

# Changing Habits: Adapting Through Innovative Strategies

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December 15, 2021

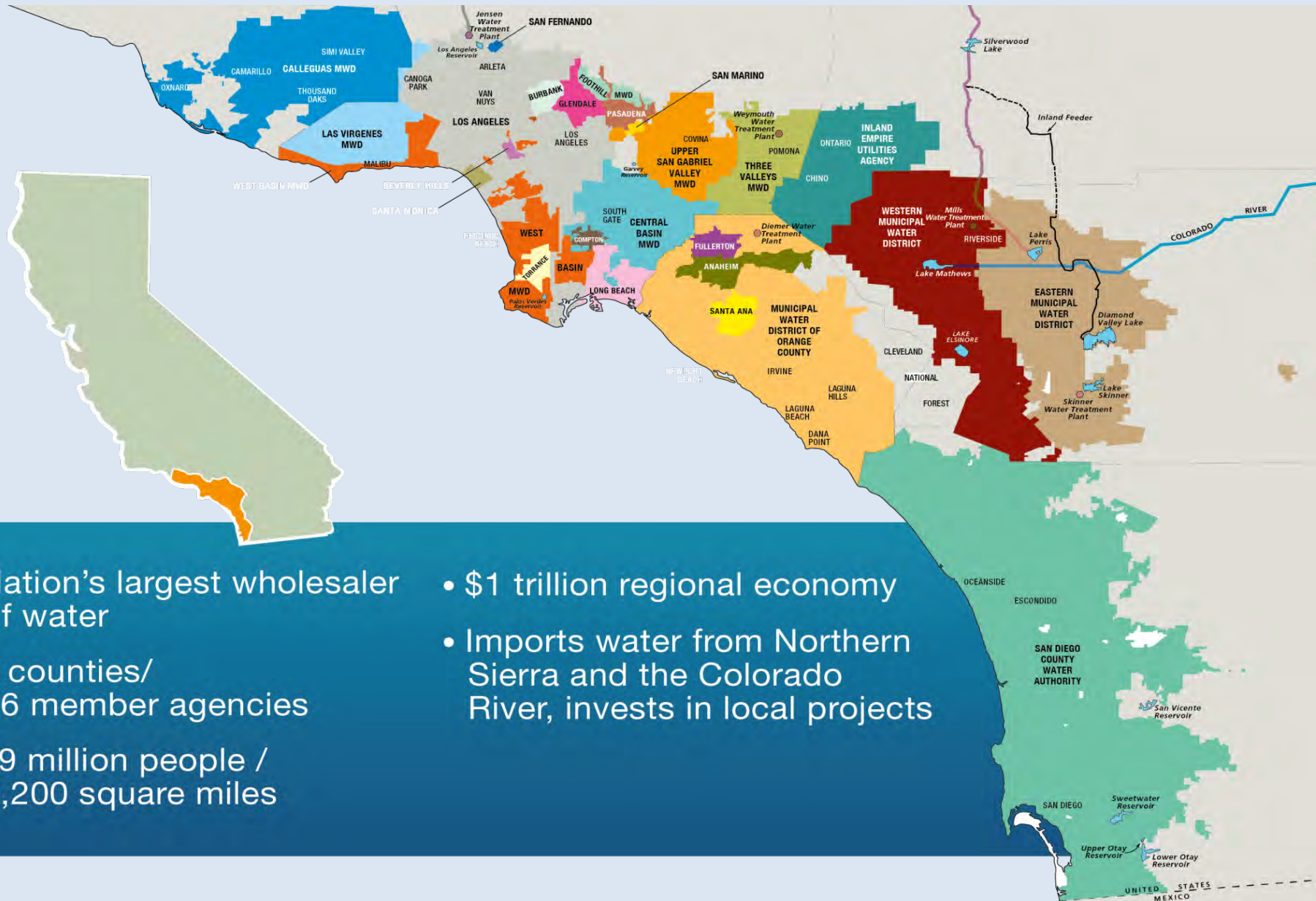
[mwdh2o.com/rrwp](https://mwdh2o.com/rrwp)



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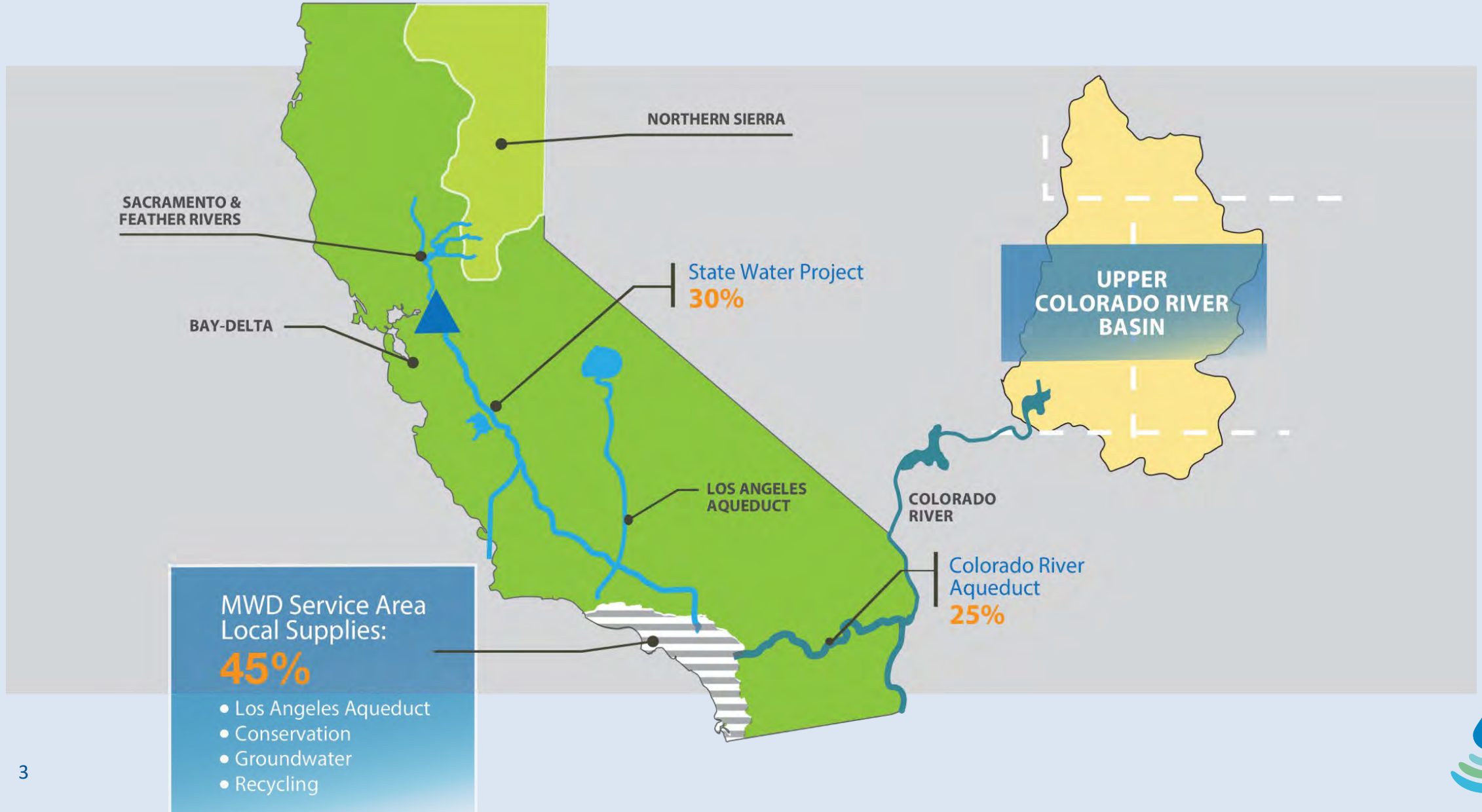
# METROPOLITAN OVERVIEW



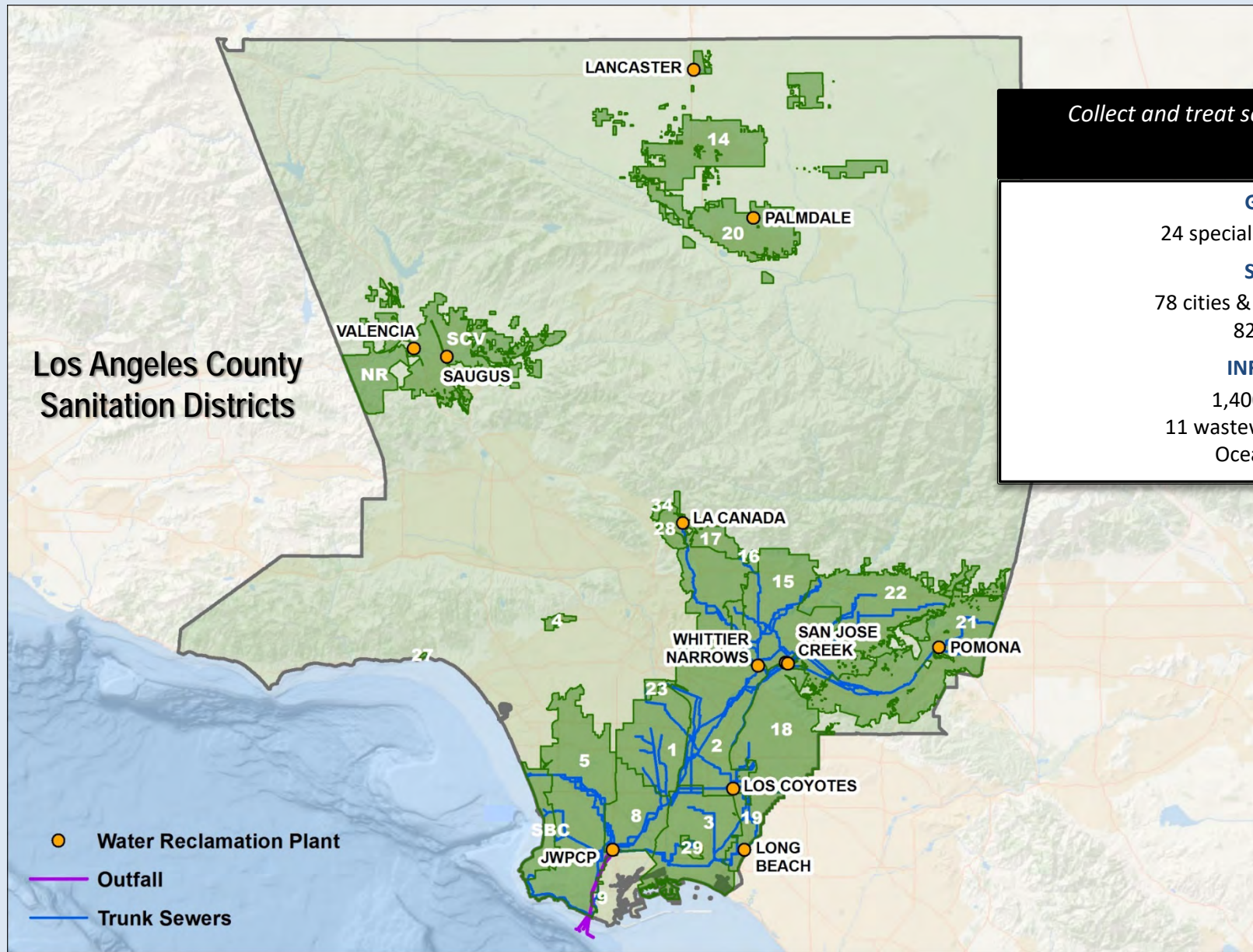
- Nation's largest wholesaler of water
- 6 counties/ 26 member agencies
- 19 million people / 5,200 square miles
- \$1 trillion regional economy
- Imports water from Northern Sierra and the Colorado River, invests in local projects



# SOURCES OF WATER FOR SOUTHERN CALIFORNIA



# LACSD OVERVIEW



Los Angeles County  
Sanitation Districts

*Collect and treat sewage from 5.6 million people*

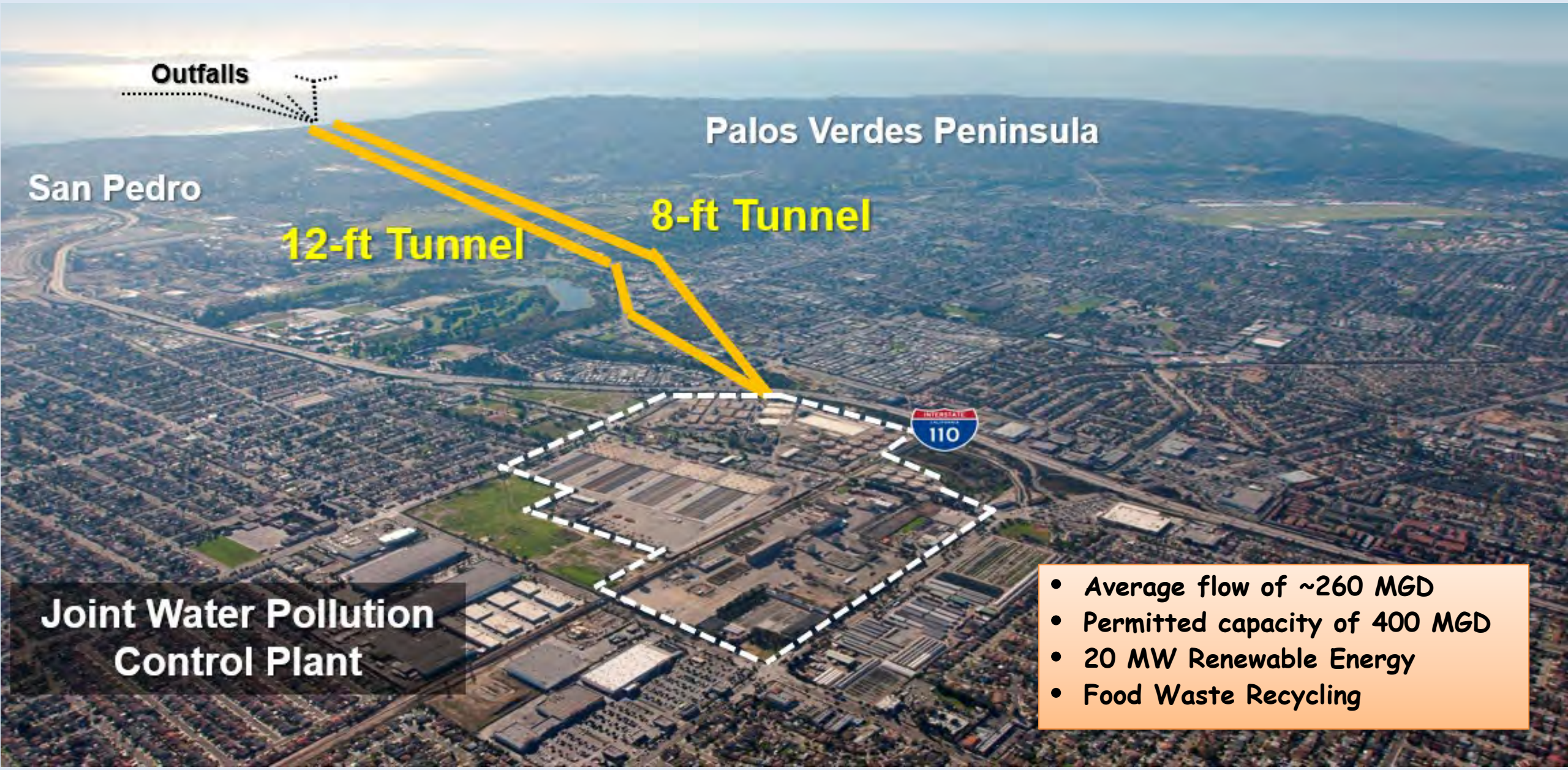
**GOVERNANCE**  
24 special districts with one staff

**SERVICE AREA**  
78 cities & unincorporated county  
824 square miles

**INFRASTRUCTURE**  
1,400 miles of sewers  
11 wastewater treatment plants  
Ocean outfall system



# Joint Water Pollution Control Plant



Outfalls

Palos Verdes Peninsula

San Pedro

12-ft Tunnel

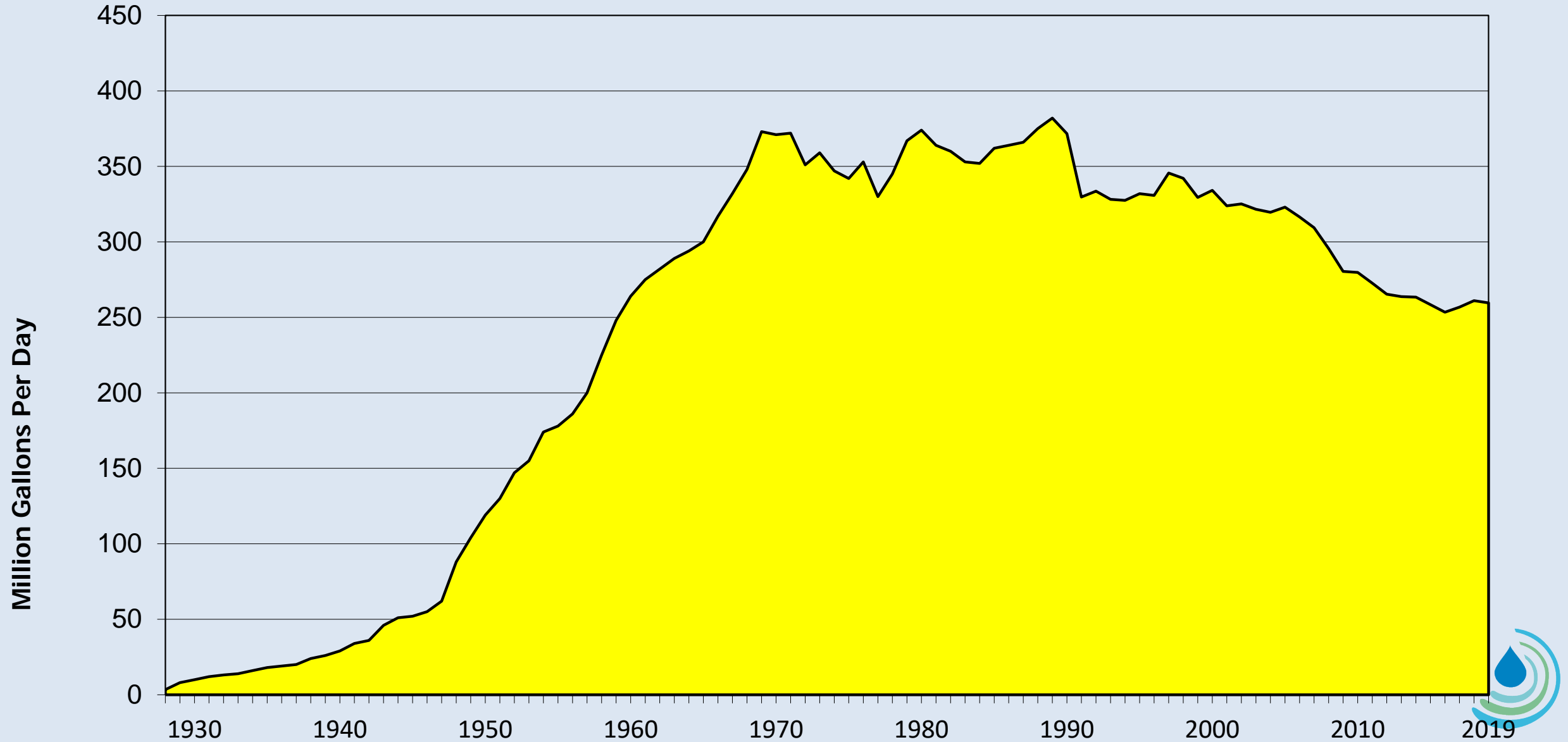
8-ft Tunnel

Joint Water Pollution  
Control Plant



- Average flow of ~260 MGD
- Permitted capacity of 400 MGD
- 20 MW Renewable Energy
- Food Waste Recycling

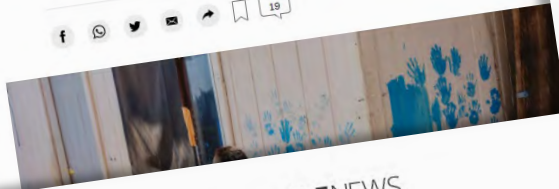
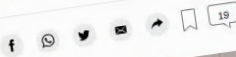
# Significant Wastewater Available To Be Purified



# Living with Droughts

CALIFORNIA TODAY

## Why California's Water Crisis Is So Difficult to Solve



## ENTERPRISE-RECORD

NEWS COVID-19 Sports Lifestyle Obits Opinion Advertising  
TRENDING: COVID vaccine notifications Camp evictions delayed North Complex Profiles Map: CA coronavirus tiers  
NEWS WEATHER  
January rain might not be enough to improve drought impacts in 2021



MOST POPULAR

- Party of seven: Child celebrates quadruple
- Letter: Watch the evidence all been duped

Los Angeles Times

## California drought prompts first-ever 'zero water allocation'



CORONAVIRUS AND PANDEMIC

Prison officials ignored warnings before inmate transfer that led to virus outbreak, watchdog says

How experts will hunt for COVID origins in China

Riverside opens mass COVID-19 vaccination in one of state's most-infected regions

## Lingering Colorado River Drought Could Lead to Water Shortages

Unprecedented water rationing could begin in mid-2020, the government warns

By John Fialka, E&E News on September 6, 2019



The elevation of Lake Mead could drop by more than 20 feet by mid-2020. Credit: Alicia Burtner U.S. Geological Survey

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The Science of Feeding

AUTOMOTIVE  
EPA Races to Draft Interim Standards for CO<sub>2</sub>

PHYSICS  
The Cosmological Constant: Most Embarrassing Problem

BEHAVIOR & SOCIETY  
Scientists Need to Be Keenly Aware of the Drought

## Groundwater Levels Plummet in Crucial LA County Basins

By Patrick Healy • Published September 17, 2014 • Updated on September 18, 2014 at 8:00 am



Southern California's severe drought is depriving groundwater wells of the rainwater they so desperately need, putting resources for some 4 million people. Patrick Healy reports for the NBC4 News at 6 p.m. on Wednesday, Sept. 17, 2014.

## California and National Drought Summary for January 26, 2021, 10 Day Weather Outlook, and California Drought Statistics

Last Updated: Thursday, 28 January 2021 05:41  
Published: Thursday, 28 January 2021 05:41



### U.S. Drought Monitor California



January 26, 2021  
(Released Thursday, Jan. 28, 2021)  
Valid 7 a.m. EST

	Drought Conditions (Percent Area)				
	None	D0-D4	D1-D4	D2-D4	D3-D4
Current	0.00	100.00	95.20	75.74	39.46
Last Week 01-19-2021	0.00	100.00	95.20	78.12	39.46
3 Months Ago 10-27-2020	15.40	84.60	67.54	35.61	12.74
Start of Calendar Year 12-29-2020	0.00	100.00	95.17	74.34	33.75
Start of Water Year 09-29-2020	15.35	84.65	67.65	35.62	12.74
One Year Ago 01-28-2020	65.72	34.28	0.00	0.00	0.00

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe
- D3 Extreme Drought
- D4 Exceptional Drought

# REGIONAL RECYCLED WATER PROGRAM

*A \$3.4 billion investment*



①

Wastewater from homes, businesses, and industries in LA County

②

Treated at Sanitation Districts' Joint Water Pollution Control Plant

③

Purified at Metropolitan's advanced water treatment plant

④

Conveyed through over 60 miles of pipeline to groundwater basins, industries, or Metropolitan's treatment plants

⑤

A new purified source of water for Southern California





# New Advanced Water Purification Facility Site



52 acres

City of Los Angeles

City of Los Angeles

City of Carson

Unincorporated County

JWPCP  
~235 acres



# REGIONAL RECYCLED WATER PROGRAM

*In numbers*



Up to 150 million  
gallons per day or  
168,000 acre-feet  
per year



Enough water  
for 500,000  
homes



One of the  
largest programs  
of its kind in  
world



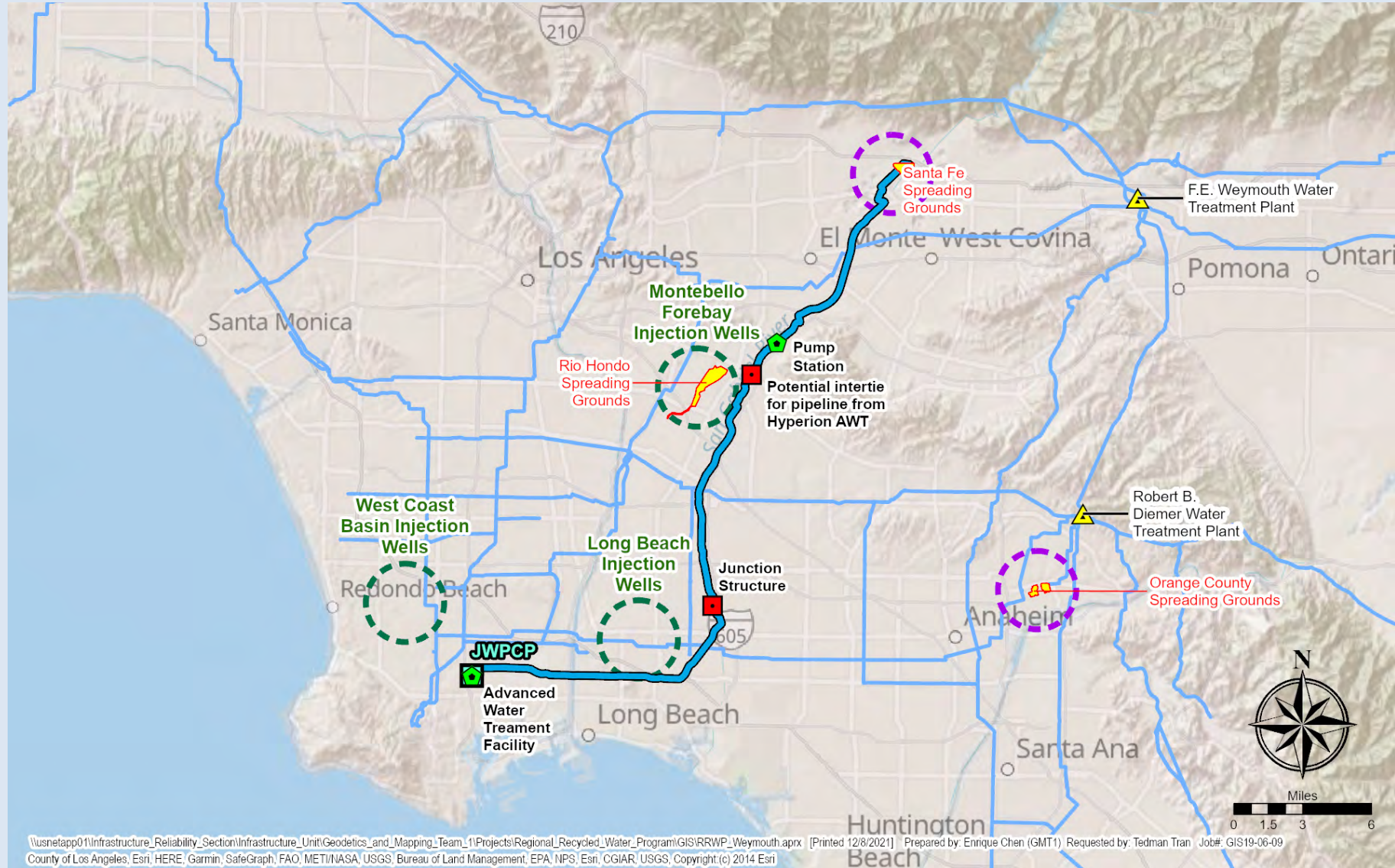
# A FULL-SCALE ADVANCED WATER TREATMENT PLANT



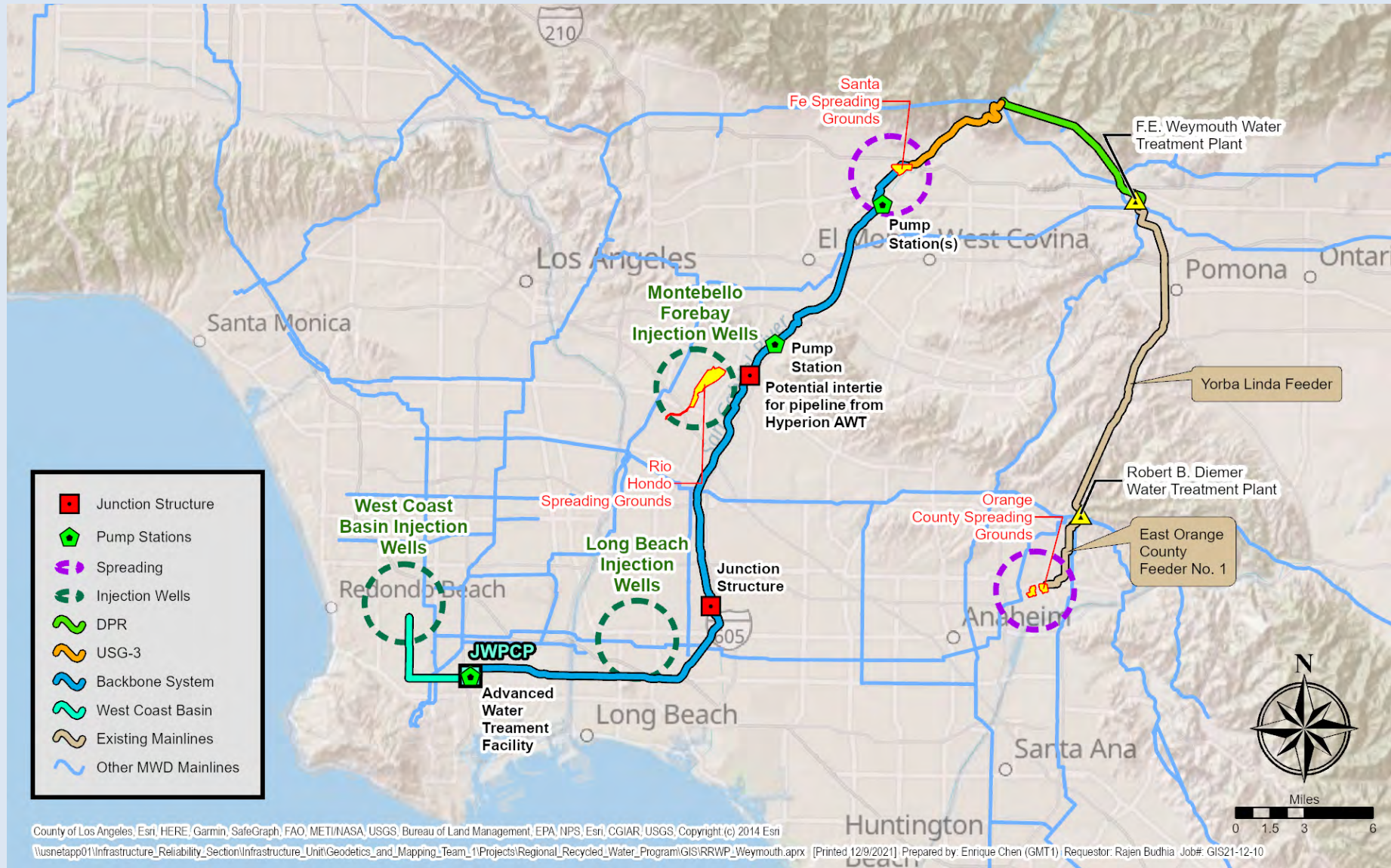
Three-step purification process featuring membrane bioreactors, reverse osmosis and ultraviolet light/advanced oxidation



# CREATE A BACKBONE REGIONAL SYSTEM



# EXPAND TO POTABLE REUSE AT EXISTING PLANTS



# BLENDING WATER SUPPLIES AT WEYMOUTH

## Raw Water Augmentation

Weymouth Aerial Location Map



# PROGRAM PARTNERS

## Wastewater Partner



**LOS ANGELES COUNTY  
SANITATION DISTRICTS**  
*Converting Waste Into Resources*

## Groundwater Basin Managers



**Main San Gabriel Basin  
WATERMASTER**

## Metropolitan Member Agencies



## Colorado River Partners



**SOUTHERN NEVADA  
WATER AUTHORITY®**



## Other Key Partners



**US Army Corps  
of Engineers®**



**SOUTHERN CALIFORNIA  
EDISON®**  
Energy for What's Ahead™



**Public Works**  
LOS ANGELES COUNTY

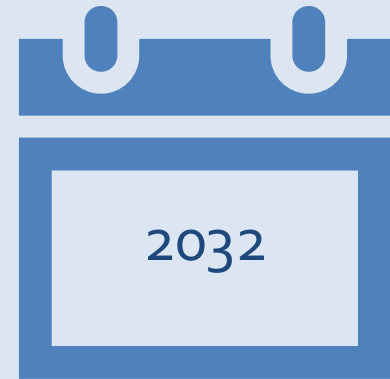
# PROGRAM SCHEDULE



Environmental  
Planning



Design and  
Construction



Start-up and  
Operations







# Regional Recycled Water

## Advanced Purification Center

Our demonstration facility is central to the program.



# REGIONAL RECYCLED WATER PROGRAM WEBSITE

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

EN Local Water Agency Director Login

## WELCOME LEARNING CENTER

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA SANITATION DISTRICTS OF LOS ANGELES COUNTY

### Expanding Local Resources

Water is too precious to use just once. So, the Metropolitan Water District of Southern California is making a major investment in a potential water recycling project that will reuse water currently sent to the ocean.

The Regional Recycled Water Program will purify wastewater to produce sustainable, high-quality water that could be used again. This partnership with Los Angeles County Sanitation Districts started with a demonstration facility and could eventually become one of the largest advanced water treatment plants in the world.

[View our program resources →](#)

