Pure Water
Southern California
Welcome!

September 23, 2023
Metropolitan Overview

- Service area of 19 million people, 5,200 square miles, parts of six counties
- Supports $1.6 trillion regional economy (ranks 11th in the world)
Metropolitan Overview

• Nation’s **largest** wholesale water provider governed by 38 Member Board from 26 public member water agencies

• Imports water from Colorado River, Northern Sierra, invests in local projects & conservation
Impacts of Climate Change
Water Supply Strategy
Average Year Water Supply 1990 vs. 2035

Local Supply Target
45 Year Goal Projection

Colorado River Aqueduct
State Water Project
Other Local Supply
Conservation & Recycling

1990:
- 33% Colorado River Aqueduct
- 34% Conservation & Recycling
- 7% Other Local Supply
- 27% State Water Project

2035:
- 14% Colorado River Aqueduct
- 31% Conservation & Recycling
- 22% Other Local Supply
- 33% State Water Project

41% LOCAL - Heavy Dependence on imports
64% LOCAL - Emphasis on conservation/recycling
Pure Water Southern California Program

How it works

① Used water (wastewater) from homes, businesses, and industries in LA County
② Cleaned at Sanitation Districts’ Joint Water Pollution Control Plant
③ Purified at Metropolitan’s advanced water purification facility
④ Conveyed through over 60 miles of pipeline to groundwater basins, industries, or Metropolitan’s drinking water plants
⑤ A new climate-resilient source of water for Southern California
Pure Water Southern California

*In numbers*

- Up to 150 million gallons per day
- Enough water for over 1.5 million people
- One of the largest programs of its kind in the world
- Advanced Water Purification facility
- Conveyance pipelines
- Pump stations
- Spreading facilities
- Injection wells
- A regional water reuse system
California Recycled Water Regulations

Non-Potable Reuse
- Irrigation
- Industrial Uses
- 2000

Indirect Potable Reuse
- Groundwater Replenishment
- 2014

Indirect Potable Reuse
- Reservoir Water Augmentation
- 2018

Direct Potable Reuse
- Raw and Treated Water Augmentation
- 2023

*Increasing requirements for public health protection*
Program Overview

Non-potable reuse
24 mgd
• Harbor Area

Indirect Potable Reuse
66 mgd
• Main San Gabriel
• Central/West Coast

DPR via RWA
60 mgd
• Weymouth and Diemer

Phase 1: 115 mgd
Phase 2: 35 mgd
Joint Water Pollution Control Plant

- Average flow of ~250 million gallons daily
- Agency serves ~5.6 million people in L.A. County
- Cleaned water flows to the ocean
- Largest untapped source of treated wastewater
Project History

- Pilot Scale Studies (2010-2012)
- Feasibility Study Report (2013-2016)
- Conceptual Planning Studies (2017-2019)
- Demonstration Plant (2017- present)
- Environmental Planning (2021-2024)
- Preliminary Design (start 2023)
Program Benefits

Water Supply Benefits
- Provides a Sustainable Supply of Water
- Increases Water Resiliency
- Replenishes Groundwater Basins
- Creates a Local Supply of Water

Environmental Benefits
- Enhances Water Quality
- Reuses the Largest Untapped Source of Wastewater in the Region
- Reduces Reliance on Imported Supplies

Economic Benefits
- Fuels Economic Growth
- Generates Jobs
Program Schedule

2021-2024
Environmental Planning

2023-2031
Design & Construction

2032
Primary Startup & Operations
Unique Elements

- Design Build and Alternate Delivery Methods
- Project Labor Agreement
- Grant and Partnership Funding
Pure Water Southern California
Demonstration Plant
Demonstration Plant Overview

- Tests an innovative purification process
- Obtain regulatory approval of process
- Provides costs and data for full-scale facility
- Gain public support
Step 1: Membrane Bioreactors

Step 2: Reverse Osmosis

Step 3: UV Disinfection / Advanced Oxidation

Purification Process
Let’s Take a Tour
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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 program that would reuse water currently sent to the ocean. Pure Water Southern California, formerly known as the Regional Recycled Water Program, will take cleaned wastewater and further purify it to produce a new, sustainable source of high-quality water for Southern California.

This partnership with the Los Angeles County Sanitation Districts would produce up to 150 million gallons of water daily when completed and provide purified water for up to 15 million people, making it one of the largest water reuse programs in the world.