



# Water & Wastewater 101

CITY OF SAN DIEGO PUBLIC UTILITIES DEPARTMENT

September 2026

**2.3 M**

wastewater  
customers  
served



**6,300**  
miles of pipelines  
are managed



**1.4 M**  
residents receive  
clean and safe  
drinking water



**24/7  
365**

operations ensure the  
delivery of safe and  
clean water



**13** divisions  
and  
**2,000**  
team members





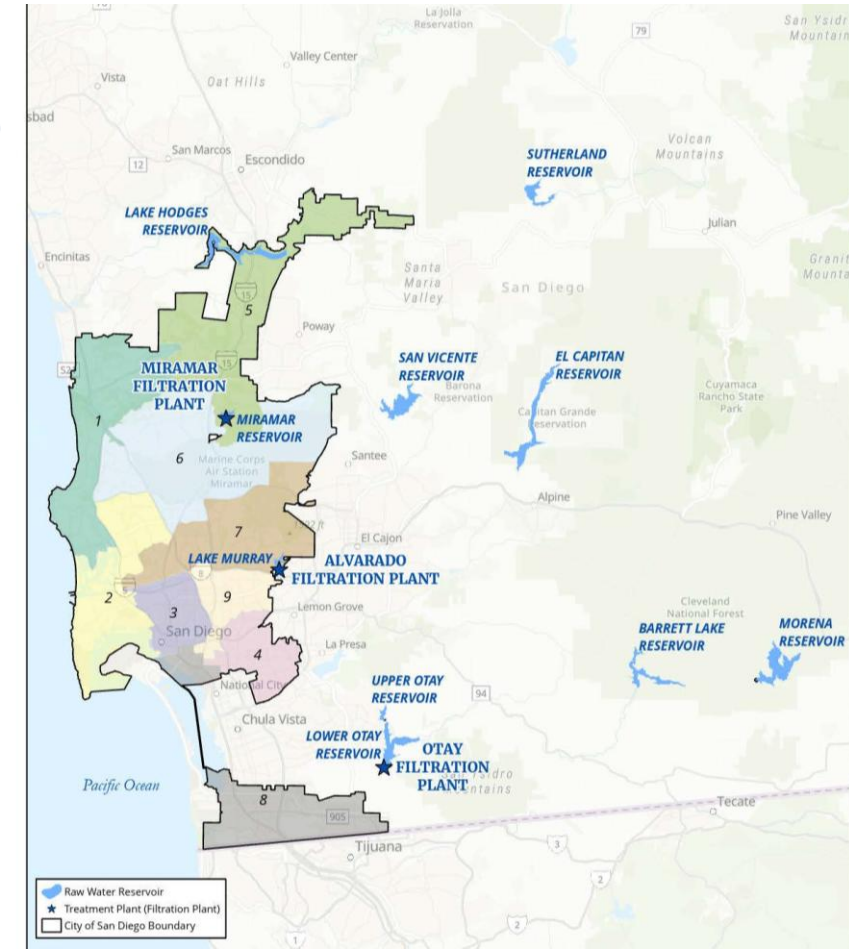
# Water 101

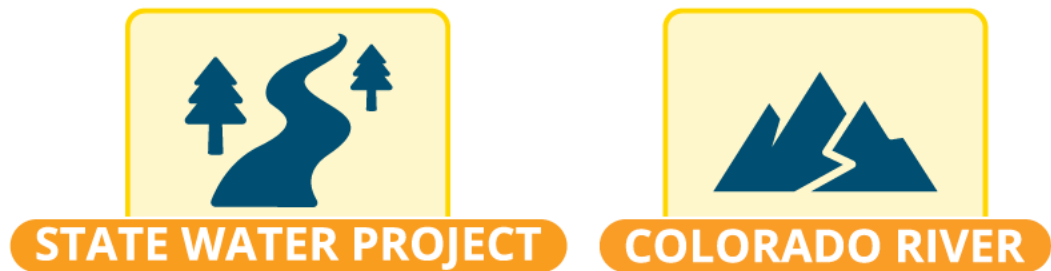
# Your Water's Journey Starts Here



# Our Water Service Area

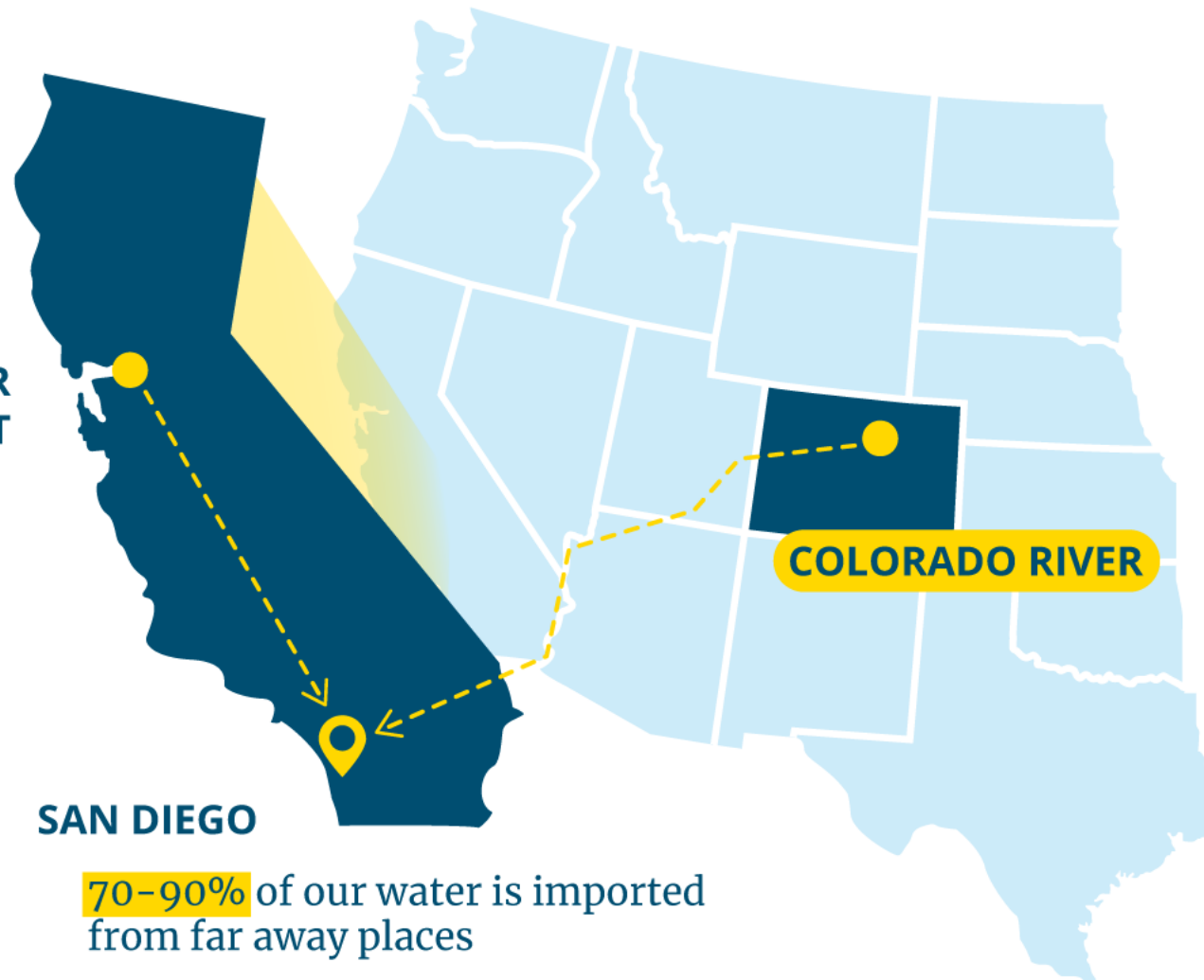
- Provide water service to San Diego, Coronado, Imperial Beach and Del Mar (wholesale water)
- One of the nation's largest and most complex water systems, spanning from Escondido to the U.S./Mexico border
- Serves customers at seven major military bases
- HUGE system: Our service area is so large it could fit four (4) of Seattle's entire retail water systems and seven (7) of San Francisco's whole retail water systems into our retail service area
- Water service is often invisible until there's a disruption or main break





The City of  
**SAN DIEGO**

STATE WATER  
PROJECT





# Reservoirs & Dams

- PUD owns and operates nine local reservoirs and dams to capture rain and runoff, keeping your water flowing
- Stores and manages water from near and far
- Provides water for the City's three water treatment plants and supports water reliability during storms, droughts and emergencies





## WATER TREATMENT

# Water Treatment Plants

- Three major drinking water treatment plants, treating hundreds of millions of gallons a day
- Delivers safe and clean drinking water to the city, right to your tap
- Keeps service reliable and helps meet strict public health standards so you don't have to worry about your water quality





## WATER DISTRIBUTION

# The Hidden Highway to Your Tap

## WATER DISTRIBUTION

- 3,300+ miles of pipelines, enough to stretch from San Diego to New York City
- 25,000 fire hydrants connected to the distribution system for public safety
- 136 pressure zones designed to keep water flowing strong, even uphill, when needed
- Pumps, tanks, regulators and over 110,000 valves, unseen infrastructure that make sure water gets pushed to your home or business 24/7/365





# Small Devices with a Big Impact

## WATER METER SERVICES

- Every drop counts when it comes to your water and accurate meters mean fair, precise billing and early leak detection
- Over 286,000 total meters in our system, ranging in size from  $\frac{3}{4}$  inch residential meters to 20 inch fire services
- We're now replacing 1,200 meters per month, up from just 300 per month in 2023





# Wastewater 101

# Your Water's Journey Starts Here



# Our Wastewater System

- San Diego's wastewater system includes 2 water reclamation plants and the Point Loma Wastewater Treatment Plant, which handle wastewater from 2.3 million people across the region
- The system relies on 81 pump stations to move wastewater away from homes and businesses efficiently
- This infrastructure ensures safe, consistent service 24/7/365
- **Looking ahead:** Pure Water San Diego will treat wastewater to provide nearly half of the City's water locally by 2035 and will significantly reduce treated discharges from the Point Loma Wastewater Treatment Plant





## WASTEWATER COLLECTIONS

# Two Unseen Systems that Keep the Region Flowing

## METROPOLITAN WASTEWATER SYSTEM

- Serves 2.3 million people and 550+ square miles through a regional partnership with 12 agencies through a Joint Powers Authority
- 180 million gallons per day (MGD), that's how much wastewater we treat every single day to protect public health and the environment





## WASTEWATER COLLECTIONS

# Two Unseen Systems that Keep the Region Flowing

## MUNICIPAL COLLECTION SYSTEM

- 3,000+ miles of underground sewer lines, which is the equivalent of driving from San Diego to Maine
- 81 pump stations are quietly working 24/7/365 to keep wastewater moving toward treatment at all times
- Every stretch of sewer pipe is on a cleaning schedule to help ensure grease, roots and debris don't cause spills





## WASTEWATER COLLECTIONS

# San Diego Sewer System's Unsung Hero

## PUMP STATION 2

- **Does the heavy lifting:** Pump Station 2 moves 90% of the region's wastewater on its final journey to the Point Loma Wastewater Treatment Plant
- **Big power, big impact:** With 8 vertical shaft-driven pumps, it can move up to 432 million gallons per day
- PS2 has been in continuous operation 24/7/365 since it was commissioned in 1963





## WASTEWATER TREATMENT

# Protecting Public Health and the Ocean

## POINT LOMA WASTEWATER TREATMENT PLANT

- This plant typically treats 180 million gallons of wastewater per day from more than 2.3 million residents
- Removes solids, grease and other pollutants to keep our ocean and environment safe
- Generates all energy to power the plant on site
- Clean and treated water flows through the Point Loma Ocean Outfall, protecting marine life and public health





WASTEWATER  
RECLAMATION

# Recycling Water

## NORTH CITY AND SOUTH BAY WATER RECLAMATION PLANTS

- **Water with a second life:** Build to treat wastewater to recycled water standards for safe, non-drinking uses like irrigation and industrial cooling
- **Purple pipes:** Recycled water reduces demand on imported drinking water supplies, helping us stretch and save each drop





# Pure Water San Diego

- **Big vision, local benefit:** Pure Water San Diego is an advances water purification program that will provide nearly half of San Diego's water supply locally by 2035
  - Phase 1 will produce 30 MGD by 2027
  - Phase 2 will produce an additional 53 MGD by 2035
- **Science you can trust:** The program uses proven purification technology to clean recycled water into safe, high-quality drinking water





# Support Functions

# Keeping Our Coast Clean

## ENVIRONMENTAL MONITORING AND TECHNICAL SERVICES LABORATORY

- **World-class ocean protection:** Supports the largest and most comprehensive Ocean Monitoring Program in the world, right here in San Diego
- **Science in action:** Expert lab staff collect and analyze samples of ocean water, sea life and sea floor near the Point Loma and South Bay outfalls
- **Regulations fully covered:** Ensures the City meets or exceeds all environmental permits protecting public health and marine life
- **For today and tomorrow:** Monitoring through this lab helps us safeguard clean beaches, thriving ecosystems and a sustainable coastline for generations to come



# We're Here When You Need Us

## CUSTOMER SUPPORT

- **Real people, real help:** Local San Diegans respond to every service request
- **Reliable support:** Trusted by 286,000 + households and businesses
- **Building trust:** Every positive interaction builds trust, reduces confusion and boosts confidence in our work
- **Water conservation:** Assisted customers with reducing household water usage by 35% over the past 25-years



# Service That's Smarter

## FINANCE

- **Smart with your dollars:** Managing grants, capital projects and investments to keep water flowing
- **Budgets with purpose:** Every dollar supports City goals:
  - Sustainability
  - Equity
  - Infrastructure investment
- **Cost pressures are real:** Rising costs (energy costs are up 30%) make smart budgeting essential
- **Planning ahead:** Actively planning and hiring to ensure long-term water reliability



# People + Planning

## HUMAN RESOURCES

- **People power our progress:** diverse, committed workforce that reflects our community
- **Careers with a purpose:** Growing career pipelines from entry level to leadership
- **Retention that works:** Better benefits, training and a supportive culture keep great people
- **Planning for the future:** Hiring today to ensure safe, reliable water service tomorrow



# The Brains Behind the Build

## ENGINEERING AND PROGRAM MANAGEMENT

- **The team behind every pipeline:** Manages capital projects for 6,300+ miles of water and sewer pipelines and 130 pump stations
- **Building what matters:** Replacing pipelines to upgrading treatment plants and modernizing infrastructure
- **Plans, permits and progress:** Oversee schedules, permits and compliance
- **Committed to quality and safety:** Prioritize quality, safety and environmental standards



# The Team Behind Safe, Reliable Service

## SAFETY AND TRAINING

- **A perfect track record:** Over 100 years with ZERO unsafe water incidents
- **Training makes the difference:** Hands-on, ongoing training keeps team certified and confident for any task
- **Certified to serve:** Workforce certified by Cal/OSHA, the State Water Board, and more, showing proven expertise
- **Ready for anything:** Preparing for emergencies (earthquakes, wildfires and infrastructure failures) ensures uninterrupted service



# The Bridge Between the Pipes and the People

## EXTERNAL AFFAIRS

- **Strategic storytelling:** Clear, consistent messaging on water and wastewater issues
- **Policy + people power:** Advocates for customers at all levels, from D.C. to Sacramento to City Hall
- **Outreach that resonates:** Keeps the public informed and engaged on key topics
- **Transparent by design:** Commits to proactive, transparent communication



# Your Water's Journey Starts Here





# Q&A and Discussion







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# **2025 Urban Water Management Plan & Water Shortage Contingency Plan**

## **Resiliency Advisory Board**

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# 2025 UWMP – Plan Overview

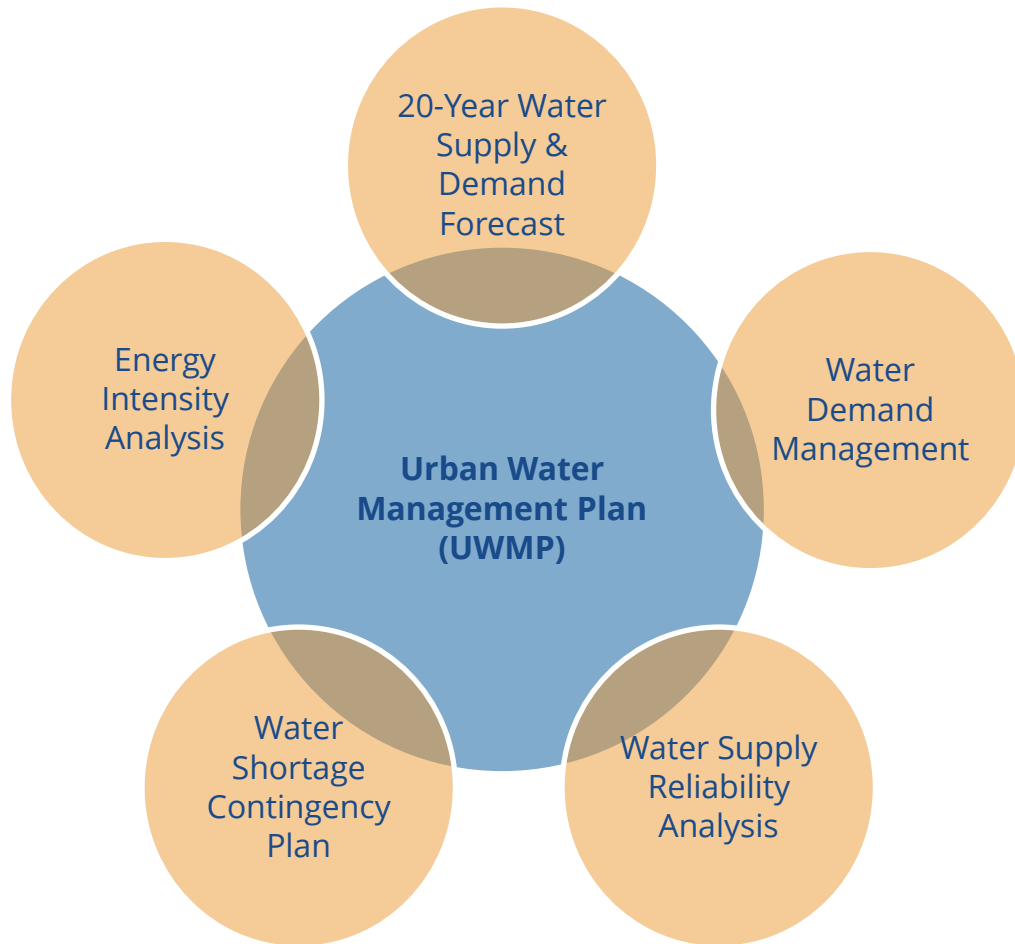
## Purpose of the UWMP

- The 2025 Urban Water Management Plan (UWMP) projects future water supplies and demands to help inform local, regional and state planning efforts and must be adopted and submitted to the California Department of Water Resources (DWR) every five years.
- Must include a Water Shortage Contingency Plan (WSCP) that describes actions the City may take in the event of a declared water emergency to mitigate any potential water shortages
- Required for the City to be eligible for grant or loan funding administered by DWR
- The 2025 UWMP is the City's 9th iteration of the UWMP, due to DWR by July 1st, 2026

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# 2025 UWMP Plan Components & Implementation

## Goals

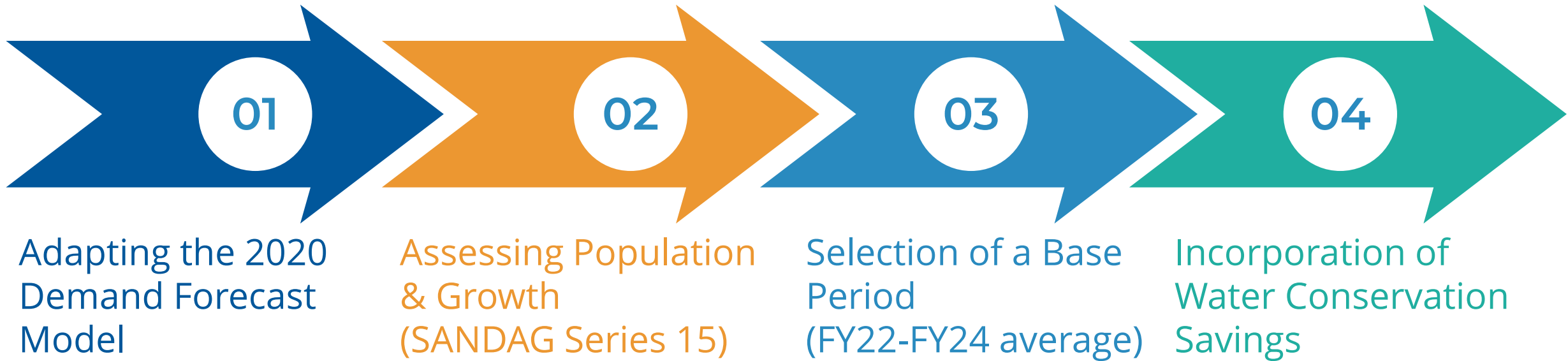


## 2025 UWMP Implementation Goals

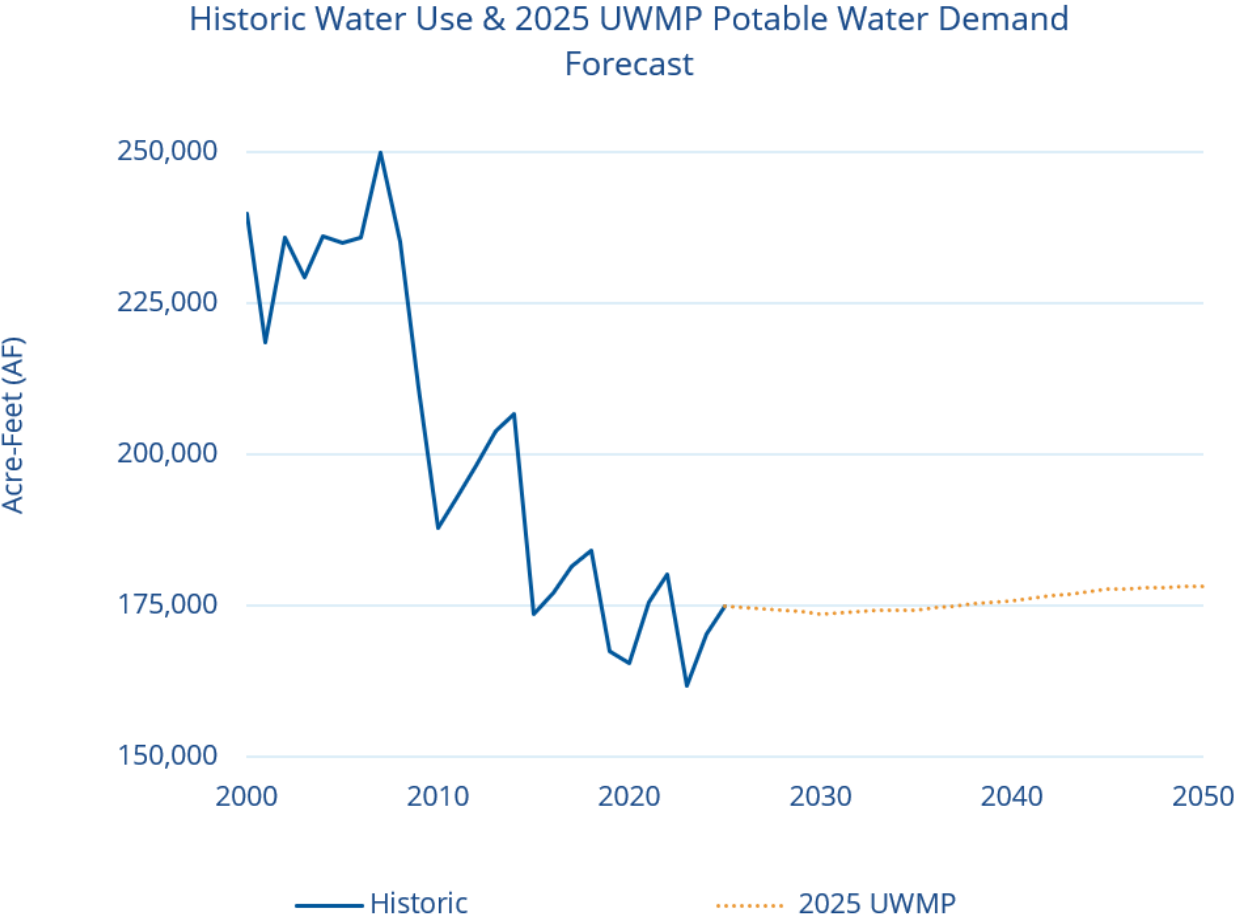
1. Develop a credible and balanced 25-year projection of water demand
2. Update and refine water demand modeling approach for more accurate projections
3. Analyze system reliability and integrate a Water Shortage Contingency Plan (WSCP)
4. Utilize and build upon the City's Climate Action Plan (CAP) and water conservation goals
5. Prepare for future inclusion and expansion of local water supply development

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# 2025 UWMP – Water Demand Forecast Methodology



# 2025 UWMP – Water Demand Forecast



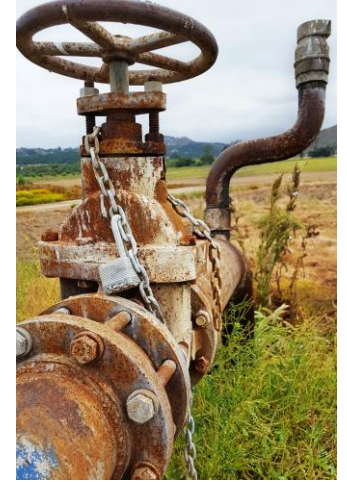
| Water Demand Forecast 2030 – 2050 (AFY)     |         |         |         |         |         |
|---------------------------------------------|---------|---------|---------|---------|---------|
| Sector                                      | 2030    | 2035    | 2040    | 2045    | 2050    |
| Single Family Residential                   | 52,153  | 52,049  | 51,940  | 51,725  | 51,291  |
| Multifamily Residential                     | 41,132  | 41,711  | 42,739  | 44,445  | 45,190  |
| Commercial, Industrial, Institutional (CII) | 46,495  | 46,765  | 47,229  | 47,453  | 47,658  |
| Irrigation                                  | 8,881   | 8,881   | 8,881   | 8,881   | 8,881   |
| Wholesale                                   | 10,622  | 10,622  | 10,622  | 10,622  | 10,622  |
| Non-Revenue Water                           | 14,228  | 14,294  | 14,418  | 14,571  | 14,617  |
| Total Potable Consumption                   | 173,510 | 174,321 | 175,829 | 177,696 | 178,259 |
| Recycled Water (Non-Potable)                | 9,152   | 9,152   | 9,152   | 9,152   | 9,152   |
| Total Production                            | 182,662 | 183,473 | 184,981 | 186,848 | 187,411 |

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# 2025 UWMP – Water Supply Sources

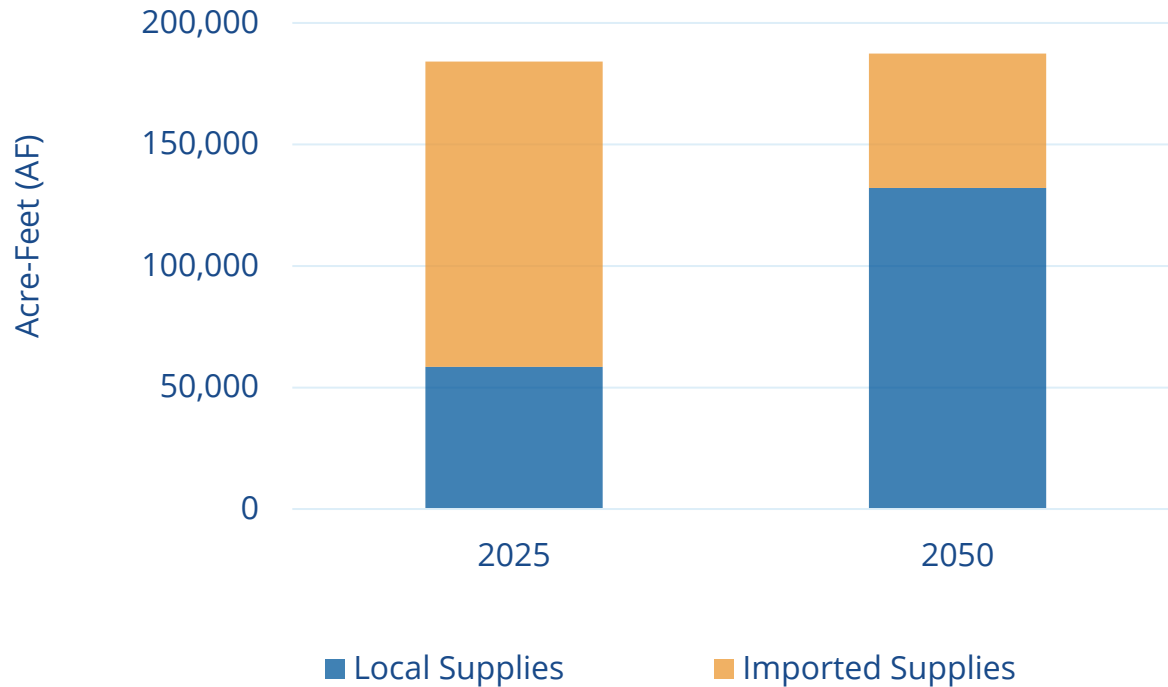
## What makes up the City's water supply portfolio?

- Local Water Supplies
  - Surface Water
  - Groundwater
  - Recycled Water
  - Pure Water
- Imported Supplies
  - San Diego County Water Authority (Colorado River & State Water Project)

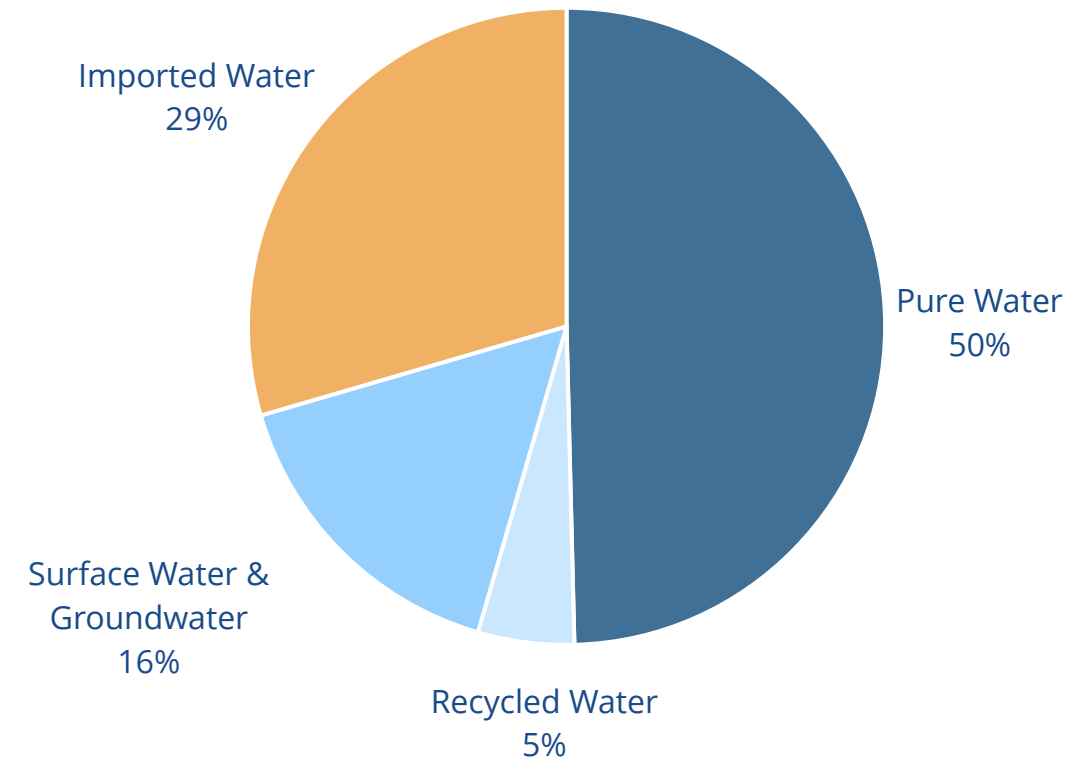


# 2025 UWMP – Water Supply Projection

Imported vs Local Water Supplies  
(2025 & 2050)



2050 Water Supply Projection



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## 2025 UWMP – Water Demand Management

### Demand Management Milestones and Future Actions

- Met the SB X7-7 Water Conservation Act Requirements (i.e., 20% demand reduction by 2020)
- Currently meeting the Model Water Efficient Landscape Ordinance (MWELO) and Urban Water Use Objectives (UWUO) based on current water usage
- Included additional conservation for outdoor water usage in the demand forecast for future compliance with AB 1572 (i.e., non-functional turf ban)
- The City continues to offer active water conservation programs including residential water surveys and water conservation rebates

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# 2025 UWMP – Water Shortage Contingency Plan

## Overview

- Defines water shortage levels and the range of actions the City may implement under the Municipal Code’s Emergency Water Regulations

| Water Shortage Level                                                | Percent Shortage Range |
|---------------------------------------------------------------------|------------------------|
| Level 1: Expanded Year-Round Permanent Mandatory Water Restrictions | Up to 10%              |
| Level 2: Drought Watch Condition                                    | Up to 20%              |
| Level 3: Drought Alert Condition                                    | Up to 30%              |
| Level 4: Drought Critical Condition                                 | Up to 40%              |
| Level 5: Drought Crisis Condition                                   | Up to 50%              |
| Level 6: Drought Emergency Condition                                | Greater than 50%       |

Water Shortage  
Response Actions

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# 2025 UWMP – Water Shortage Contingency Plan

## Shortage Response Actions

- Locally appropriate demand reduction actions, operational changes, supply augmentation, and additional mandatory prohibitions against specific water use practices (in addition to state-mandated prohibitions)

| Water Shortage Level                                                                                                                              | Shortage Response Actions                                                              | Estimate Of Extent To Which Supply Gap Reduced | Response Action Type |
|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------|----------------------|
| <b>Water Shortage Level 1: Expanded Year-Round Permanent Mandatory Water Restrictions</b><br>(consumer demand reduction of up to 10% is required) | Increase outreach efforts for high-volume customers and expand the leak alert program. | 1-2%                                           | Demand Reduction     |
|                                                                                                                                                   | Increase voluntary conservation.                                                       | 1-2%                                           | Demand Reduction     |
|                                                                                                                                                   | Expanded enforcement of Permanent Water Waste Prohibitions.                            | 3-7%                                           | Demand Reduction     |

# 2025 UWMP – Public Participation & Adoption Schedule

