



# WEST BASIN

Municipal Water District

## Purple Pipe – Remember Me?

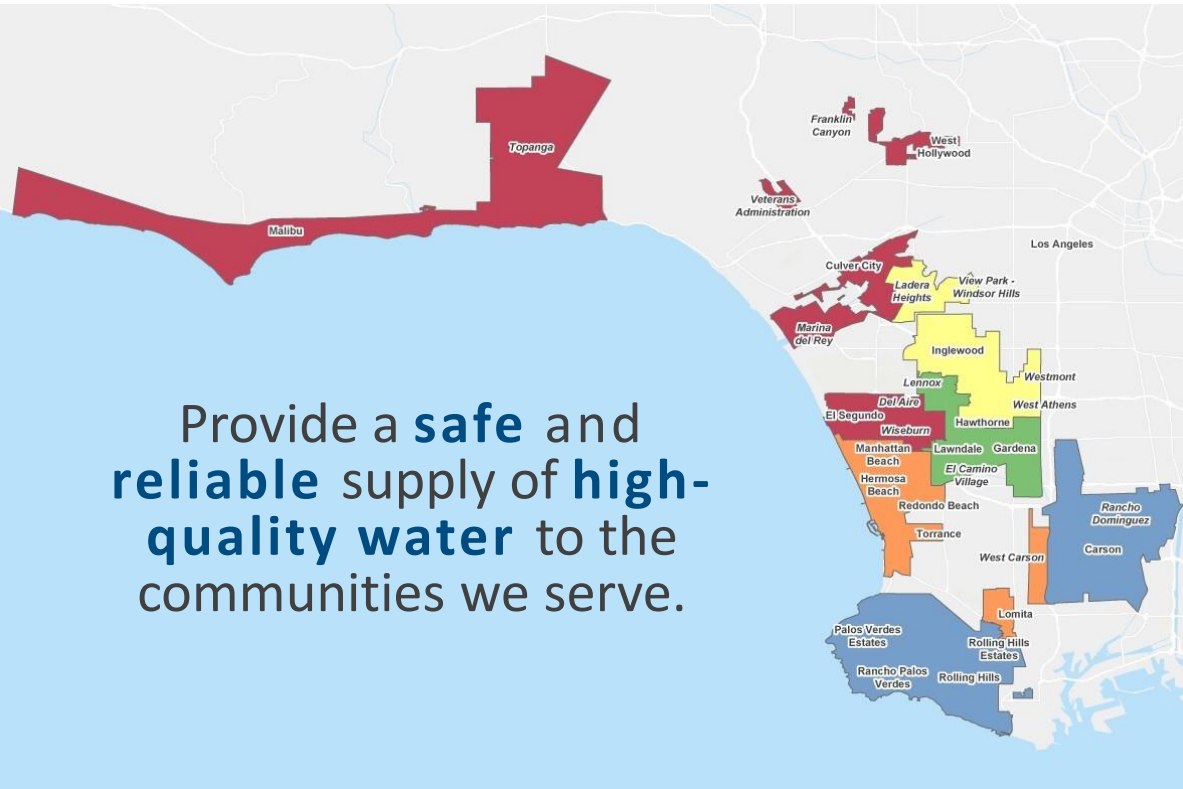
WaterReuse Los Angeles

April 9, 2024

[www.westbasin.org](http://www.westbasin.org)



# Service Area



Provide a **safe** and **reliable** supply of **high-quality water** to the communities we serve.

## Division I (Harold Williams)

Carson, Palos Verdes Estates, Rancho Palos Verdes, Rolling Hills, Rolling Hills Estates, and the unincorporated LA County areas of Rancho Dominguez

## Division II (Gloria Gray)

Inglewood, portions of the cities of Gardena and Hawthorne, and the unincorporated LA County areas of Ladera Heights, View Park-Windsor Hills, West Athens, and Westmont

## Division III (Desi Alvarez)

Hermosa Beach, Lomita, Manhattan Beach, Redondo Beach, a portion of the city of Torrance, and the unincorporated LA County area of West Carson

## Division IV (Scott Houston)

Culver City, El Segundo, Malibu, West Hollywood, a portion of the city of Hawthorne, and the unincorporated LA County areas of Del Aire, Marina del Rey, Topanga, and Wiseburn

## Division V (Donald Dear)

Lawndale, portions of the cities of Gardena and Hawthorne, and the unincorporated LA County area of El Camino Village and Lennox

# Water Recycling



*Edward C. Little Water Recycling Facility  
El Segundo, Calif.*

- Secondary treated water from Hyperion
- Edward C. Little Water Recycling Facility, El Segundo
- 30 - 40 million gallons per day produced and prevented from entering the ocean
- Five types of recycled water
- Satellite plants to add further treatment for refinery customers

# 5 Types of Recycled Water

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## **Irrigation Water**

Filtered and disinfected for industrial and irrigation use.



## **Cooling Tower Water**

Processed to remove ammonia for industrial cooling tower use.



## **Low-Pressure Boiler Feed Water**

Membrane filtration and reverse osmosis membranes



## **High-Pressure Boiler Feed Water**

Membrane filtration and passed through reverse osmosis membranes twice



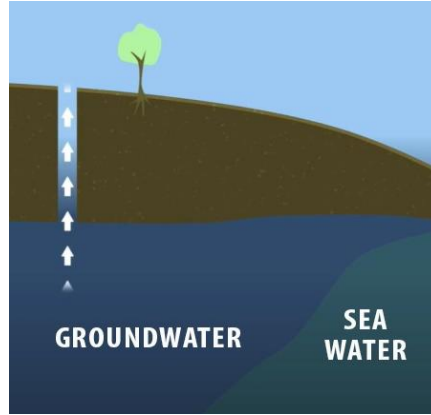
## **Seawater Barrier Water**

Membrane filtration, reverse osmosis, and disinfection for use in a barrier against seawater intrusion, augmenting local well water supplies.

# Recycled Water Portfolio



**Refineries**  
**50%**



**Seawater Barrier**  
**35%**



**Irrigation & Other**  
**15%**

# Recycled Water Customers



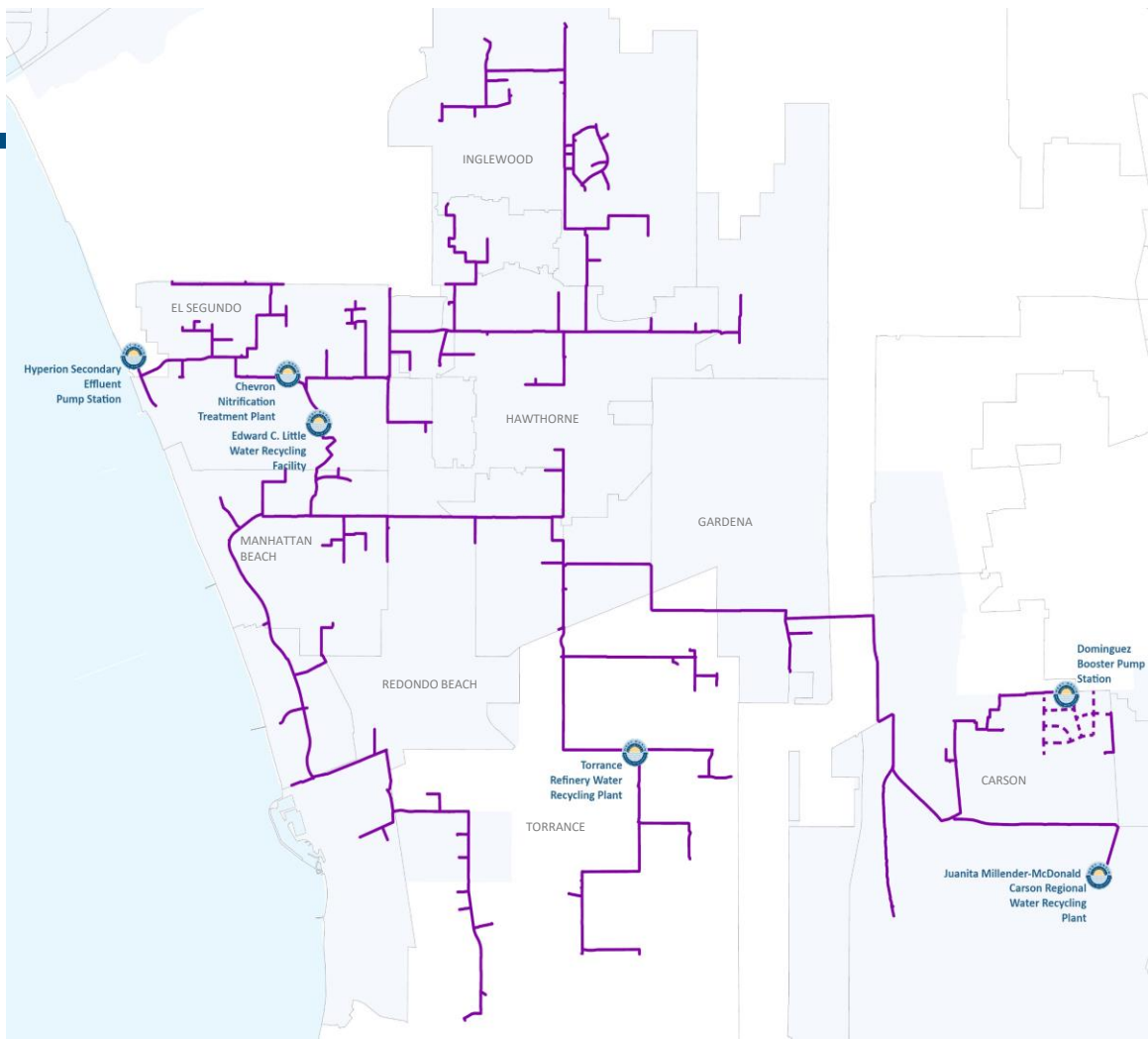
# West Basin Distribution System



West Basin Facility

Recycled Water Pipeline

Recycled Water Pipeline,  
California Water Service Company



# Upcoming Recycled Water Sites

- LA Stadium and Entertainment District, Inglewood
- Inglewood Basketball and Entertainment Center (Clippers Arena), Inglewood
- Nash Street Extension, El Segundo
- Palos Verdes Lateral, Torrance and Palos Verdes
- District at South Bay, Carson





# LA Stadium and Entertainment District (LASED)

- RW Use: Irrigation, Lake Fill
- Existing Sites:
  - SoFi Stadium
  - Parkways
  - Hollywood Park Residential (“The Crosby” & “The Wesley”)
  - Hollywood Park Retail Center
- Site Demand: 80 AFY



# LA Stadium and Entertainment District (LASED)

- RW Use: Irrigation
- New Sites (*to be connected*):
  - Hollywood Park COSM
  - Hollywood Park Studios
- Estimated Demand: 4 AFY
- Anticipated Connection: June 2024



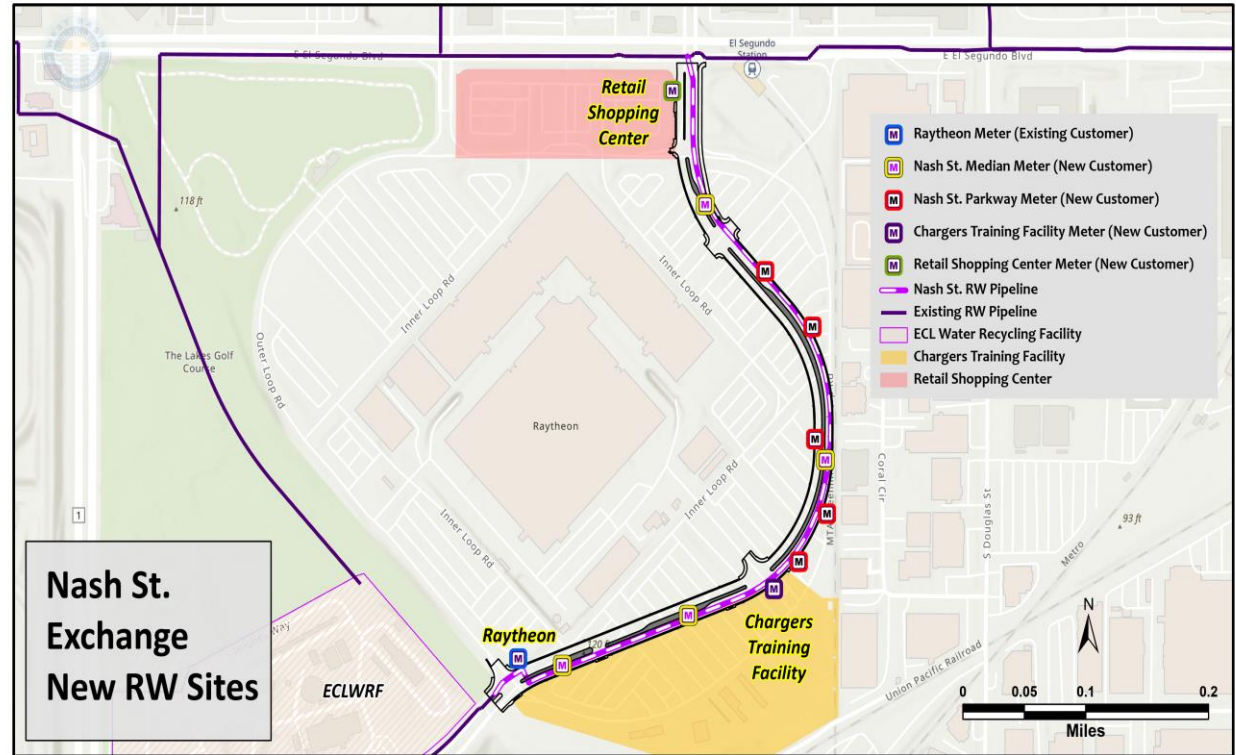
# Inglewood Basketball and Entertainment Center (IBEC)

- RW Use: Irrigation, Dual Plumbing, Cooling Towers
- Onsite RO Treatment
- Overall Site Demand: 40 AFY
- Anticipated Connection: July 2024



# Nash Street Expansion

- RW Use: Irrigation
- Sites:
  - Chargers Training Facility
  - Retail Shopping Center
  - Nash St. Parkways & Medians
- Overall Site Demand: 25 AFY
- Anticipated Connection: June 2024



# Nash Street Expansion – Chargers Training Facility

- RW Use: Irrigation
- Practice Fields
- Overall Site Demand: 20 AFY
- Anticipated Connection: June 2024



# Palos Verdes Lateral



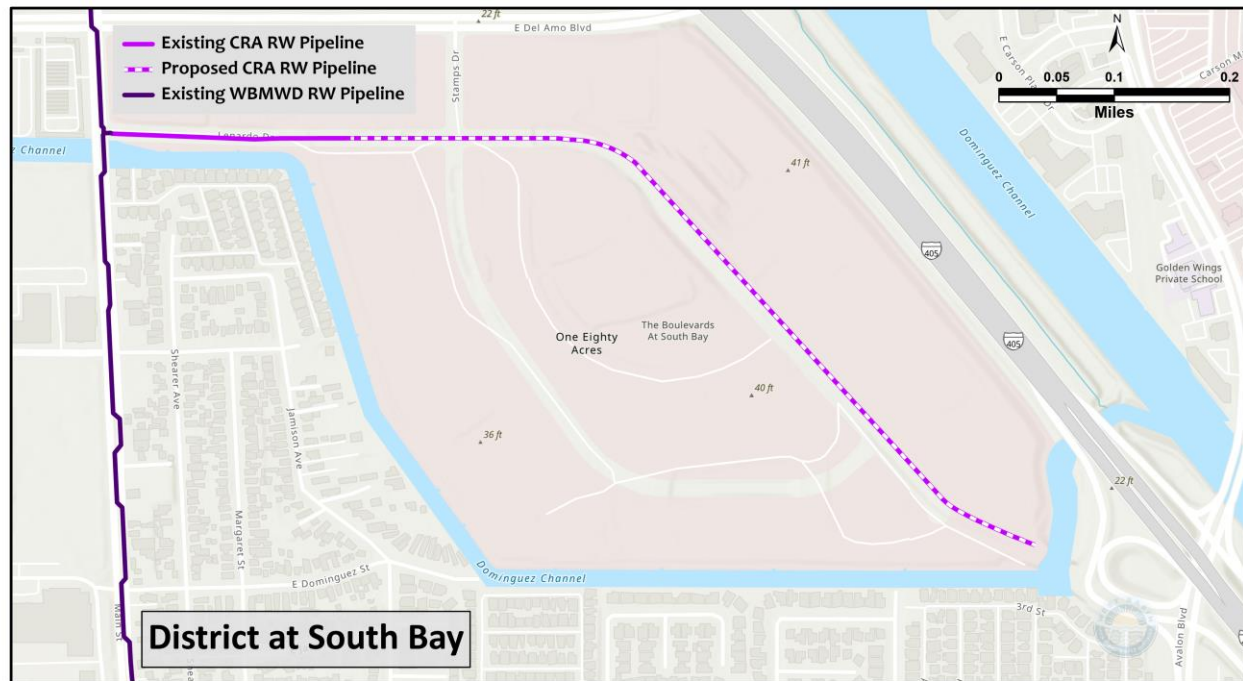
# Palos Verdes Lateral

- RW Use: Irrigation
- Sites (*to be retrofitted*):
  - Lago Seco Park
  - Los Arboles Park
  - PCH Medians
  - Anza Medians
  - Richardson Middle School
  - Riviera Elementary
  - PV Golf Club
- Overall Demand: 248 AFY
- Anticipated Connections: Starting late 2024



# District at South Bay (Carson Reclamation Authority)

- RW Use: Irrigation
- Estimated Demand: 60 AFY
- Sites: Park, Industrial, Shopping Center
- Anticipated Connection: 2026/2027





# Thank You!



Frank Fuchs  
Operations Supervisor

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[www.westbasin.org](http://www.westbasin.org)

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West Basin



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West Basin Municipal  
Water District



# Climate Action and Adaptation Plan

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Goals, Benefits, & Process

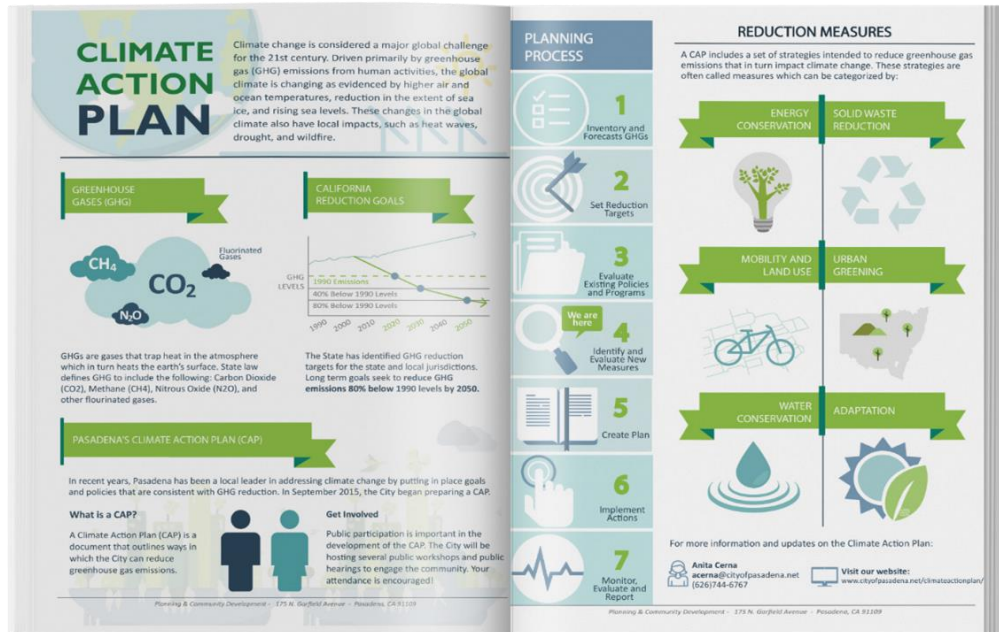


# Why LVMWD and Las Virgenes-Triunfo JPA Developed a CAAP



- Strengthened applications for funding Pure Water Project Las Virgenes - Triunfo
  - State Revolving Fund
  - Other potential grants and low-interest loans
- Intent to mitigate risks associated with future State requirements
- Identified and developed solutions for inefficiencies and vulnerabilities informed by recent disaster experiences (i.e. Woolsey Fire)
- Identified strategic investments for economical and impactful GHG reduction and climate adaptation projects
- Demonstrating recent accomplishments & progress

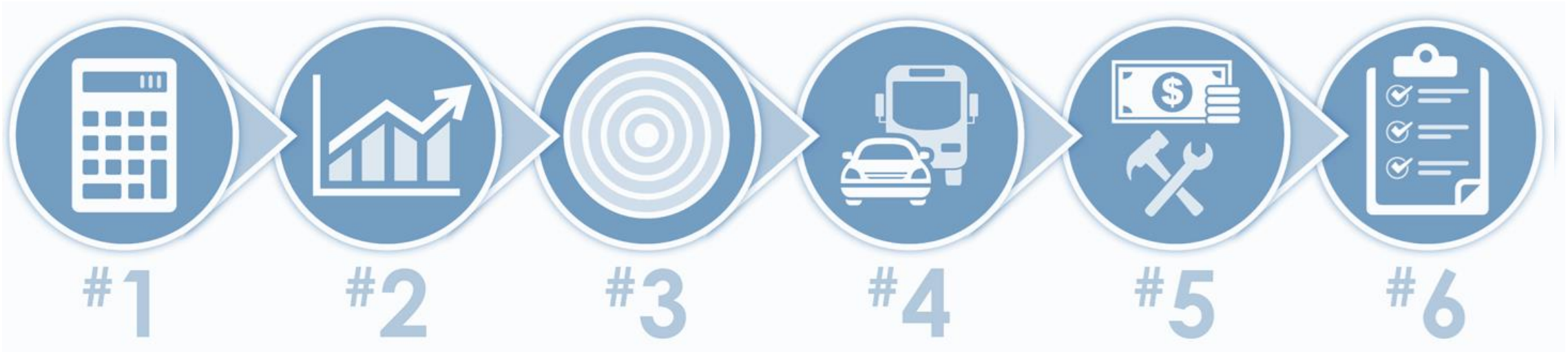
# Climate Action & Adaptation Plan Purpose



A roadmap for:

- Reducing GHG emissions in alignment with State goals
- Increasing resilience of critical facilities, infrastructure, services, and resources to climate change impacts

# Project Process



Baseline Inventory & Climate Vulnerability Assessment

Forecasting Emissions and projecting future climate changes

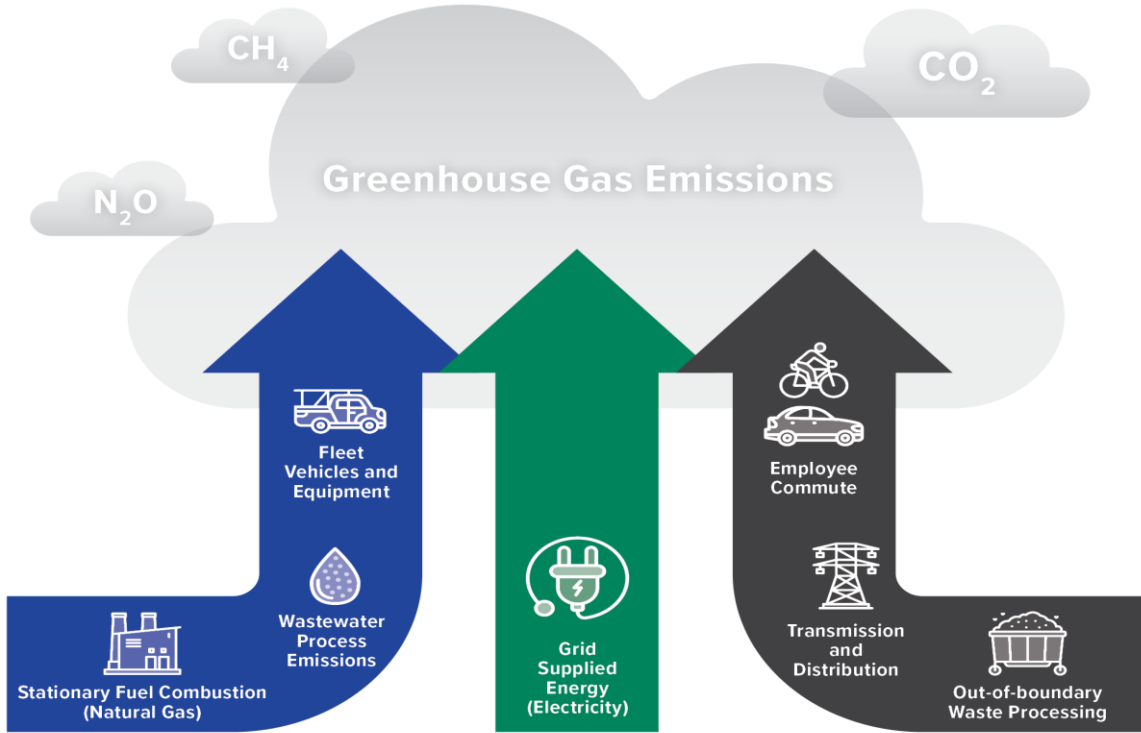
Establish Targets and adaptation goals

Strategy Selection, Report, Board Review and Adoption

Funding & Implementation

Monitor & Track Progress

# Climate Action Overview



<b>SCOPE 1</b> DIRECT EMISSIONS	<b>SCOPE 2</b> INDIRECT EMISSIONS	<b>SCOPE 3</b> INDIRECT EMISSIONS
GHG emissions generated by activities directly controlled by JPA.	GHG emissions associated with production of JPA's electricity, outside of JPA's direct control.	GHG emissions associated with all other activities required for JPA operations, outside of JPA's direct control.

(CO<sub>2</sub> = Carbon dioxide | CH<sub>4</sub> = Methane | N<sub>2</sub>O = Nitrous oxide)

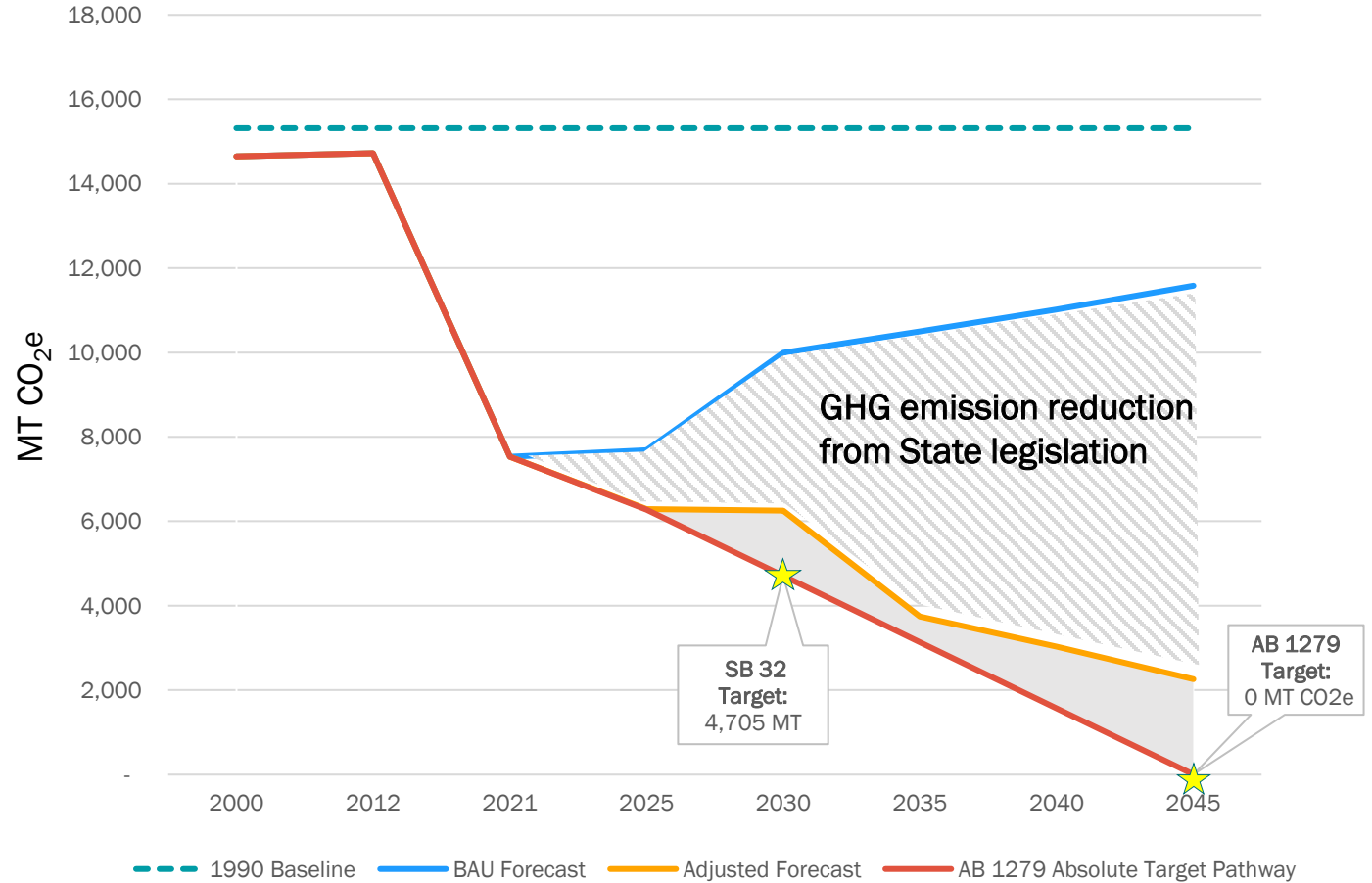
- Establishes inventory of baseline greenhouse gas (GHG) emissions
- Forecasts GHG emissions
- Establishes GHG emissions reduction goals
- Develops GHG reduction measures and actions



# Preliminary GHG Emissions Reduction Goals

Target Description	1990	2030	2045
Adjusted Forecast Emissions	15,314	6,249	2,260
% Reduction from 1990	N/A	70%	100%
Emissions Goal	N/A	4,705	0
Emissions Gap	N/A	1,544	2,260

- AB 1279 = carbon-neutrality by 2045



# Climate Adaptation Overview



- Details projected exposure to climate hazards: wildfire, heat, drought, storms, etc.
- Identifies vulnerable critical assets including systems components, infrastructure, and water resources
- Describes potential impacts and risks for each climate hazard based on critical asset vulnerability: damage, outages, disruptions, etc.
- Develops climate adaptation and resilience goals, measures, and actions





# Mitigation and Adaptation Strategy Structure



*\*Measures are categorized as infrastructure, operations, and natural resources*

## Climate Action and Adaptation Plan Objectives

Objective #1 Enhances Water Supply Diversification

Objective #2 Better Protected Water Resources

Objective #3 Increased Operational Efficiency & Resources Management

Objective #4 Improved Operational Flexibility & Reliability

Objective #5 Better Connected People and Water

# Key GHG Emissions Reduction Strategies



## 100% Carbon Free Electricity

-Purchased/grid-supplied electricity needs

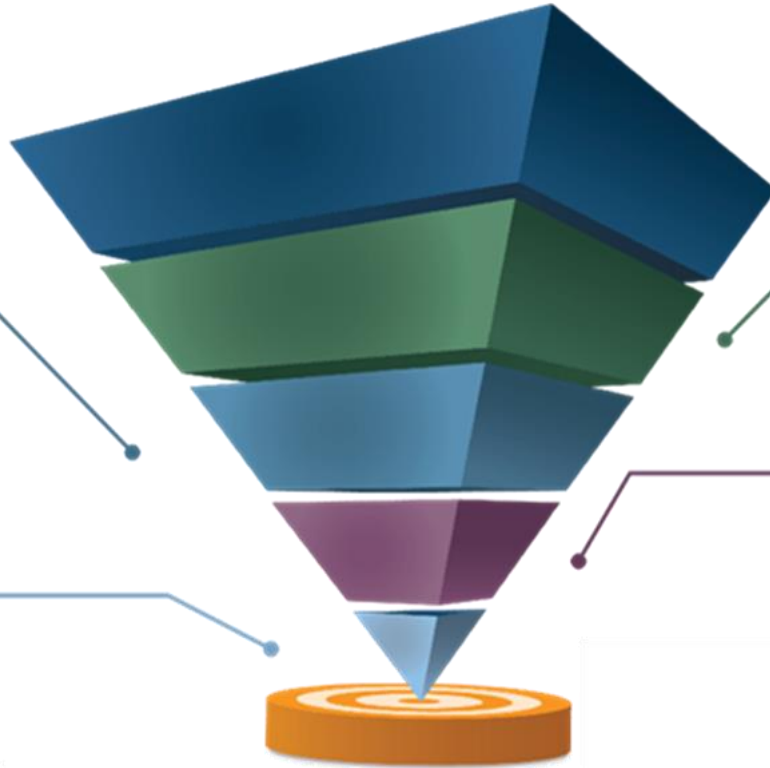
## Reduce Wastewater Process Emissions

-Long-term strategies such as methane capture for LCFS credits and implementation of the Pure Water Project



## Waste, Water & Sequestration

-Align with Senate Bill 1383 zero waste goals  
 -Continue water conservation efforts  
 -Investigate carbon sequestration projects and funding opportunities



## Electrify Existing Buildings



-Capitalizes on emission reductions from greener electricity source and current building energy efficiencies

## Electrify Fleet/ Reduce Commuter VMT



-Align with Advanced Clean Fleet Rule  
 -Incentivize more sustainable commutes

# Climate Action and Adaptation Measures

## Select Measures

Utilize carbon-free electricity for 100% of electricity needs by 2030.

Electrify new and existing stationary equipment to reduce natural gas consumption 75% by 2030 and 100% by 2045.

Utilize renewable diesel and alternative fuels to bridge the technology gap and decarbonize stationary equipment to reduce diesel consumption by stationary equipment 100% by 2030.

Increase energy storage at facilities and buildings.

Improve energy efficiency at facilities and buildings.

Reduce process and fugitive GHG emissions associated with wastewater treatment.

Maximize backup power facilities for all critical assets.

Improve the Supervisory control and data acquisition (SCADA) system.

Systematically incorporate mitigation and adaptation features into new capital projects.

Implement the Pure Water Project Las Virgenes Triunfo.

# Climate Action and Adaptation Measures

## Select Operations Measure

Reduce recycled water consumption for irrigation by 25% by 2030 compared with 2020 consumption levels.

Optimize treatment efficiency at the WWTP and other facilities utilizing AI/machine learning.

Develop a net zero waste program for operations such that waste sent to the landfill is reduced by 90% by 2030 and maintain through 2045.

## Select Natural Resources Measures

Catalog and improve the stability of hillside monitoring and stabilization efforts after heavy rain events in areas at risk of landslides and debris flows to minimize impacts to infrastructure and equipment.

Develop and implement a wildfire abatement and response policy

Increase wastewater treatment capabilities to manage potential future sediment levels from future stormwater, landslide, and erosion impacts

# Board Adoptions of the CAAP



Adopted unanimously by two Boards (JPA and LVMWD) by Resolution

No “rubber stamping”

- Held a workshop with each Board when a draft of the Plan was completed
- Incorporated feedback from each Board into the final Plan
- Presented the final Plan in advance of adoption

Emphasized Purpose and Limits of Plan

- Stressed goals and not hard commitments
- Implementation of actions only if deemed feasible by the Board(s)
- Annual progress reports and 5-year updates



## RESOLUTION NO. 32

### A RESOLUTION OF THE GOVERNING BOARD OF THE LAS VIRGENES – TRIUNFO JOINT POWERS AUTHORITY ADOPTING THE 2023 CLIMATE ACTION AND ADAPTATION PLAN

WHEREAS, the State of California has enacted legislation over the past several years that aims to reduce greenhouse gas (GHG) emissions to mitigate the effects of climate change;

WHEREAS, on January 9, 2023, the Governing Board of the Las Virgenes – Triunfo Joint Powers Authority (JPA) authorized the Administering Agent/General Manager to execute a professional services agreement with Rincon Consultants, Inc. for development of a Climate Action and Adaptation Plan (CAAP);

WHEREAS, the CAAP will provide a roadmap for reducing GHG emissions in alignment with State goals and guidance for increasing the resilience of critical facilities, infrastructure, services, and resources to climate change impacts;

WHEREAS, on July 10, 2023, the Governing Board of the JPA received and filed a progress report on components of the CAAP that relate to JPA facilities and operations and provided comments to staff;

WHEREAS, on September 5, 2023 a draft of the CAAP was presented to the Governing Board of the JPA to solicit final comments, which have been incorporated to the extent appropriate, and the CAAP has been finalized;

WHEREAS, **unless otherwise mandated by the State or federal government, cost analysis and feasibility studies will be conducted and individual reduction and adaptation measures will be implemented only if deemed feasible and authorized by the Governing Board of the JPA** for its facilities and operations; and

WHEREAS, progress reports will be provided to the Governing Board of the JPA on an annual basis and the CAAP will be updated every 5 years or as otherwise deemed



# Thank you!

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Senior Climate Planner

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**LOS ANGELES COUNTY  
SANITATION DISTRICTS**

*Converting Waste Into Resources*

# WaterReuse Legislative Update, LA Chapter

**Phillip Vander Klay**

April 9, 2024



OUR SERVICE AREA

# Legislative Update

## Bills

- SB 903 (Skinner) PFAS Source Control
- Resources Bond
- Making Conservation a Way of Life bills

## The Budget Problem



# Regulatory Update

## Recycled Water Fees

- Status Quo
- Assess surcharge for recycled water production
- Assess surcharge for permittees w/o recycled water production
- Stakeholder meeting 4/18/2024



# Salt and Nutrient Management Plans

April 09, 2024



Los Angeles Regional Water Quality Control Board

# Groundwater Basins in Los Angeles and Ventura Region

- 33 basins and sub-basins within Los Angeles Region (DWR Bulletin 118)
  - 11 groups by hydrographic area
- Beneficial uses generally include Municipal and Domestic Supply (MUN), Industrial Service Supply (IND), Industrial Process Supply (PROC), and Agricultural Supply (AGR)



# Salt and Nutrient Management Plans



# Key Elements of a SNMP

- Water recycling and stormwater recharge objectives
- Groundwater basin characteristics
- Source identification and loading rates (salts, nutrients, other pollutants of concern)
- Implementation measures to manage salt and nutrient loading
- Basin-wide monitoring (including CECs)
- Antidegradation Analysis
  - Assure beneficial use protection
  - Consider social & economic benefits
- CEQA Analysis
  - Consider alternatives / mitigation measures
- Stakeholder-driven

# Main Water Quality Concerns

- **Central and West** : Seawater Intrusion
- **San Gabriel** : Nitrate, VOC, Superfund Site
- **San Fernando** : Nitrate, VOC, PCE, Sulfate, Metals, Superfund Site
- **Raymond**: Nitrate, VOC, Superfund Site
- **Santa Clara**: Salts, Nutrients





# Benefits of Salt and Nutrient Management Plans

- Incorporating the SNMP measures into the Basin Plan will expedite the permitting process for recycled water projects and facilitate future recycled water projects
- SNMPs can be integrated into Groundwater Sustainability Plans (GSPs)
  - 6.2.1.4. of the Recycled Water Policy - The regional water board may determine that GSPs is functionally equivalent to a salt and nutrient management plan.
  - The regional water board may find that groundwater sustainability plans developed pursuant to the Sustainable Groundwater Management Act include water quality components that sufficiently address 9 the components of 6.2.4 and therefore are functionally equivalent to a salt and nutrient management plan.



# Additional Information

## Los Angeles Water Board website:

[www.waterboards.ca.gov/losangeles/water\\_issues/programs/salt\\_and\\_nutrient\\_management/index.shtml](http://www.waterboards.ca.gov/losangeles/water_issues/programs/salt_and_nutrient_management/index.shtml)

## E-mail list subscription:

[https://public.govdelivery.com/accounts/CAWRRCB/subscriber/new?qsp=los\\_angeles](https://public.govdelivery.com/accounts/CAWRRCB/subscriber/new?qsp=los_angeles)

## Los Angeles Water Board contacts:

Adam Taing

[adam.taing@waterboards.ca.gov](mailto:adam.taing@waterboards.ca.gov)

(213) 576-6752

Xiaofei Cui

[xiaofei.cui@waterboards.ca.gov](mailto:xiaofei.cui@waterboards.ca.gov)

(213) 576-6696

# Chapter Trustee Updates

## WATEREUSE LA Chapter – April 9, 2024



**Last Board of Trustees Meeting:** February 9, 2024

**Next Board of Trustee Meeting:** May 3, 2024

### Appointment of WRCA Managing Director

- Brenley McKenna

#### Experience

- Chief of Subscriber Services: The Water Research Foundation in Denver Colorado
- Served as Section President for 2016 - 2017 term

### Appointment of WRCA Treasurer

- Kyle Swanson

#### Experience

- CEO and General Manager for Padre Dam Municipal Water District



# Chapter Trustee Updates

## WATEREUSE LA Chapter – April 9, 2024



**Last Board of Trustees Meeting:** February 9, 2024



### Legislative and Regulatory Committee

- State Budget and Climate Update Bond Status
  - California budget is in a deficit.
- Recycled Water-Potable Reuse “Conservation is a way of Life”
  - WRCA attended the California way of life Workgroup Kickoff meeting.
- Major Provisions of California's DPR Regulations
  - New Organizational Structure
  - Highest level of Operating Certifications
  - Enhanced source controls
  - Rigorous chemical and pathogen controls
- California DPR Regulations making international News!



# Chapter Trustee Updates

## WATEREUSE LA Chapter – April 9, 2024



**Last Board of Trustees Meeting:** February 9, 2024



### Reimagining Water Together

- 39<sup>th</sup> Annual WaterReuse Symposium
- Over 900 Water Professionals in attendance
- Spotlights on
  - Colorado River
  - Global Water Reuse Dialogue
  - 2024 Technology Showcase



REMOVING  
BARRIERS,  
ELEVATING  
OPPORTUNITIES



# Chapter Trustee Updates

## WATEREUSE LA Chapter – April 9, 2024

**Last Board of Trustees Meeting:** February 9, 2024



### 2024 WaterReuse California Conference

- September 15<sup>th</sup> -17<sup>th</sup> , 2024 Garden Grove, CA
  - Hyatt Regency Orange County
- Early Bird Registration: Mid-April
- Call for Abstracts: Early April



2024 WaterReuse CA  
CONFERENCE  
GARDEN GROVE • CA



# LA Chapter Updates

- Communications Chair:  
*Oliver Slosser*  
[oslosser@lvmwd.com](mailto:oslosser@lvmwd.com)
- Rising Professionals Committee Chair:  
*Seto Cherchian*  
[Scherschian@BrwnCald.com](mailto:Scherschian@BrwnCald.com)
- Technical Topics Chair:  
*Alex Franchi*  
[alex.franchi@aecom.com](mailto:alex.franchi@aecom.com)
- Agricultural Committee  
**(Volunteer Opportunity)**  
*Seto Cherchian*  
[Scherschian@BrwnCald.com](mailto:Scherschian@BrwnCald.com)
- Recycled Water Users Manual:  
*John Lockett*
- Meeting Summaries:  
December 2023  
*Karina Gonzalez and Annie Chen,*  
*LA Sanitation & Environment*
- Ad Hoc Urban Irrigation Manual Update Committee:  
*Co-chairs: Monica Sanchez/LACSD, Erika Bensch/LACSD, Jesus Gonzalez/LADWP*

# Member Agency Roundtable



Photo Courtesy of IRWD

How is your agency considering “purple pipe” programs with advancements in indirect and direct potable reuse regulations?

- Is your agency/clients considering extending “purple pipe” distribution systems?
- Suspending new connections?
- Cancelling recycled water programs?