



# The Future of Integrated Regional Water Management in Los Angeles County

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# Today's Discussion

- Current Water Resource Management  
Challenges L.A. County
- IRWM Implementation
  - Sun Valley Watershed
- Challenges to IRWM Approach
- Opportunities

# County of Los Angeles



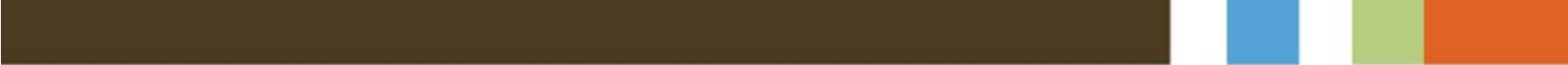
# County of Los Angeles

- 10 + million residents – 25% of State CA population
- Total Area 4752 sq. miles
- Density 2,427 people / sq mile
- 88 cities – City of L.A. largest in CA and second largest in US
- Highest Elevation 10,068 feet
- Average Annual Rainfall 15 inches in Downtown LA and 35 inches in the San Gabriel Mountains

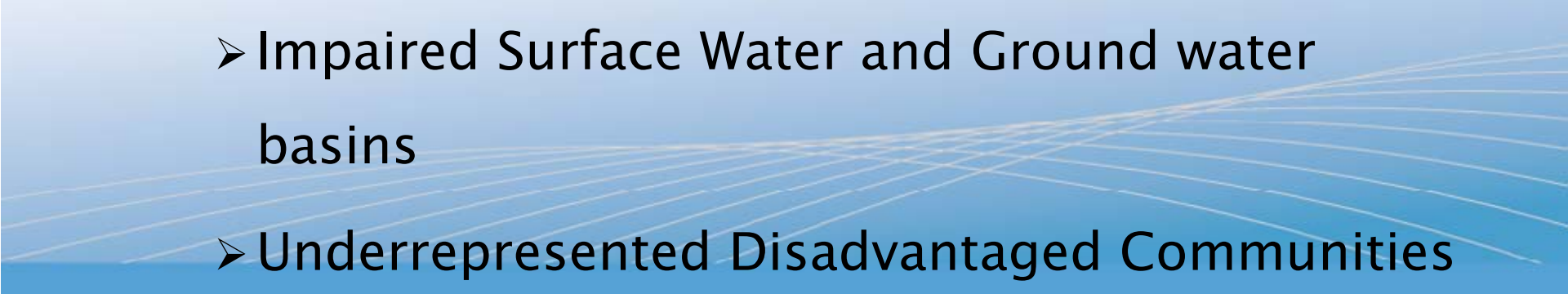






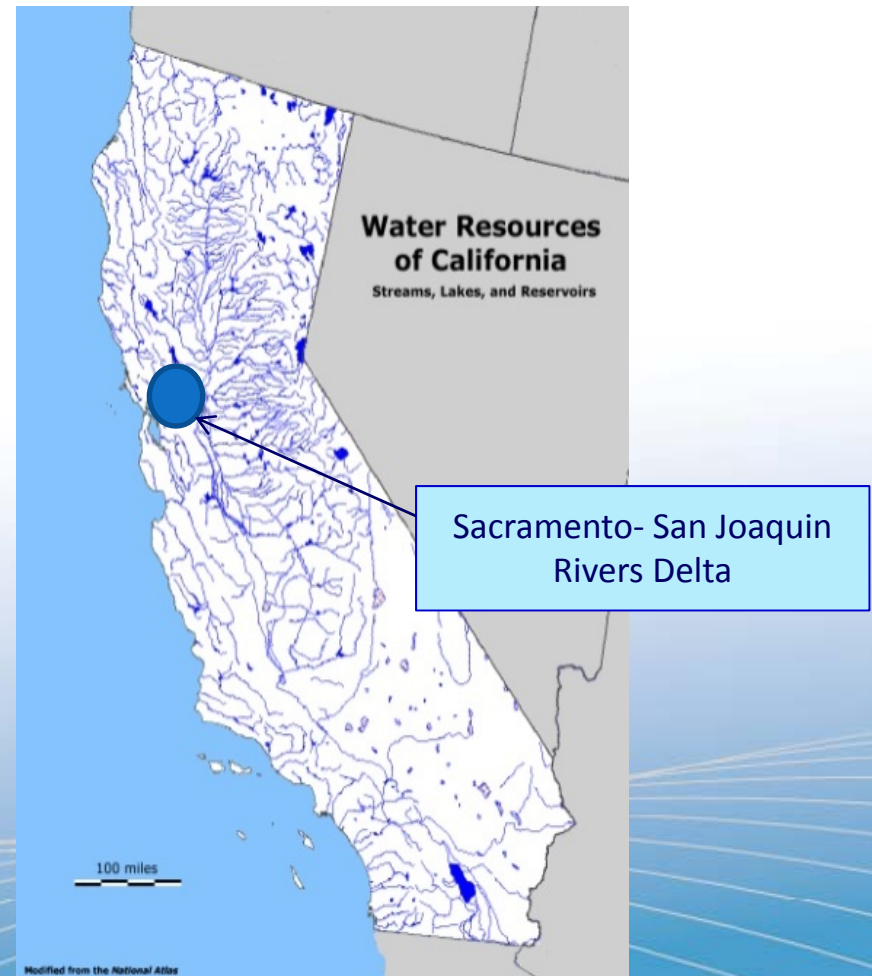


# Water Resource Management Challenges

- Semi Arid Climate with increasing Population
  - Decentralized Water Resource Management
  - Reduction in imported water supply
  - Climate Change
  - Severe Fire/Flood Cycle/Sediment Management
  - Impaired Surface Water and Ground water basins
  - Underrepresented Disadvantaged Communities
- 

# Sources of Water

- Imported
- Groundwater
- Local Surface
- Reclaimed



# Importers of Water

## Los Angeles County Sources



Department of  
Water Resources  
(DWR)

Metropolitan Water District  
of Southern California  
(MWD)

City of Los Angeles  
Department of Water and  
Power (DWP)



# Import Supply vs. Local Supply



Colorado River  
Aqueduct



State Water  
Project

- Water Imports – Presently support ~ 2/3 of demand
  - ❑ ~ 60 % from State Water Project (Delta)
  - ❑ ~ 40 % from Colorado River Aqueduct
- Local Sources - Presently support ~ 1/3 of demand



Pacoima Spreading  
Grounds



Big Tujunga  
Reservoir

# Wholesalers and Distributors

INDIVIDUAL  
CITIES

Las Virgenes  
MWD

West Basin  
MWD

Foothill MWD

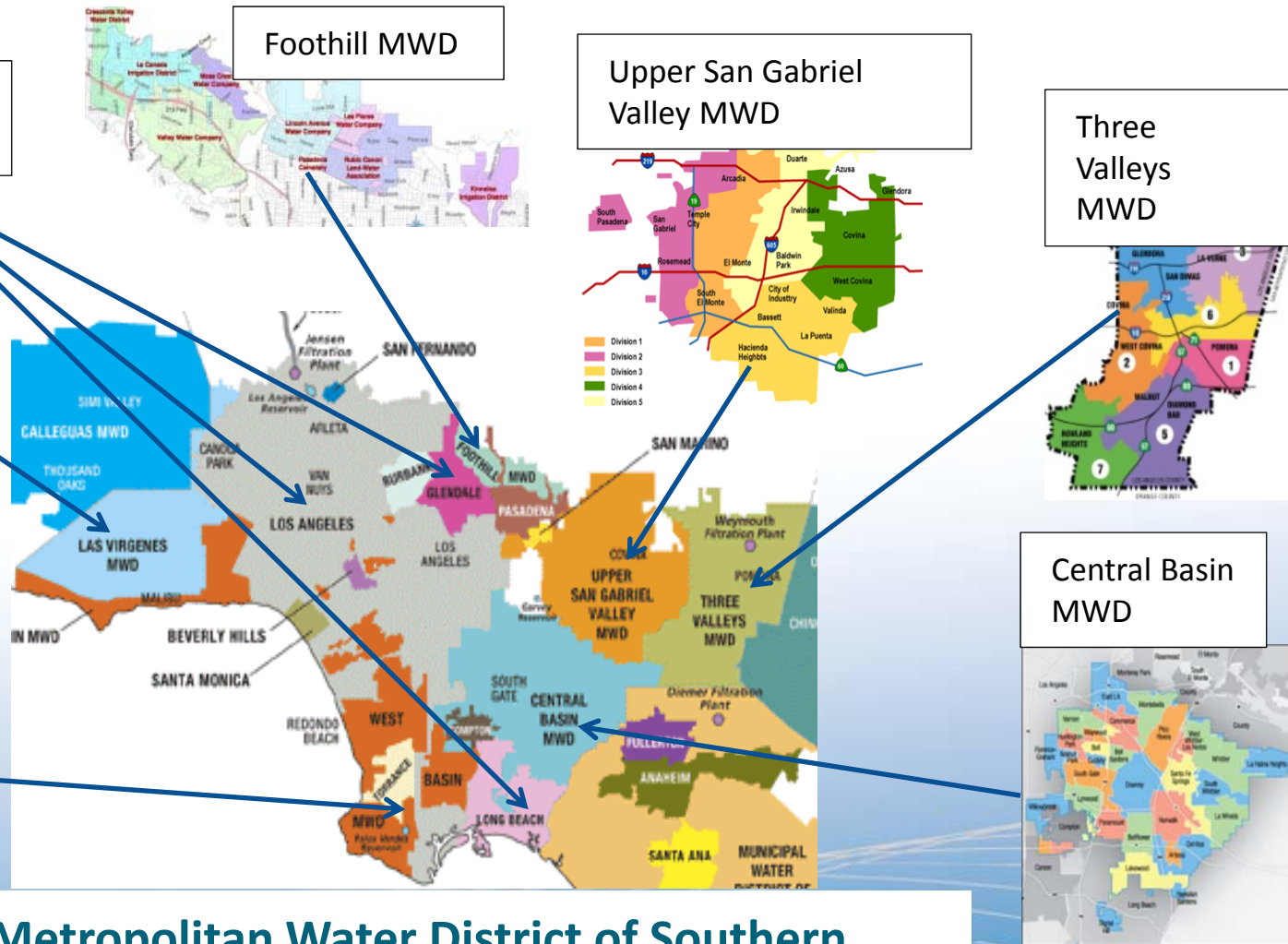
Upper San Gabriel  
Valley MWD

Three  
Valleys  
MWD

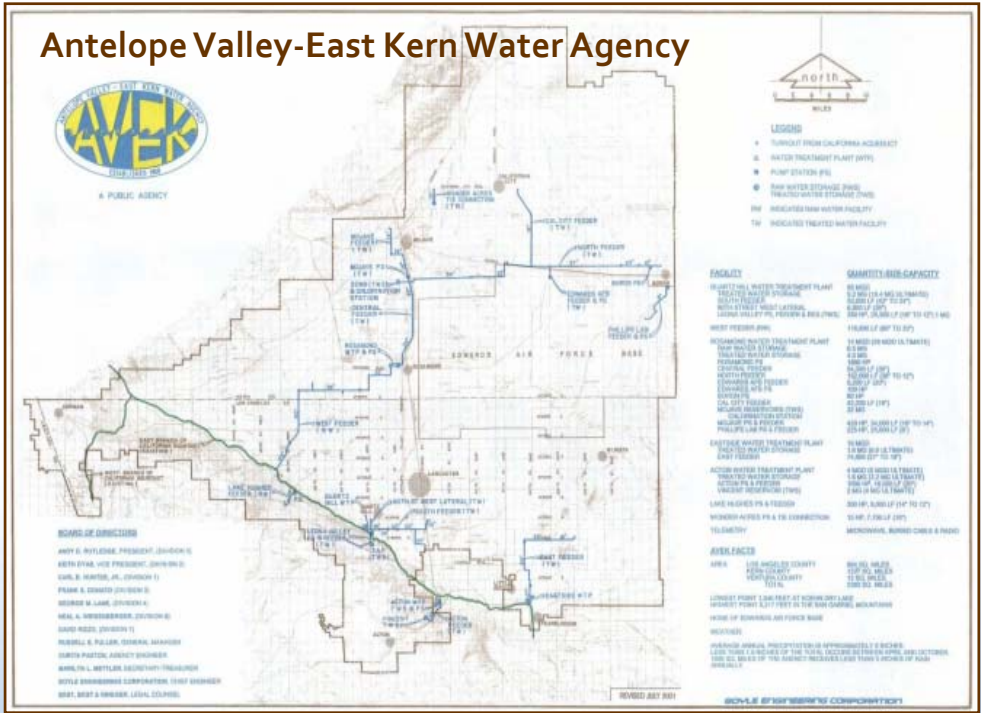
Central Basin  
MWD

Metropolitan Water District of Southern  
California

(MWD) Member Agencies





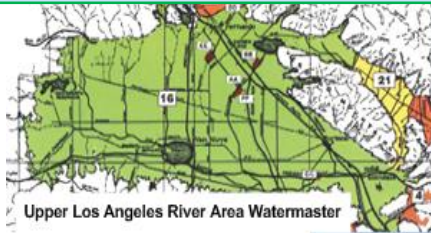


# Local Retail Purveyors



# Groundwater Basin Administrators

Upper Los Angeles Area Watermaster (DWP)



Upper Los Angeles River Area Watermaster

Water Replenishment District (WRD)



Raymond Basin Watermaster

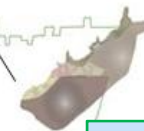


Main San Gabriel Watermaster



Main San Gabriel Watermaster

Six Basins Watermaster



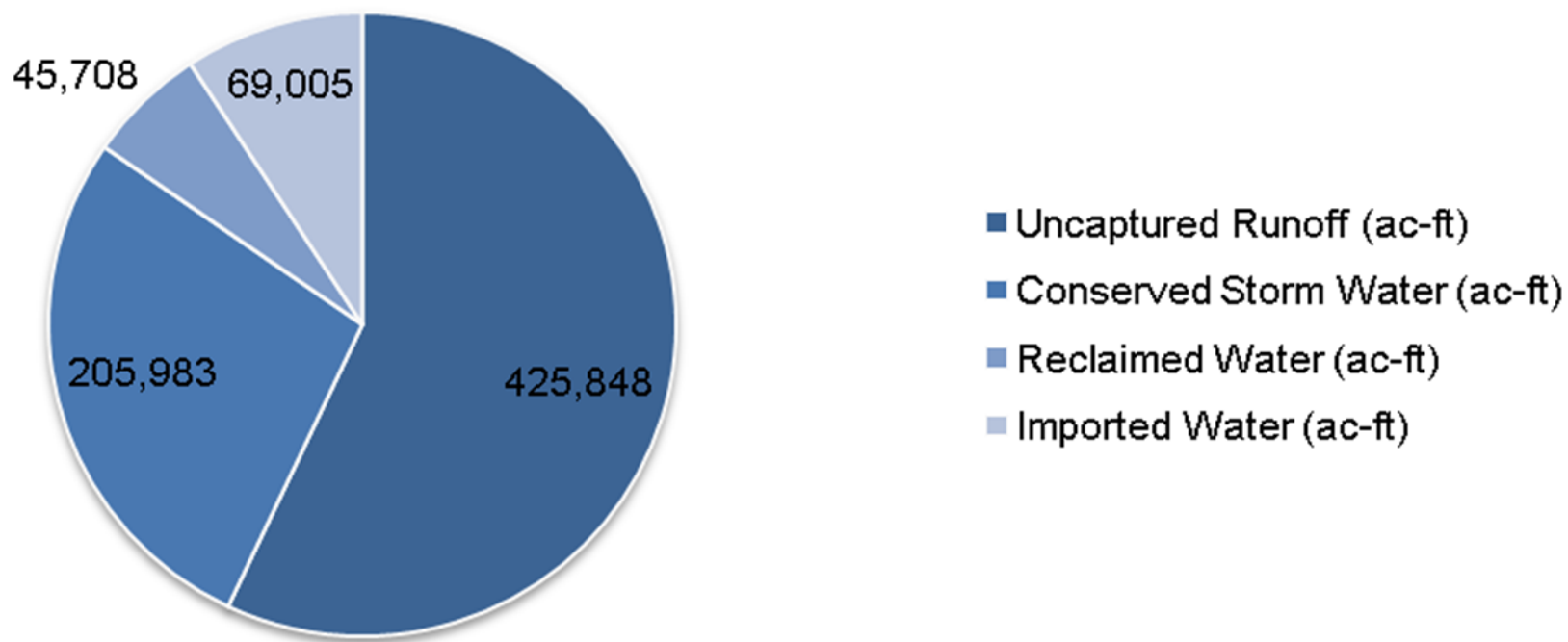
# Water Supply Challenge

## ➤ Local Water Supply Development

- Over **830,000 acre-feet of imported water** delivered to member agencies of MWD in the GLA Region in 2009
- ~ 250,000 acre-feet local surface water collected annually
- Groundwater capable of producing 400,000 acre-feet annually, but reliant on recharge from import and local surface waters
- With demand projection, need to close an ~ **800,000 ac-ft gap by 2025**



## Analysis of Entire Los Angeles County Water Conservation System





# Groundwater Quality Agencies

- **Los Angeles County Flood Control District (Seawater Barriers)**

- ☐ FCD owns and operates 22 miles of seawater barrier facilities
- ☐ WRD purchases water for injection

- **Water Replenishment District of Southern California (WRD)**

- **Upper Los Angeles River Area Watermaster (DWP)**

- **San Gabriel Basin Water Quality Authority (established 1993 by State Law)**

- ☐ San Gabriel Valley Municipal Water District
- ☐ Upper San Gabriel Valley Municipal Water District
- ☐ Three Valleys Municipal Water District

# The Department of Public Works and the Flood Control District



## ➤ Water Conservation and Storage

- ❑ 14 Major Dams and Reservoirs
- ❑ 27 Spreading Grounds
- ❑ 39 Miles of Soft-bottom Channels
- ❑ 13 Rubber Dams on Flood Control Channels
- ❑ 22 Miles of Groundwater Seawater Barrier Systems

## ➤ Surface Water Rights

- ❑ Example: San Gabriel Water Committee (“Committee of Nine”) rights to surface water on San Gabriel River







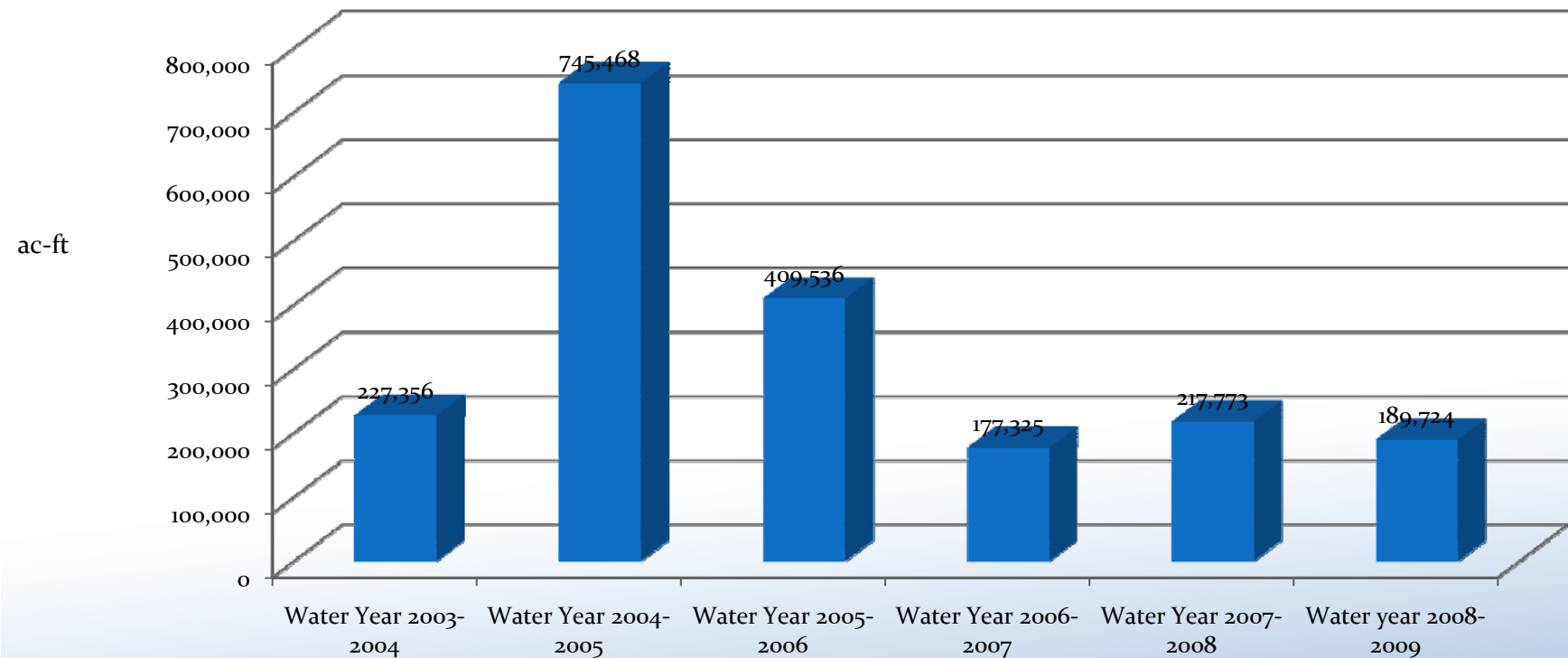






Compton Creek

# Flood Control District Groundwater Recharge



Water Year: October through April



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Station Fire – September 2009





US Forest Area

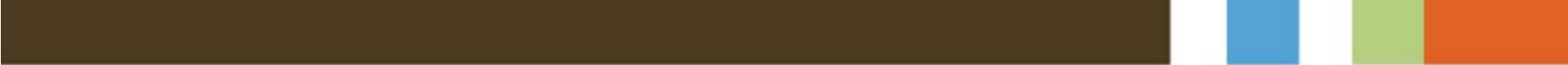


Pickens Debris Basin – 2009-10 Storm Season



La Canada Flintridge, January 2010



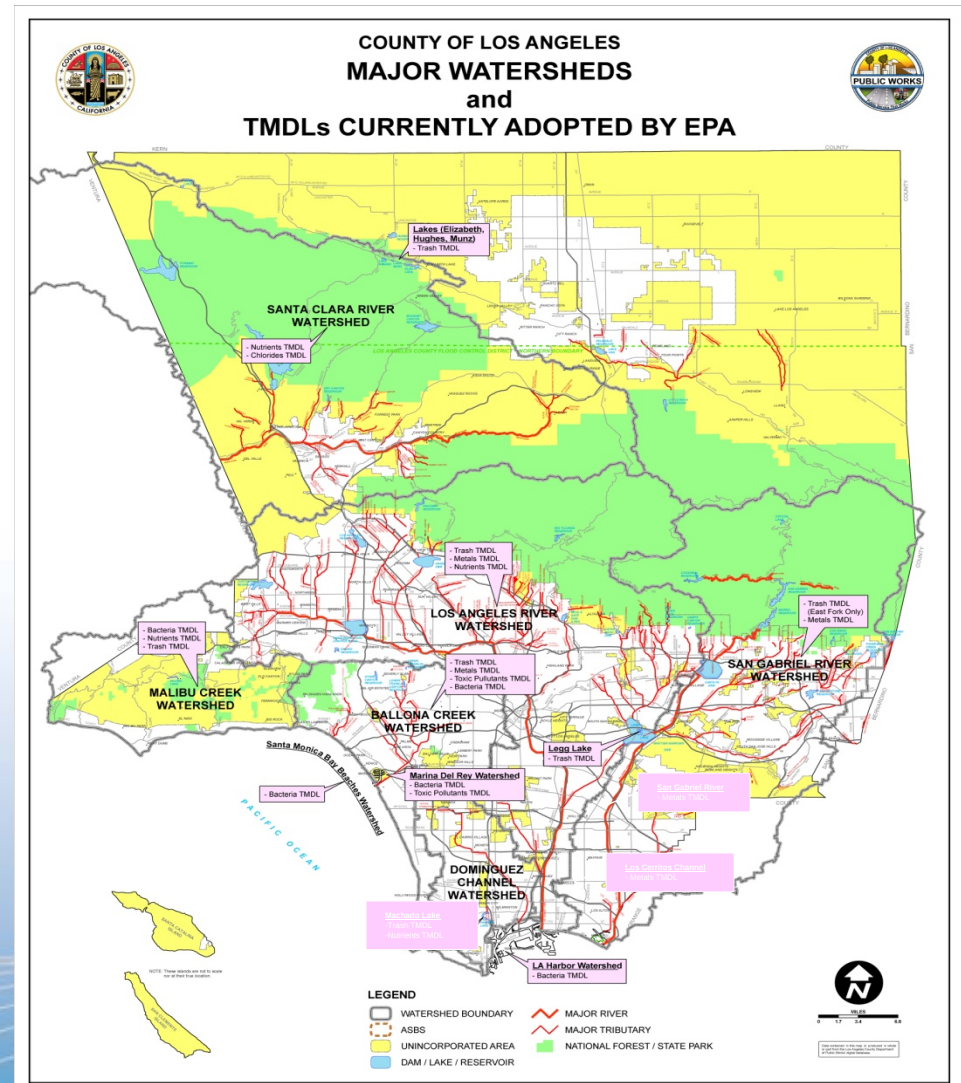


# Flood Control and Water Con Challenge

- Sediment Management threatens local water Conservation and storage facilities
  - 19,350,000 Cubic Yards forecasted for removal by 2013.
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# Surface Water Quality

- Every Major Water body Impaired
  - 23 current TMDLs
  - 5 TMDLs in development
  - More TMDLs contemplated







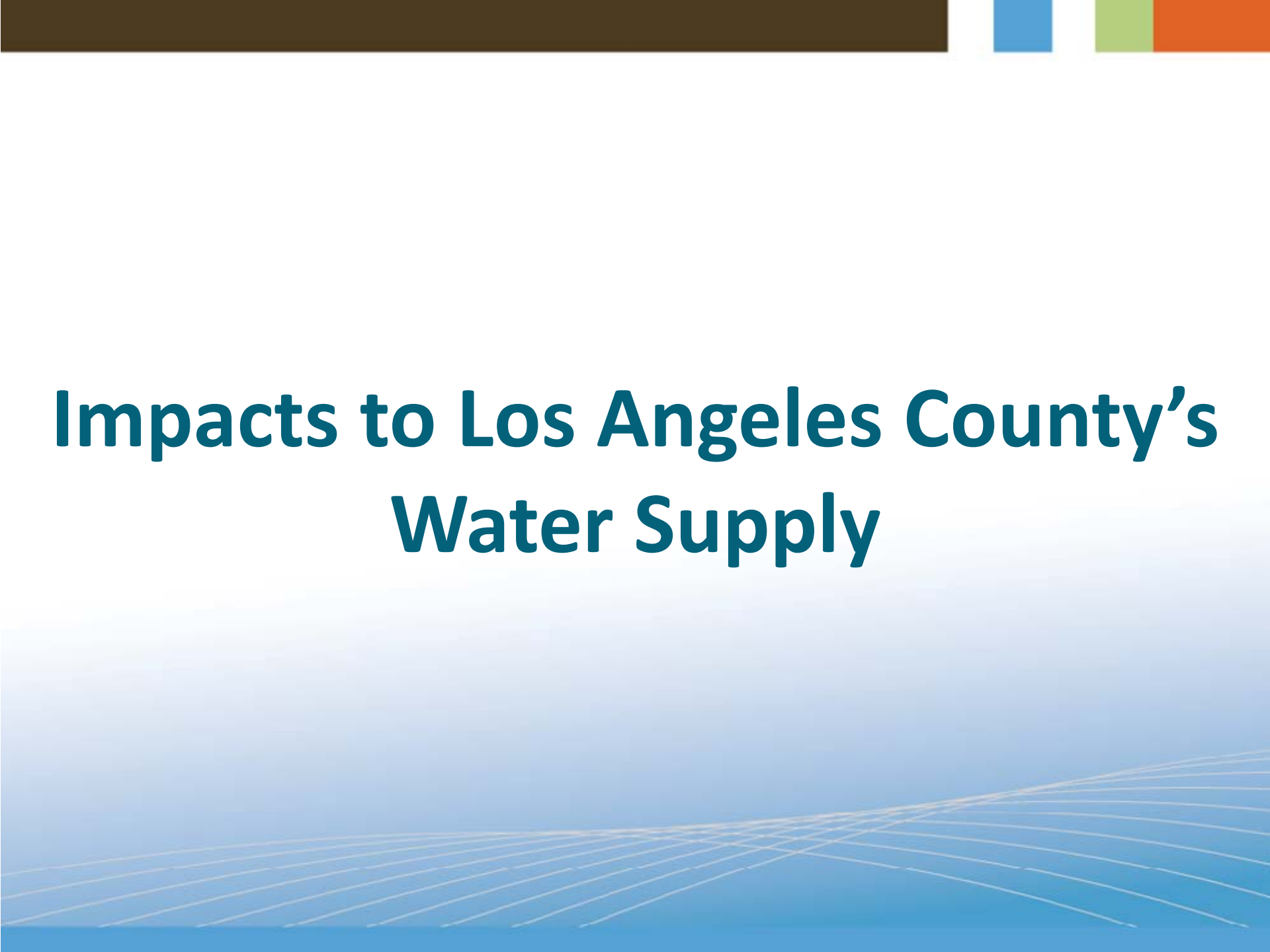




# Groundwater Challenge

- Groundwater Contamination In Major Basins
  - Long-term process – 30 to 100 years
  - Impacts storage and conjunctive use options
  - Very high cost



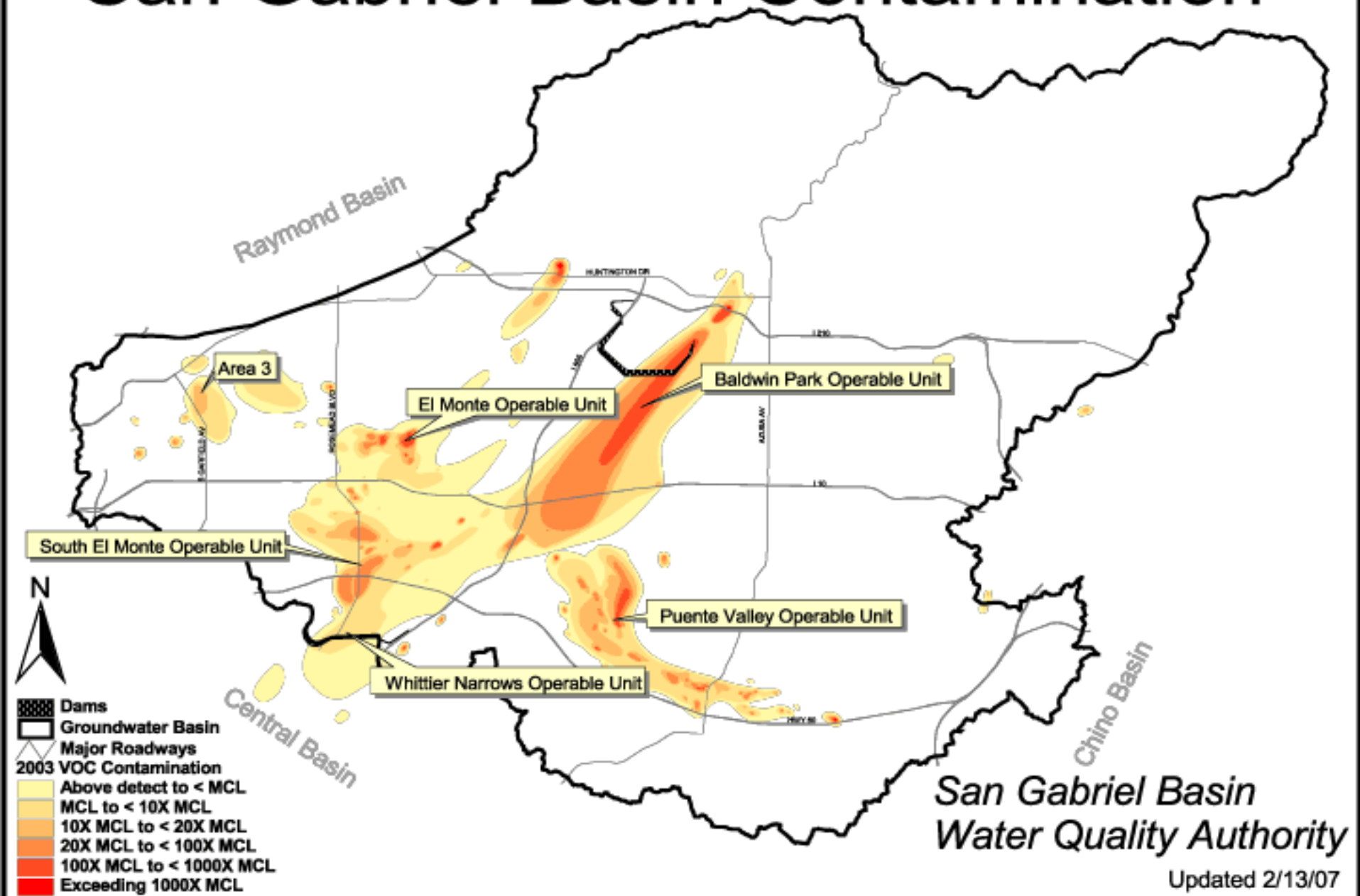


# **Impacts to Los Angeles County's Water Supply**

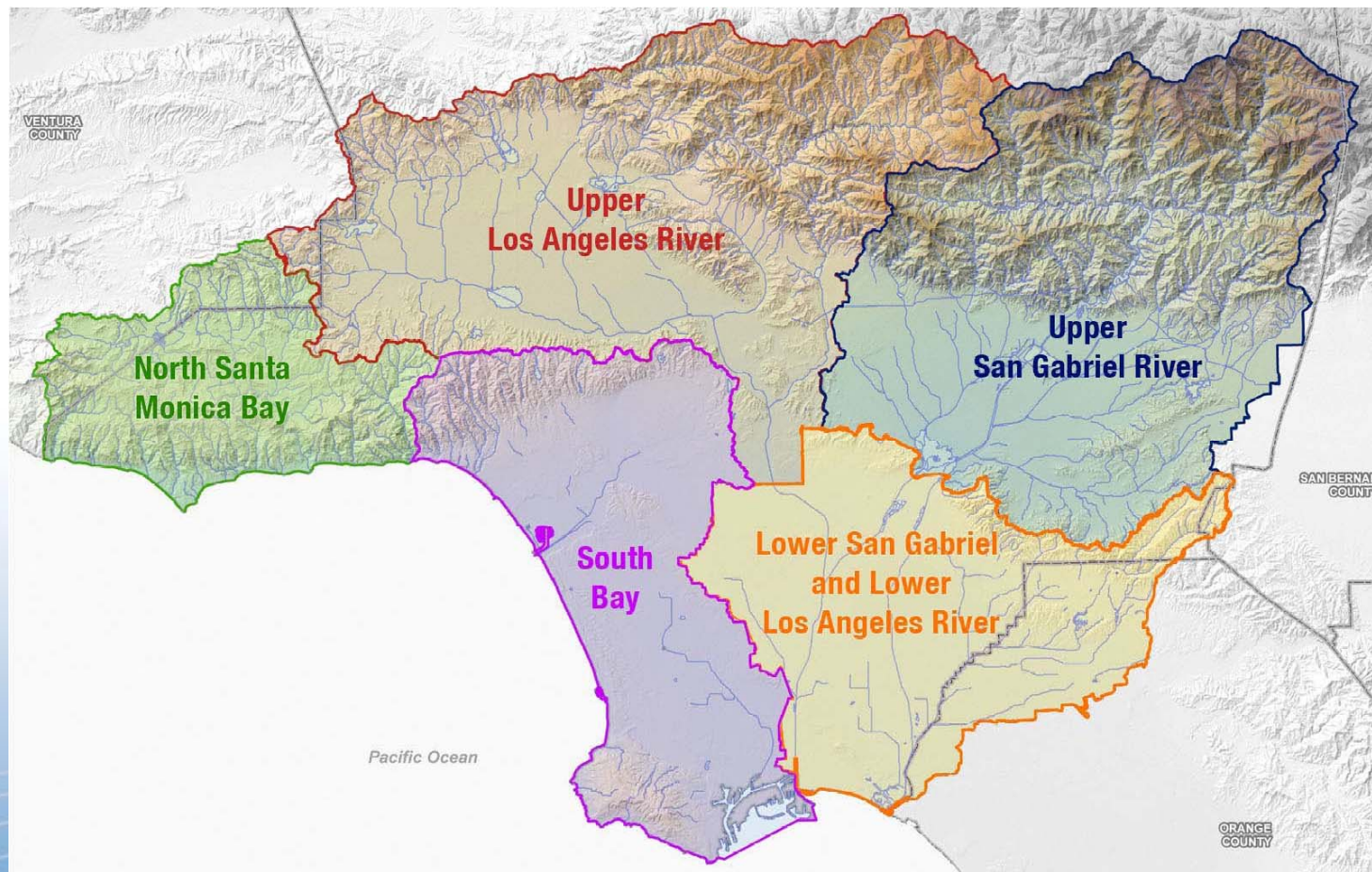


-Figure 1-

# San Gabriel Basin Contamination



# ***Greater Los Angeles County IRWMP***









# GREATER LOS ANGELES COUNTY REGION IRWMP LEADERSHIP COMMITTEE

Gail Farber  
Chair  
Los Angeles County Flood Control District

## SUBREGIONAL GROUP REPRESENTATION

### Lower San Gabriel

Art Aguilar, Chair  
Central Basin  
Municipal Water District  
(Alternate: David Hill)

Belinda Faustinos, Vice-Chair  
Watershed Conservation  
Authority  
(Alternate: none)

### North Santa Monica Bay

Randal Orton, Chair  
Las Virgenes  
Municipal Water District  
(Alternate: Joe Bellomo)

Barbara Cameron, Vice-Chair  
City of Malibu  
(Alternate: Melina Watts)

### South Bay

Rich Nagel, Chair  
West Basin  
Municipal Water District  
(Alternate: Leighanne Reeser)

Robb Whitaker, Vice-Chair  
Water Replenishment District  
(Alternate: Rob Beste)

### Upper Los Angeles

Tom Erb, Chair  
City of Los Angeles  
Department of Water & Power  
(Alternate: Andy Niknafs)

Nancy Steele, Vice-Chair  
Los Angeles & San Gabriel Rivers  
(Alternate: Edward Belden)

### Upper San Gabriel

Carol Williams, Chair  
Main San Gabriel Basin  
Watermaster  
(Alternate: Wendy La)

Grace J. Kast, Vice-Chair  
San Gabriel Basin  
Water Quality Authority  
(Alternate: Randy Schoellerman)

## WATER MANAGEMENT AREA REPRESENTATION

### Groundwater

Tony Zampiello  
Raymond Basin  
Management Board

Alternate:  
Mike Sovich  
Three Valley MWD

### Open Space

Shelley Luce  
Santa Monica Bay  
Restoration Commission

Alternate:  
Norma Garcia  
Los Angeles County  
Department of  
Parks & Recreation

### Sanitation

Steve Maguin  
County Sanitation Districts

Alternate:  
Sharon Green  
County Sanitation Districts

### Stormwater

Shahram Kharaghani  
City of Los Angeles  
Watershed Protection Division

Alternate:  
Donna Chen  
City of Los Angeles  
Watershed Protection Division

### Surface Water

Jeff Kightlinger  
Metropolitan Water District

Alternate:  
Grace Chan  
Metropolitan Water District

# IRWM Program

## ➤ Objectives – 20-year horizon

### Increase Water Supply Reliability



### Increase Reclaimed Water Usage



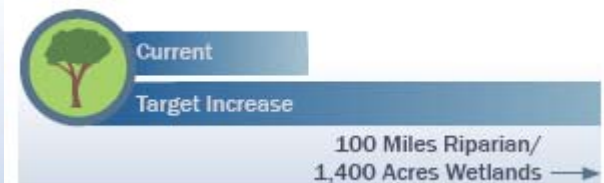
### Improve Water Quality (TMDLs)



### Improve Groundwater Quality



### Enhance Habitat



### Enhance Open Space, Recreation



### Sustain Communities



# Integrated Regional Water Management Success Story

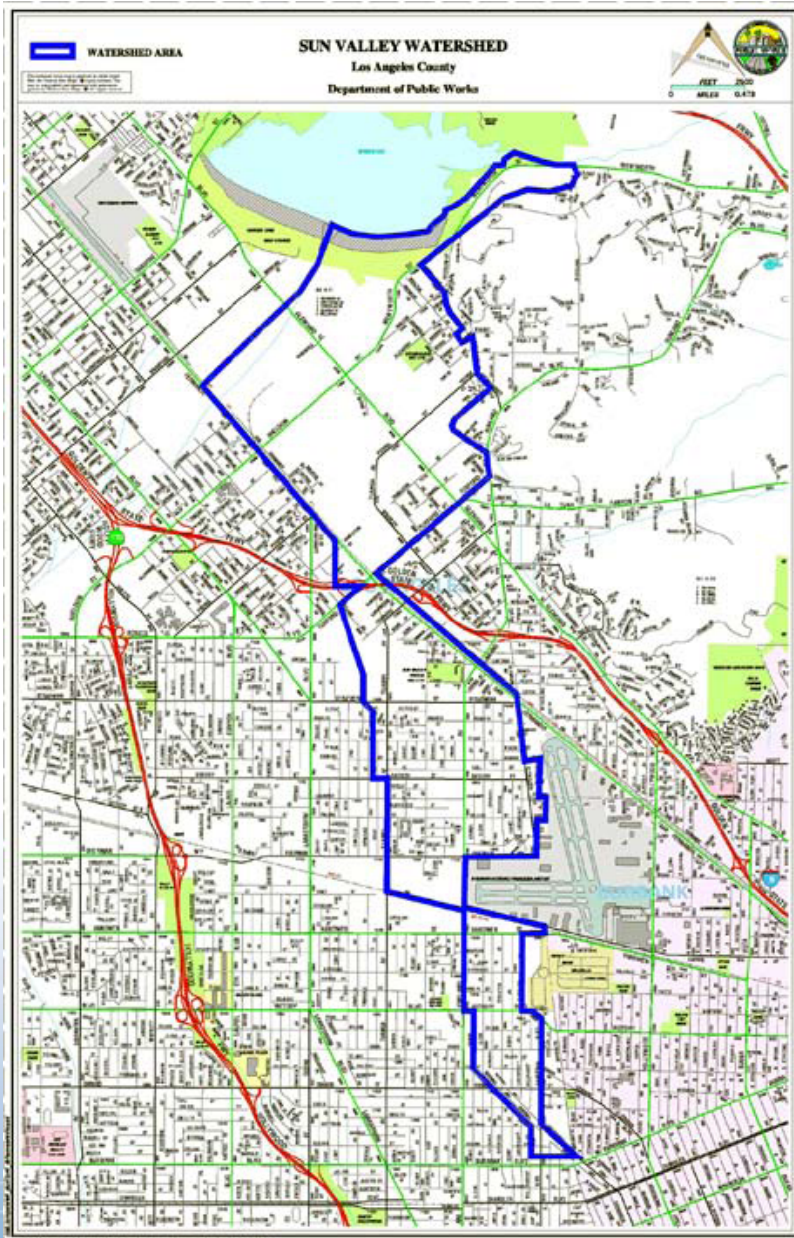




# Sun Valley Watershed Project

*Mission Statement: Solve the local flooding problem while retaining all storm water runoff from the watershed increasing water conservation ,recreation opportunities and wildlife habitat and reducing storm water pollution*





Tributary to the Los Angeles River  
4.4 square mile watershed  
Highly Urbanized with little  
recreation or open space

*Sun Valley Watershed*





# Sun Valley – Highly Urbanized





# Extreme Flooding Problems





# Regional and Local Partners

- LA County
- LA City
- DWP
- State of CA
- Tree People
- LAUSD
- Burbank
- RWQCB
- Watermaster
- Elected Officials
- Property Owners

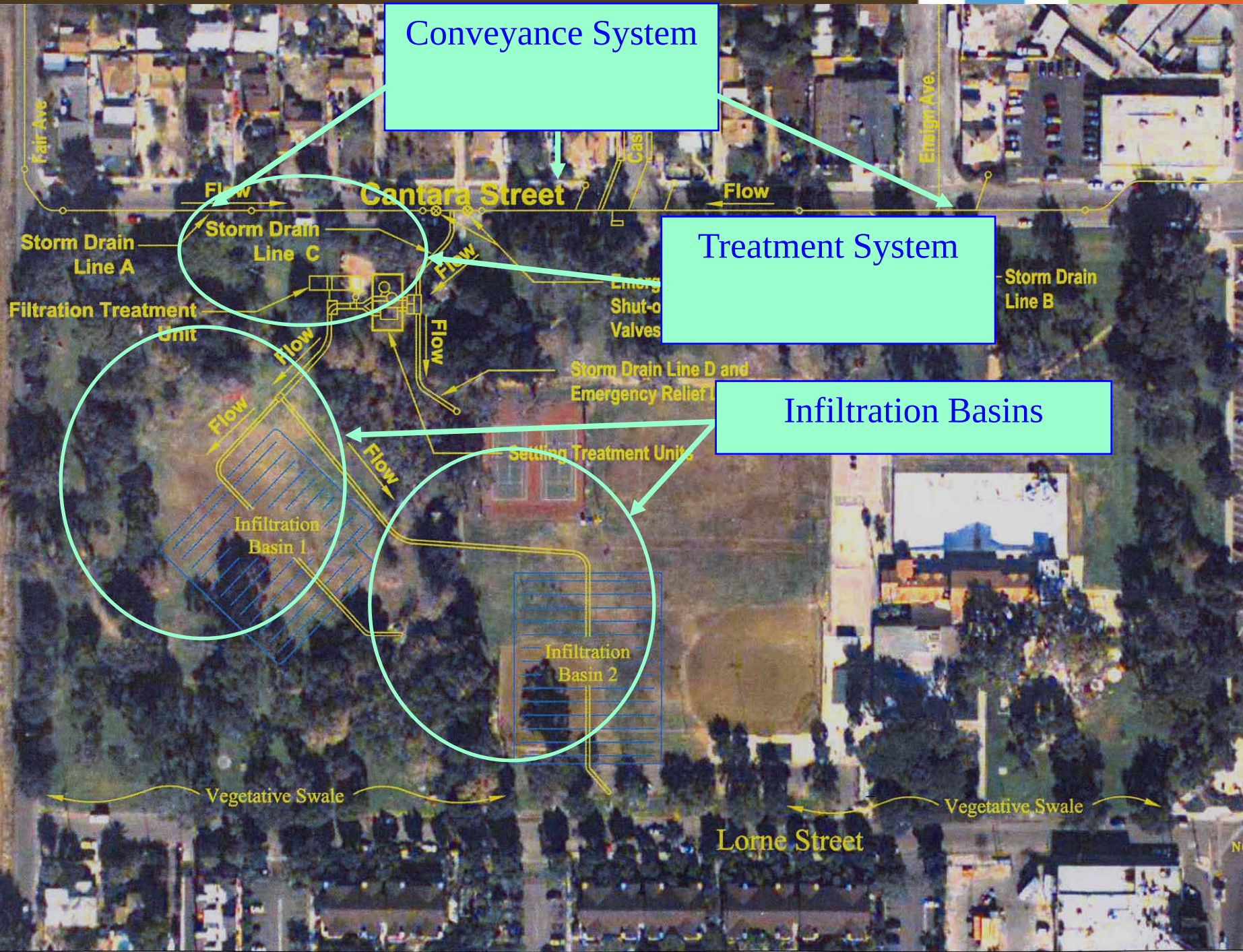




Conveyance System

Treatment System

Infiltration Basins





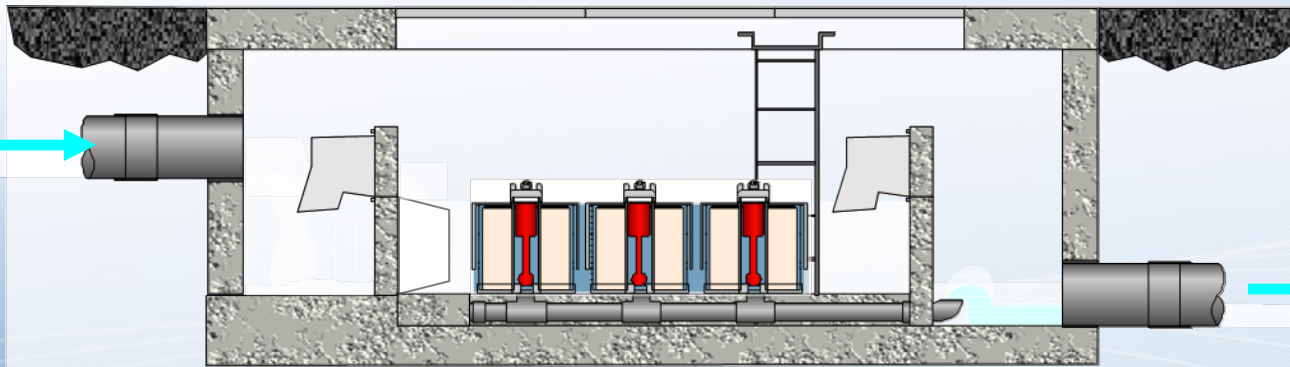
# Innovative Technology (BMPs)



Settling Treatment



Infiltration Basins

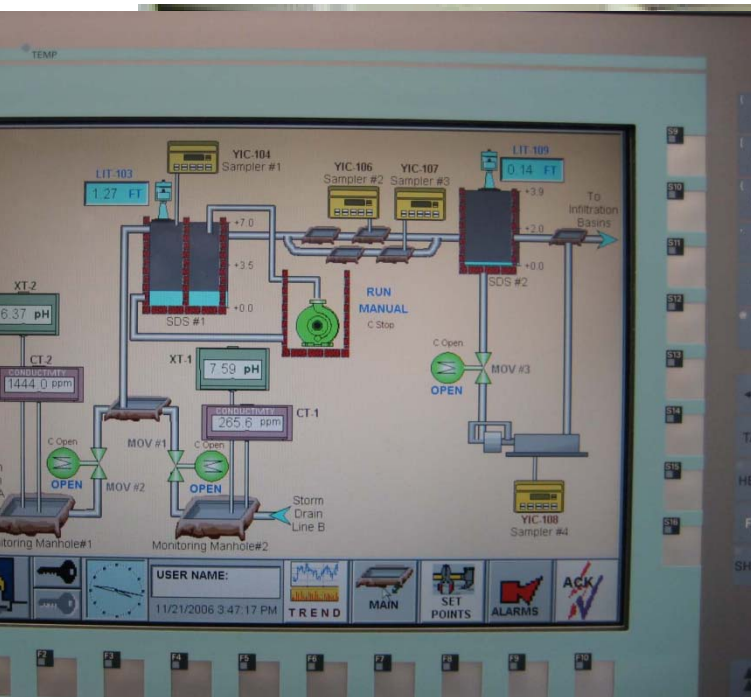


Filtration (Metals Treatment)

















# Tuxford Green Project



# Tuxford before





# Tuxford After





# STRATHERN WETLANDS PARK

## Integration...Collaboration...Partnership









# Elmer Street, Sun Valley













# IRWM Challenges

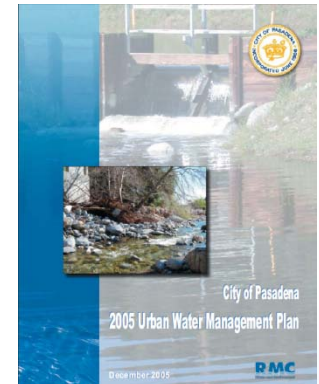
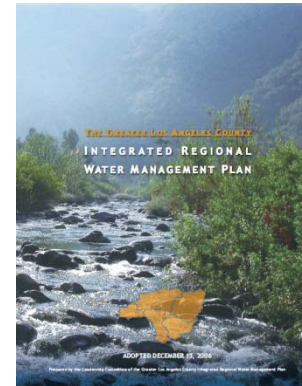
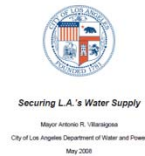
## ➤ Regional Governance

- Single agency project sponsorships
- Missed partnership opportunities
- Local emphasis
- Silo mindset

# Challenges

## ➤ Integrated Regional Planning

- Multiple agencies
- Diverse missions
- Multiple plans



# Challenges

## ➤ Policy and Legislation

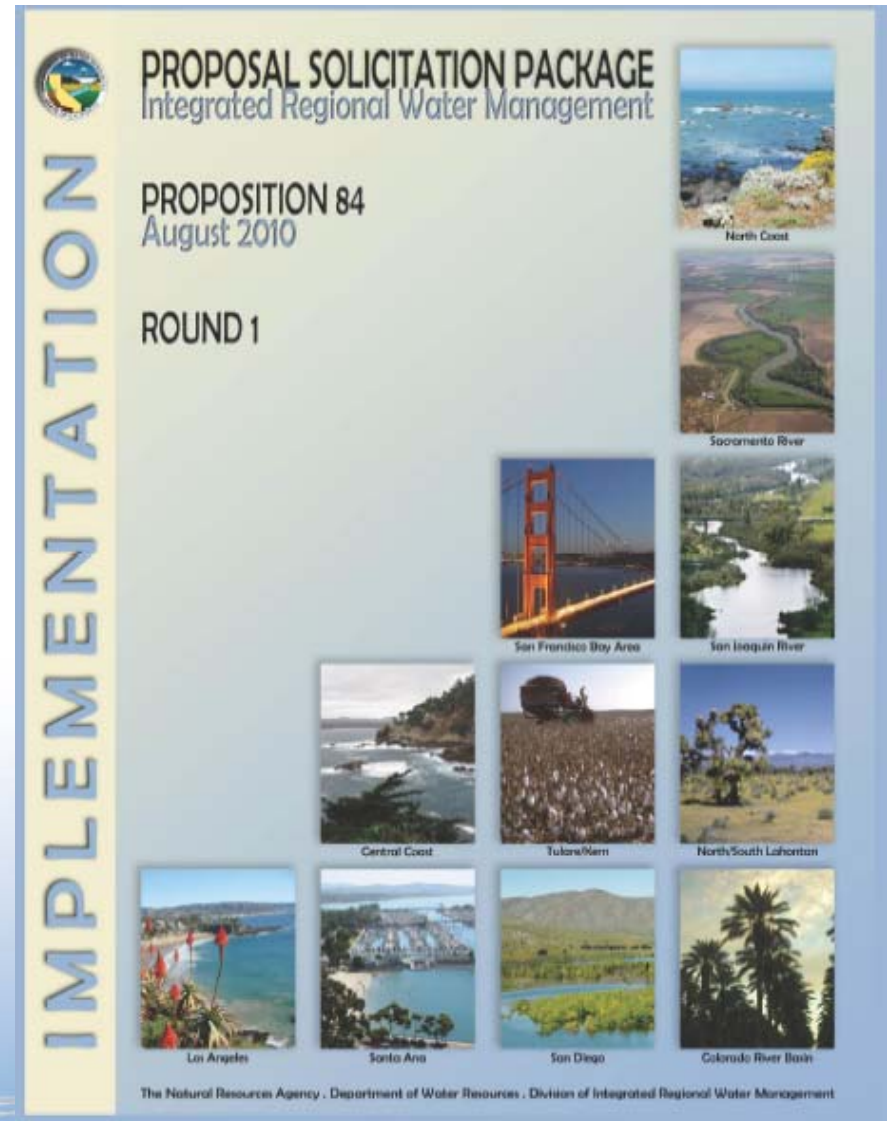
- Uncoordinated advocacy in Sacramento and Washington, D.C.
- Uncoordinated local policies
- Federal-level recognition of watershed management approach
- Lack of State agency coordination
- Lack of coordination with basin and management plans





# Challenges

- Funding
  - Inter-regional competition
  - Local agency commitment
  - Maintenance support



# Challenges

## ➤ State Leadership

- Inter-regional cooperation/communication
- Continued leadership by Department of Water Resources



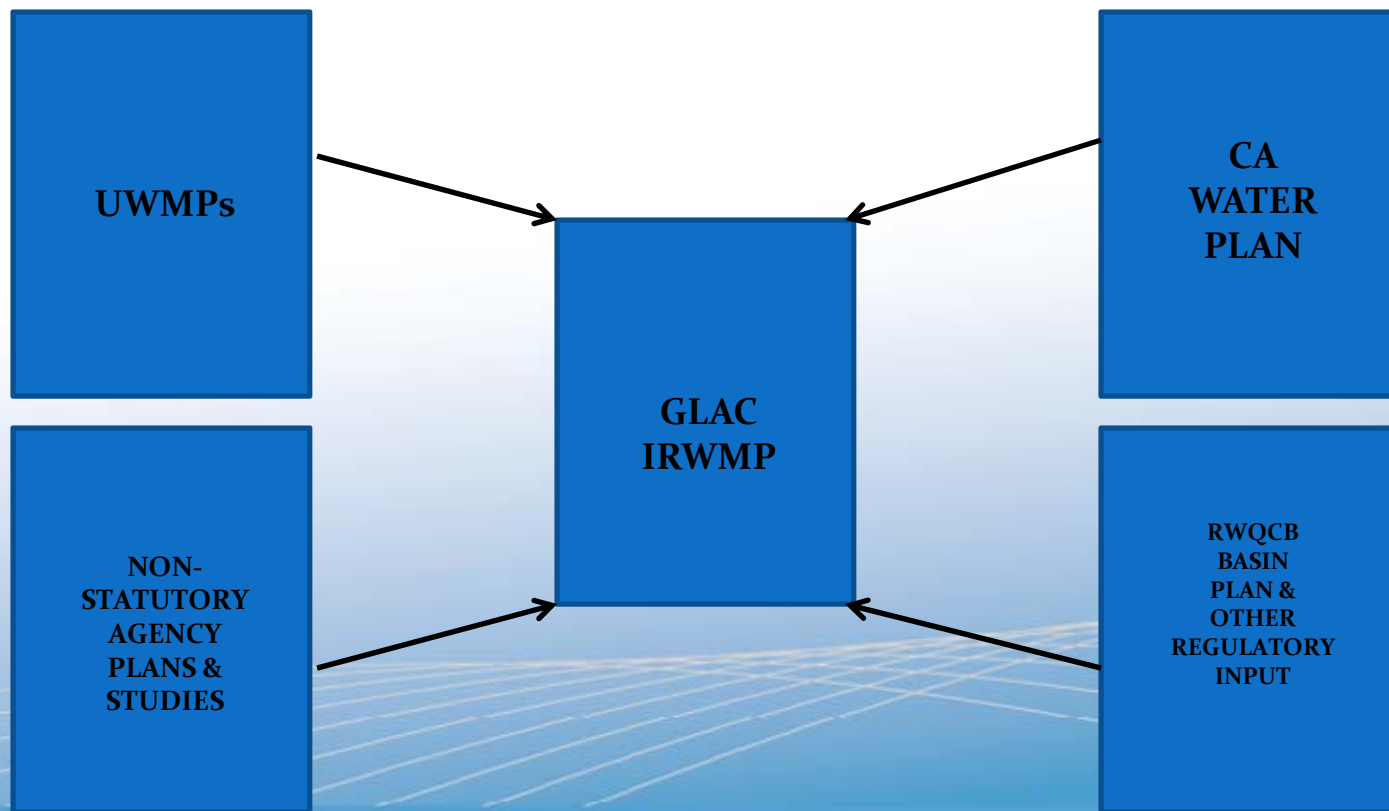
# Opportunities

- Formalized governance structure
  - Shared authority
  - Long-term commitment
  - Regionalized mindset



# Opportunities

## ➤ Integrated Regional Planning



# Opportunities

## ➤ Policy and Legislation

- Integration of IRWM governance that includes all levels of government.
- Should there be stronger statutory mandates for regional cooperation?
- What laws and regulations need to be reformed to better incorporate Federal and State agencies into the Regional IRWM process?

# Opportunities

- Funding
  - Simplify funding formulas to Regions
  - Local commitment results from governance restructuring
  - Secure State-funded maintenance support





# Questions?