



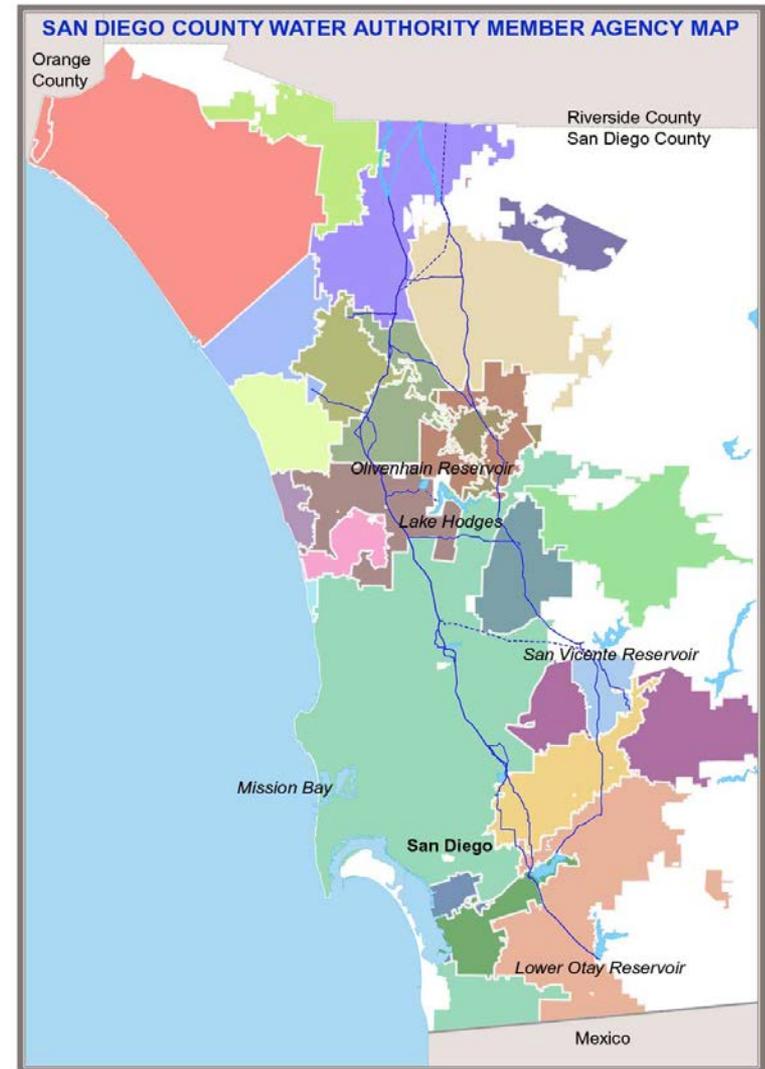
# **Long Term Water Management: Living within our Means**

March 25, 2015



# San Diego County Water Authority

- Wholesale water agency created by State Legislature in 1944
  - 24 member agencies
  - 36-member board of directors
  - Serves 3.1 million people and region's \$206 billion economy
- Imports ~80% of water used in San Diego County
- Builds, owns, operates and maintains regional water infrastructure



# San Diego County Water Supply 1991

Local Supplies

26,000 AF

5%



**Total = 578,000 AF**



# 1987-92: Six-Year Drought Leads to Cutbacks

## State to Shut Off Water Delivery to Southland

By VIRGINIA ELLIS and TED ROHRLICH  
TIMES STAFF WRITERS

SACRAMENTO — Gov. Pete Wilson on Monday announced new and unprecedented cutbacks of state water deliveries so drastic that Southern California will be cut off from this traditional source of water by mid-March.

Wilson said that heightened drought conditions had forced the state to notify cities and industry

## Limits on tap water use urged by staff

By Steve LaRue  
Staff Writer

The staff of the San Diego County Water Authority (CWA) will continue to recommend a blanket ban of tap water on private lawns and golf course roughs and fairways despite intense opposition from contractors and others.

## S.D. Faces 31% Cut in Imported Water Supply

By JENIFER WARREN  
TIMES STAFF WRITER

Faced with record-low rainfall and no prospects for relief, the Metropolitan Water District declared a water emergency on Tuesday and cut by 31% the amount of water it delivers to 27 agencies from Ventura to San Diego.

## 50% Water-Delivery Cut Will Be Blow to San Diego

■ **Drought:** Metropolitan Water District directors also vote a 90% cut in allocation for agricultural users.

## Water Dependence Bodes a Dry San Diego Future

■ **Drought:** A twisted history of water politics has left the county at the vulnerable end of the supply pipeline.

**“Never Again!”  
“No More Water Shortages!”**

## Grim water outlook is getting even worse

By Steve LaRue  
Staff Writer

SACRAMENTO — Southern Californians are likely to be ordered to cut back their water consumption by an unprecedented 30 percent this spring unless more snow falls on the Sierra Nevada, the area's chief water official said yesterday.

## State Water Project cuts off water to farms; urban slash expected

### L.A. Ready to Battle San Diego Over Water

■ **Conservation:** DWP officials weigh legal action as southern neighbor refuses to impose rationing.

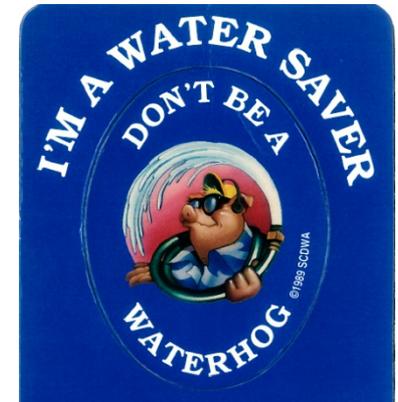
## Water: Authority to Vote Today on Mandatory Restrictions

## Companies cringe at 50 percent cut in water

Firms offer conservation plans to mayor; some say cutbacks could cripple growth

# Initial Efforts : Water Conservation

- Retrofitted hundreds of thousands of indoor devices
  - Ultra-low-flow toilets, showerheads
- Authority-sponsored Legislation
  - 10 bills enacted re: fixture standards, tax credits, metering, water supply planning
- Implemented public outreach & school education programs
- Significant improvement in water use:
  - 235 GPCP in 1990 to 161 GPCD in 2014



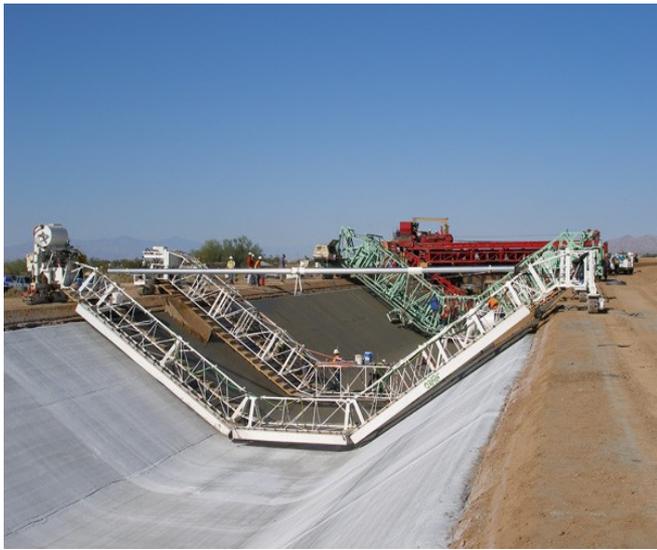
# Reliability Through Diversification

- Employ resource strategies unique to the local conditions
- No single resource strategy can manage all uncertainties
- Multi-faceted approach
  - Conservation
  - New diversified supplies
    - Imported
    - Local
  - Infrastructure improvements



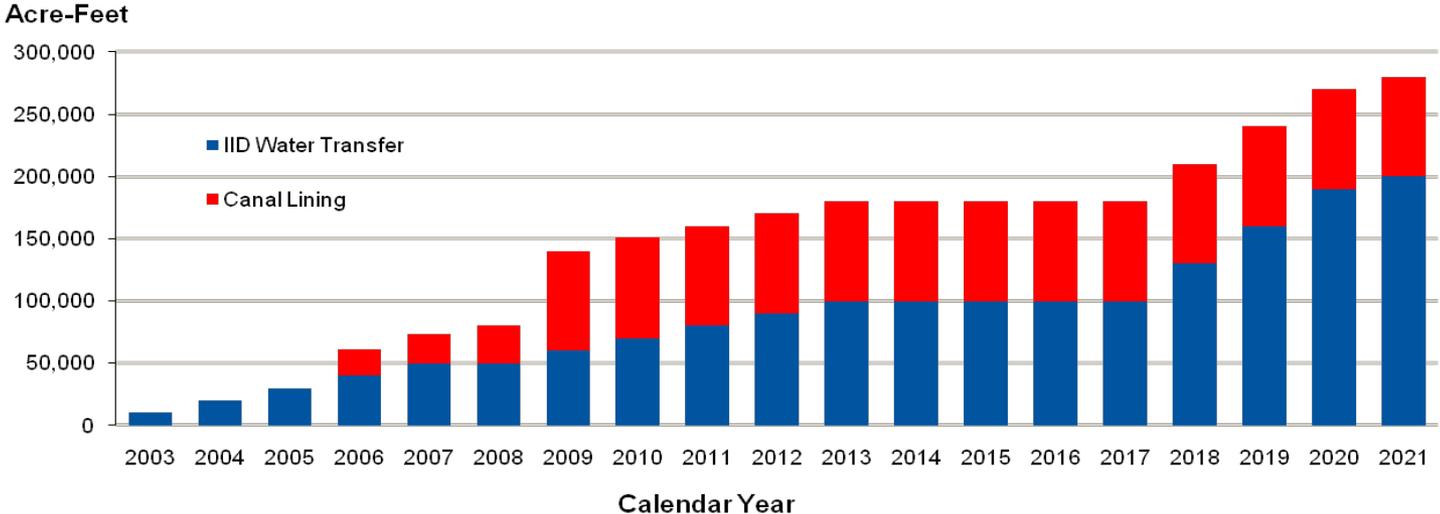
# Cornerstone of Diversification Plan: 2003 Water Transfers

- Water Authority secured new, more reliable Colorado River supplies
  - 280,000 AF/Year by 2021
    - Imperial Irrigation District conservation programs and water transfer
    - Canal-lining projects
- By 2021, **34% of region's supply**



Lining the Coachella Canal

## IID and Canal Lining Deliveries 2003-2021



# Investments in Local Supplies

- Carlsbad Seawater Desalination Project
  - \$1 billion investment
  - 56,000 acre-feet/year of drought-proof supplies
    - Largest seawater desalination facility in North America
  - Expected on-line in Fall 2015

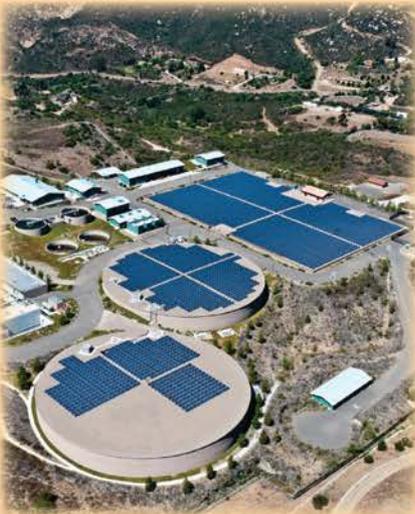


# \$2 Billion Invested in Infrastructure Since 2003

**San Vicente Dam Raise & Related Projects**  
\$416 million



**Twin Oaks Valley Water Treatment Plant**  
\$179 million



**Pipeline Relining**  
\$394 million



**Carlsbad Seawater Desalination Pipeline Projects**  
\$1 billion



Plant Site

**All-American & Coachella Canal Lining Projects**  
\$447 million  
(\$190 million from the Water Authority)



**Olivenhain Dam & Reservoir**  
\$198 million



**Lake Hodges Projects**  
\$208 million



Pump House Detail



# Next Increment of Water Supply

- City of San Diego Pure Water: 96,000 AF/year
- North County Recycled Water Program: up to 33,000 AF/year
- Padre Dam Advanced Purification Program: up to 3,000AF/year



City of San Diego's  
Advanced Water Purification Facility



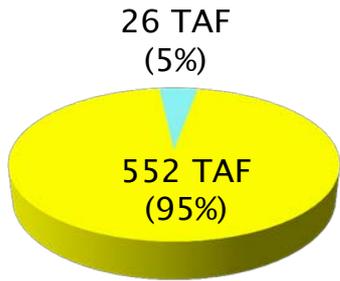
# Next Increment of Water (cont.): Social Norms

- Emphasis on Outdoor efficiency
- Landscape Market Transformation
  - Outreach – promoting the “new normal”
  - Education – “how to” classes, etc
  - Jump start with rebates and incentives
  - Tools and Resources – WaterSmart website
    - Homeowners guides, water-use calculator, design templates
  - Industry & Retail Partnerships
    - Engagement of the private sector – nurseries, landscape architects, landscape maintenance companies
  - Legislation



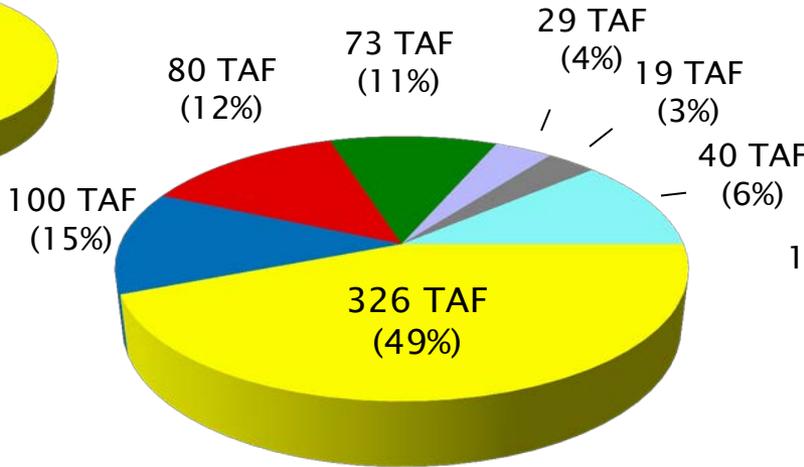
# Increasing San Diego County's Water Supply Reliability through Supply Diversification

1991



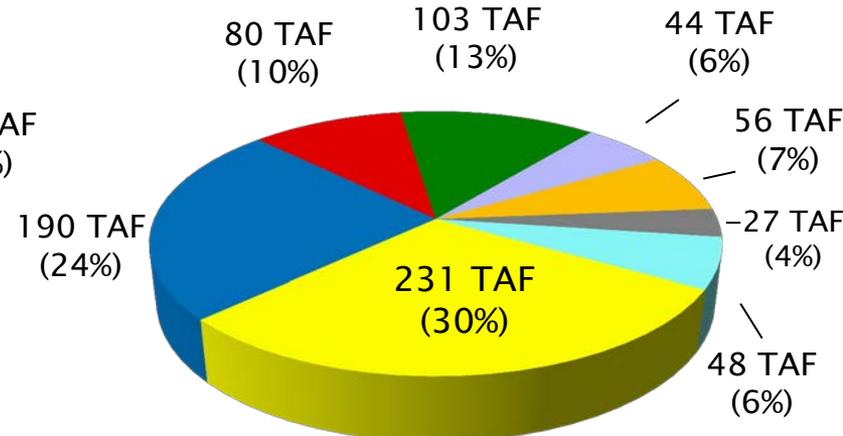
Total = 578 TAF

2014



Total = 667 TAF

2020



Total = 779 TAF

- |   |   |
|---|---|
|  Metropolitan Water District           |  Recycled Water        |
|  Imperial Irrigation District Transfer |  Seawater Desalination |
|  All American & Coachella Canal Lining |  Groundwater           |
|  Conservation                          |  Local Surface Water   |



