



# **Pure Water** SAN DIEGO

#### San Diego Water/Wastewater Facts



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Provide services to 8<sup>th</sup> largest US city & surrounding area

1.3M water & 2.5M wastewater customers from 15 agencies Regulated by Federal & State agencies

USEPA, State Water Resources Control Board ~\$1B invested in systems over last 5 years

More than \$412M planned capital projects over next 2 years Annual purchase of imported water (\$209M) and facility construction and maintenance are biggest costs

#### 85% of Our Water is Imported

City of San Diego PUBLIC UTILITIES



City of San Diego PUBLIC UTILITIES

#### **Numerous Water Challenges**

- Limited local & imported supplies
- Recurring drought
- Population growth
- Bay Delta constraints
- Natural disaster risk
- Rising imported water costs





### What is Being Done?

#### <u>Regional:</u>

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- Water Conservation
- Desalination (SDCWA)



#### City of San Diego:

- Water Conservation
- Groundwater Development
- Recycled Water
- Potable Reuse (Pure Water)



#### What is Pure Water San Diego?

 20-year program to provide a safe, reliable and cost-effective drinking water supply for San Diego

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- Uses proven water purification technology and is environmentally friendly
- Provides a locally controlled, drought-proof water supply
- Eliminates the need for expensive upgrades to the Point Loma Wastewater Treatment Plant





#### How Does This Process Work?

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### Pure Water San Diego Has Been Successfully Demonstrated

#### 1 million gallon per day Demonstration Project

- Conducted 9,000 lab tests Routinely met all standards
- Exceptional water quality Comparable to distilled water
- Energy use is comparable to imported water and cost is approximately \$1,700 – 1,900 per acre-foot

# Microfiltration & Ultrafiltration

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#### **Reverse Osmosis**



Advanced Oxidation with UV Light & Hydrogen Peroxide



#### **Independent Advisory Panel Verified**



Experienced scientists & health professionals reviewed and evaluated research studies and treatment

George Tchobanoglous, Ph.D., P.E., Chair Professor Emeritus, UC, Davis Richard Gersberg, Ph.D., Vice-Chair Interim Director, SDSU Graduate School of Public Health Director, Coastal and Marine Institute, SDSU Michael A. Anderson, Ph.D. University of California, Riverside Sunny Jiang, Ph.D. University of California, Irvine

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Richard Bull, Ph.D. Consulting Toxicologist MoBull Consulting (Richland, WA) Joseph A. Cotruvo, Ph.D. Principal Joseph Cotruvo Associates (Washington, D.C.) Michael P. Wehner Director of Water Quality and Technology Orange County Water District (Fountain

Valley, CA)

James Crook, Ph.D., P.E. Water Reuse Consultant (Boston, Massachusetts) David R. Schubert, Ph.D. The Salk Institute for Biological Studies Audrey D. Levine, Ph.D., P.E., DEE U.S. Environmental Protection Agency

## **Others Are Doing It Successfully**

#### Orange County, CA

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Fairfax, VA

- Operating since 2008
- Places purified water into the groundwater basin
- Currently expanding its capacity

- Operating since 1978
- Recycled water is added to a surface storage reservoir
- Potable water supply source for Fairfax County, VA

### State & Federal Regulators Are Supportive

 September 7, 2012, California Department of Public Health approves the San Vicente Reservoir Augmentation Concept

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 February 12, 2013, the Regional Water Board supports the City's efforts to develop the San Vicente Reservoir Augmentation Project



#### **Developing Our Local Water Supply**

Initial phase 2023

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#### 15 MGD

Wastewater will be purified at North City Plant and delivered to San Vicente Reservoir

Longterm 2035 83 MGD

Wastewater will be purified at Harbor Drive Treatment Facility and South Bay Plant and delivered to San Vicente and Otay Reservoirs



### Pure Water San Diego Saves Money

\$2,000 Ratepayer Costs (Millions) \$1,500 \$1,000

City of San Diego PUBLIC UTILITIES



# Who Supports Pure Water?

- **Elected Officials** 
  - City Council Resolution, April 29, 2014
  - **Environmental Groups**
- Wastewater Participating Agencies
  - **Professional Engineering Community**
  - Water Reliability Coalition
- **Business Community**
- Independent Rates Oversight Committee
- San Diego County

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ENVIRONMENTA

FOUNDATION

EQUINOX CENTER



















SAN DIEGO REGIONAL CHAMBER OF

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Friends of Infrastructure





#### What Can I Do?

- Visit our website:
  PureWaterSD.org
- Register for tours:
  PureWaterSD.org/tours
- Join our mailing list or sign a support card



Pure Water San Diego



@PureWaterSD



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#### Please check all that apply:

I support the Pure Water San Diego Program.
 I would like to receive updates about Pure Water San Diego.

□ I would like a presentation given to my organization.

#### Please send information to:

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