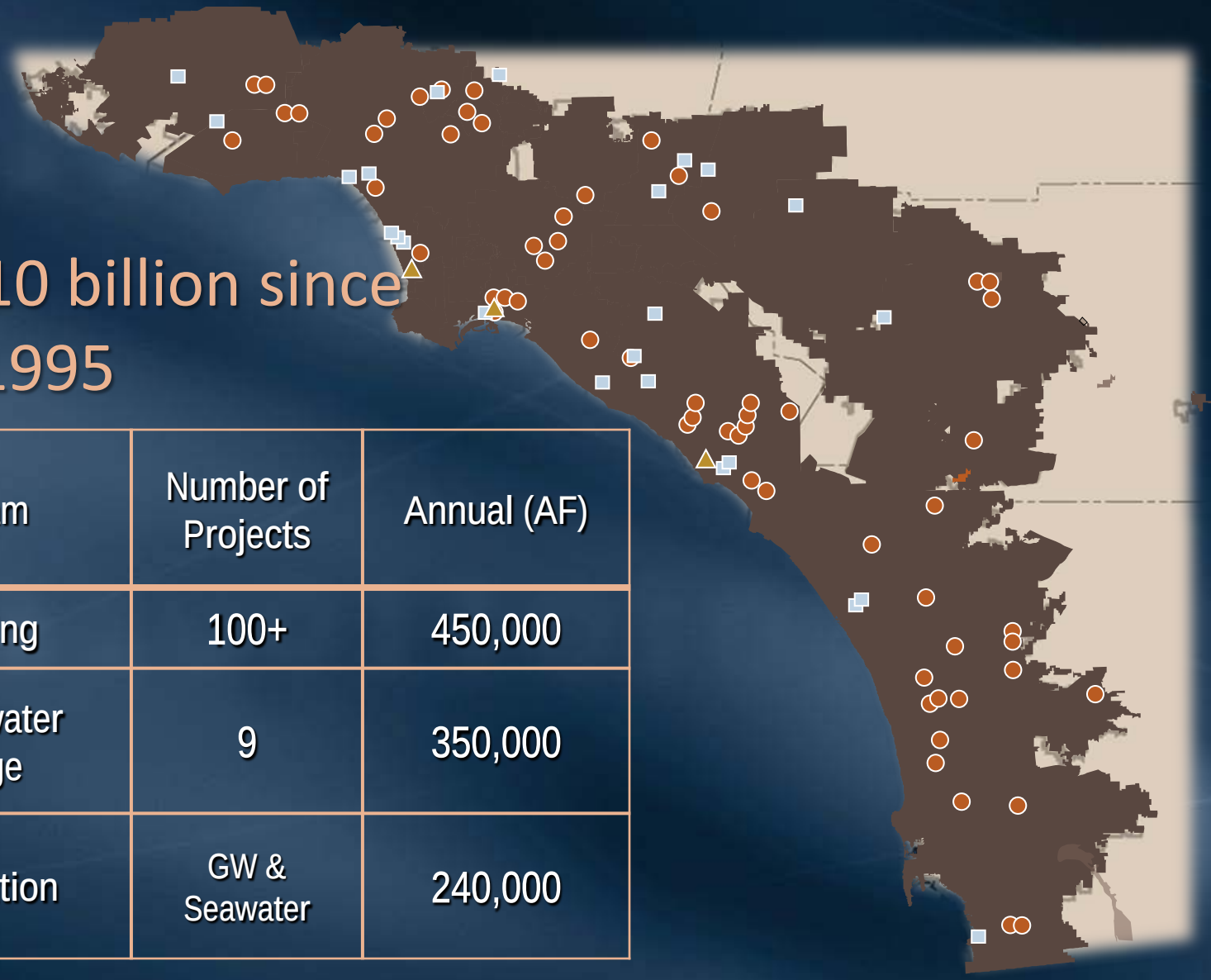


Santa Ana River Watershed




Storage & Recovery
in Chino Basin
Imported Surface Water
Storm Water
POTW
Recharge
Treatment
Desalter
Santa Ana River
High-Quality
Groundwater
Unsaturated Zone
{unused storage}
Lesser-Quality
Groundwater
Bedrock

Investment in Local Water Projects



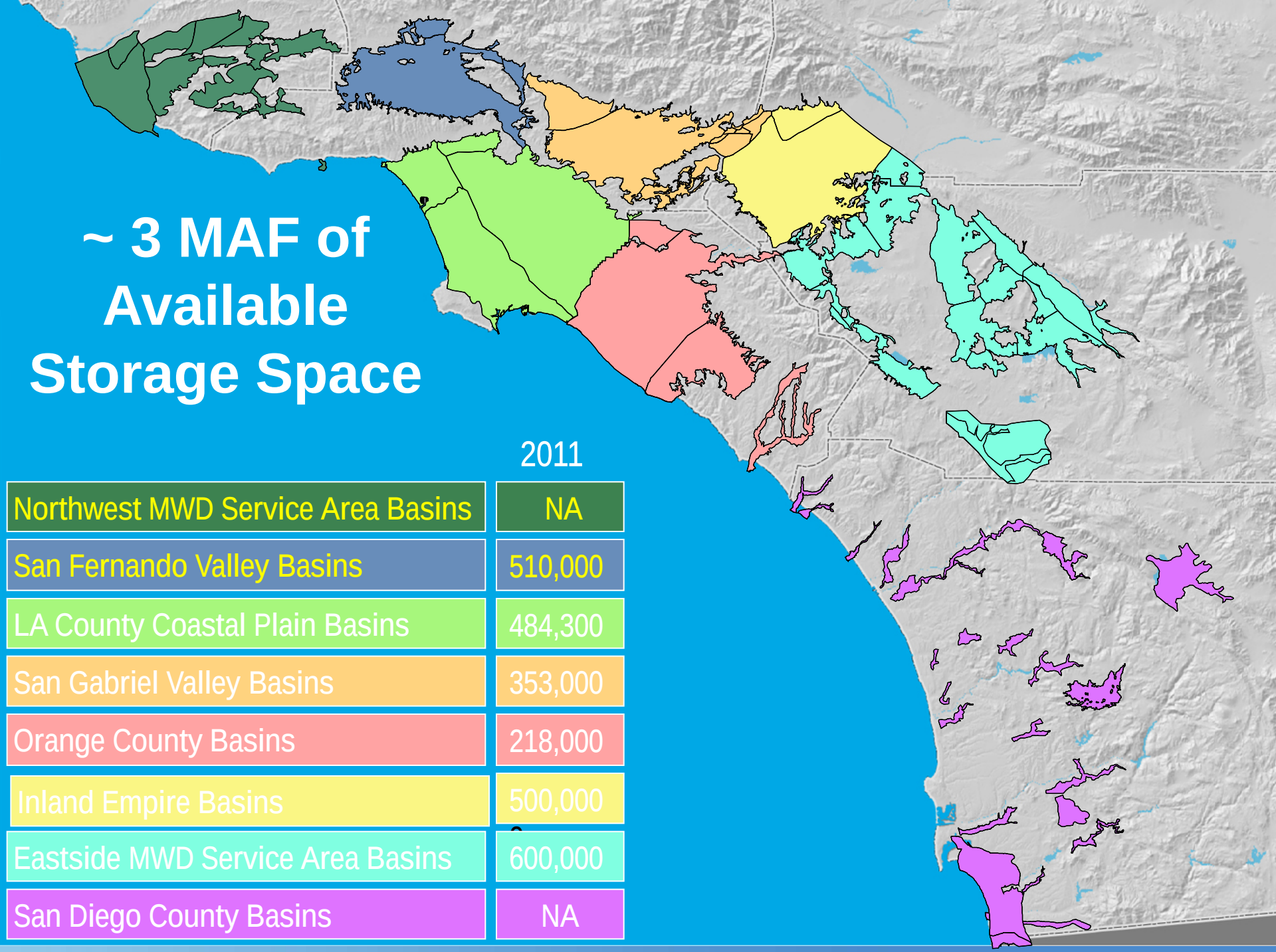
Invested $10 billion since 1995

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

History of Groundwater Adjudications

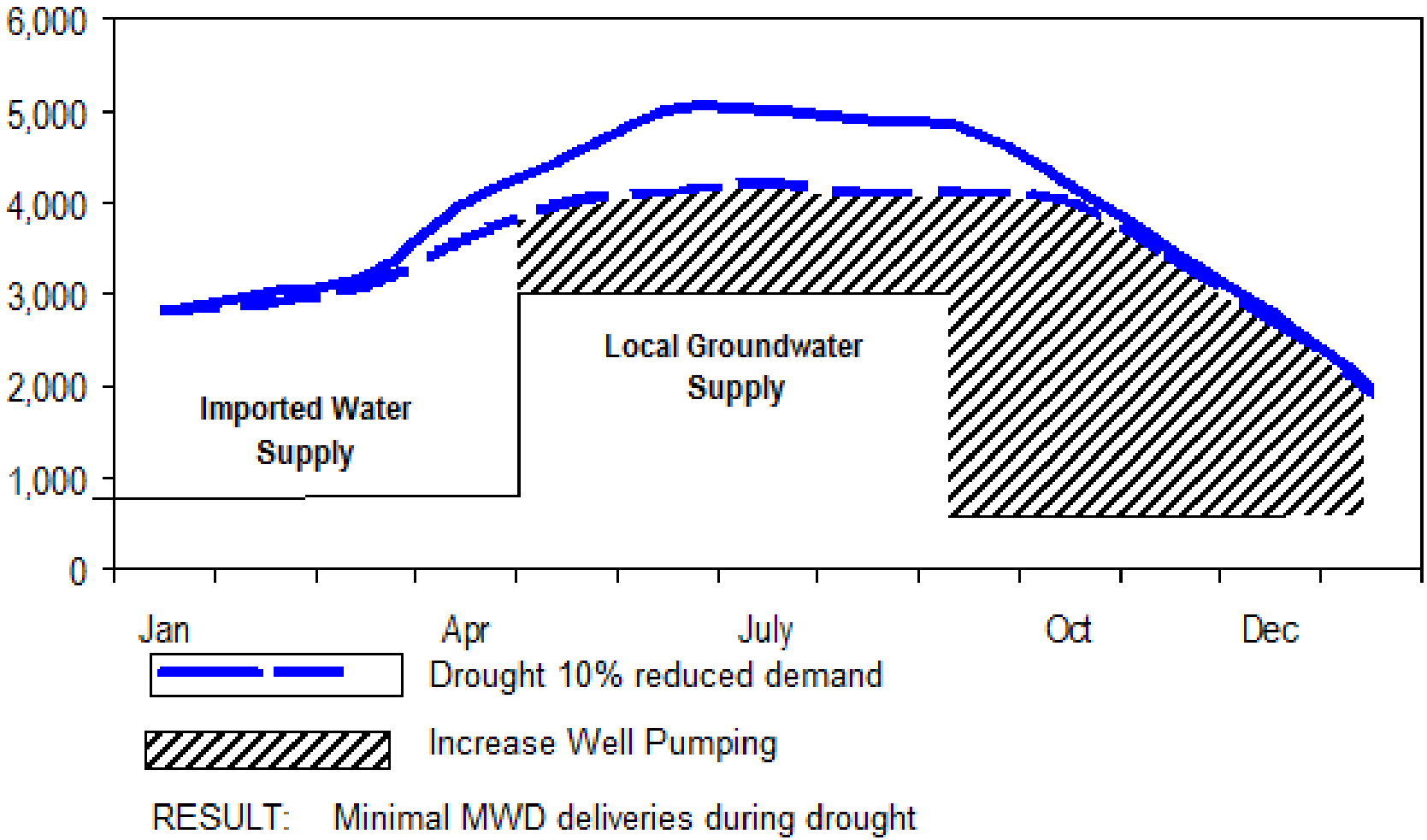
- 1940s Raymond Basin
- 1950s West Coast Basin
- 1960s Central Basin
- 1970s San Fernando, Main San Gabriel, Chi
- 1980s Fox Canyon GMA
- 1990s Six Basin and Temecula

~ 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

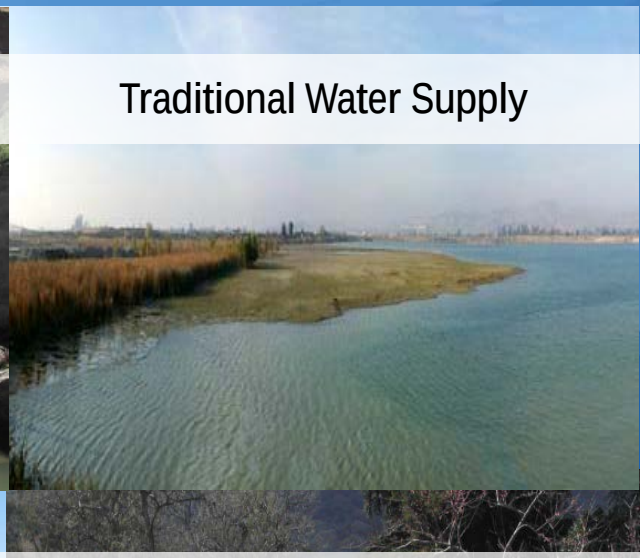


Multi-Use Project Types

Flood Protection and Drainage

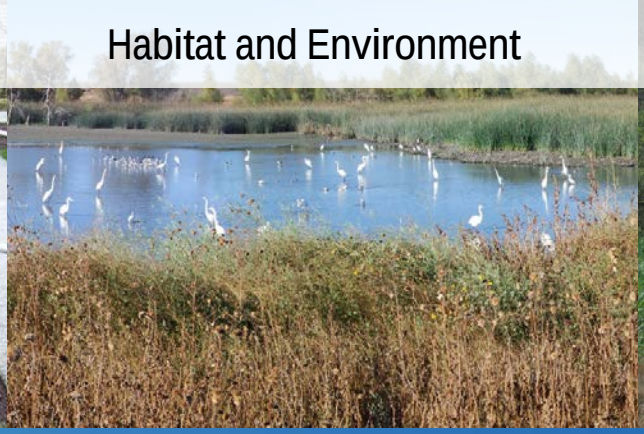
Site Specific LID -- Water Supply and Water Quality

Traditional Water Supply



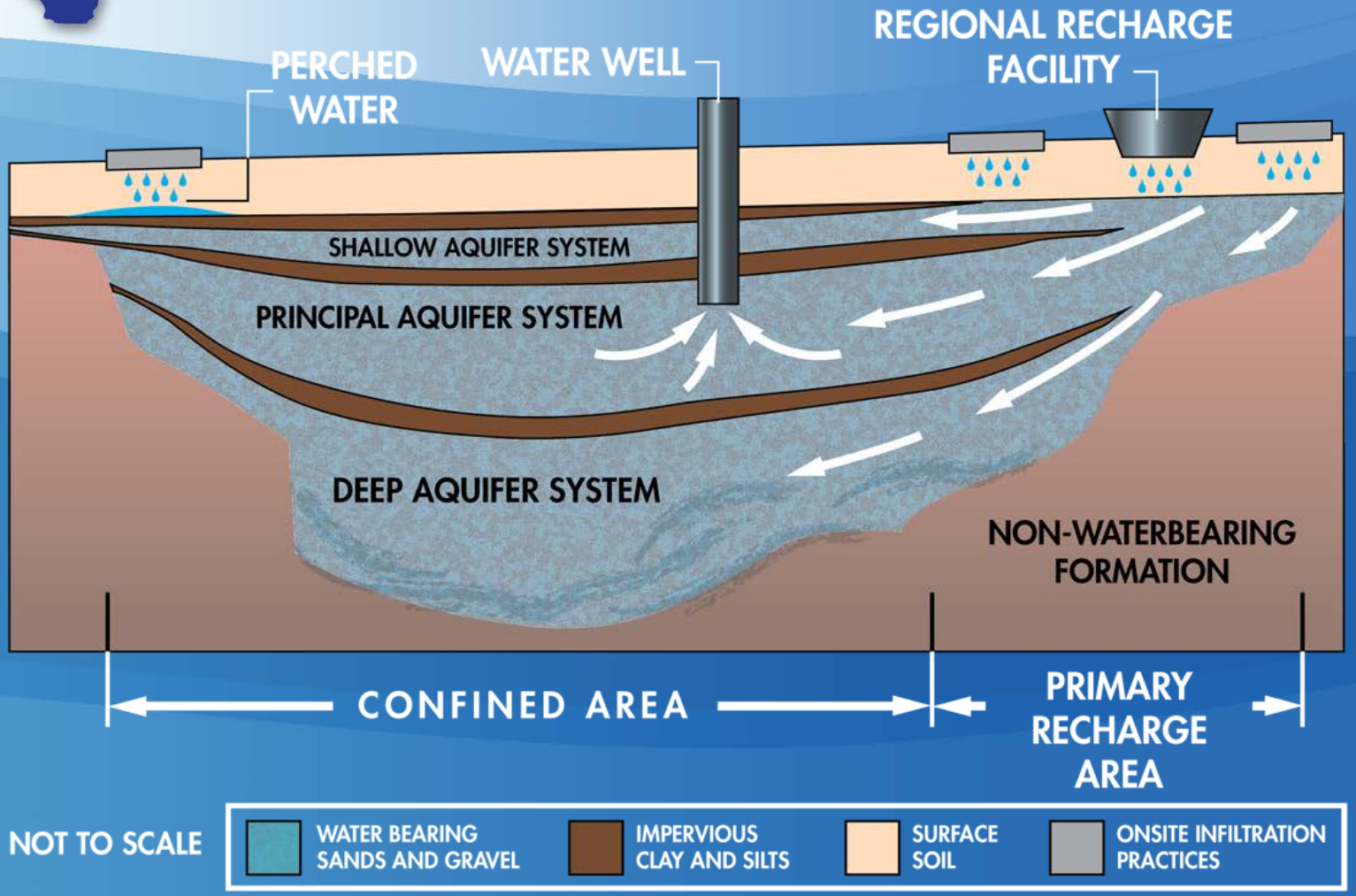
Water Quality Streetscape

Habitat and Environment



Recreation Trails and Education

Deep Percolation of Stormwater



Source: SCWC Stormwater White Paper

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.

Courtesy of Los Angeles Department of Water and Power

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.

Courtesy of Los Angeles Department of Water and Power

Planning For Uncertainty

Thank You!

Richard Atwater

Southern California Water Committee