



DOHENY OCEAN
DESALINATION
PROJECT

Local Water, Local Control.
Sponsored by South Coast Water District

The Doheny Ocean Desalination Project: *Sustainable and Innovative Water Supply in South OC*

Presentation for:
Multi-State Salinity Coalition
2023 Annual Salinity Summit
Las Vegas, Nevada

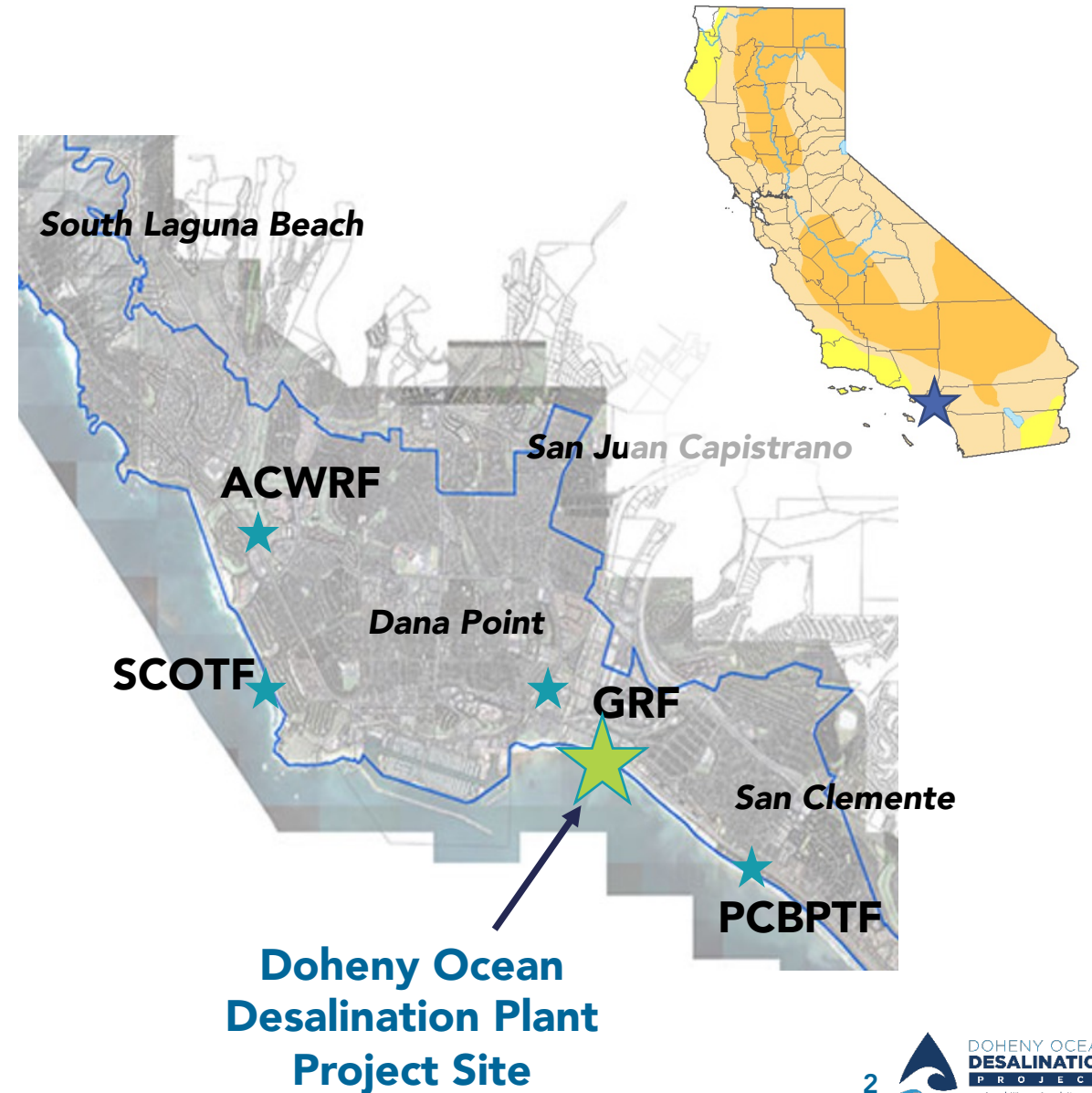
Marc Serna, Assistant General Manager / Chief Engineer
South Coast Water District

February 23, 2023

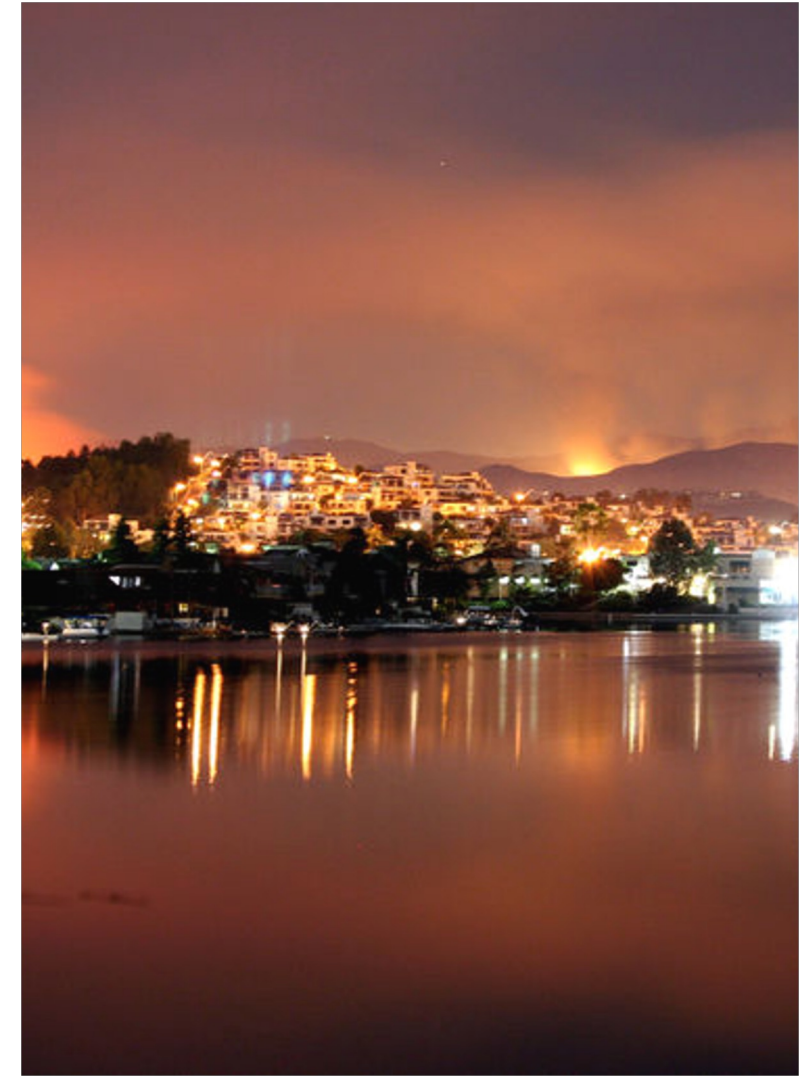
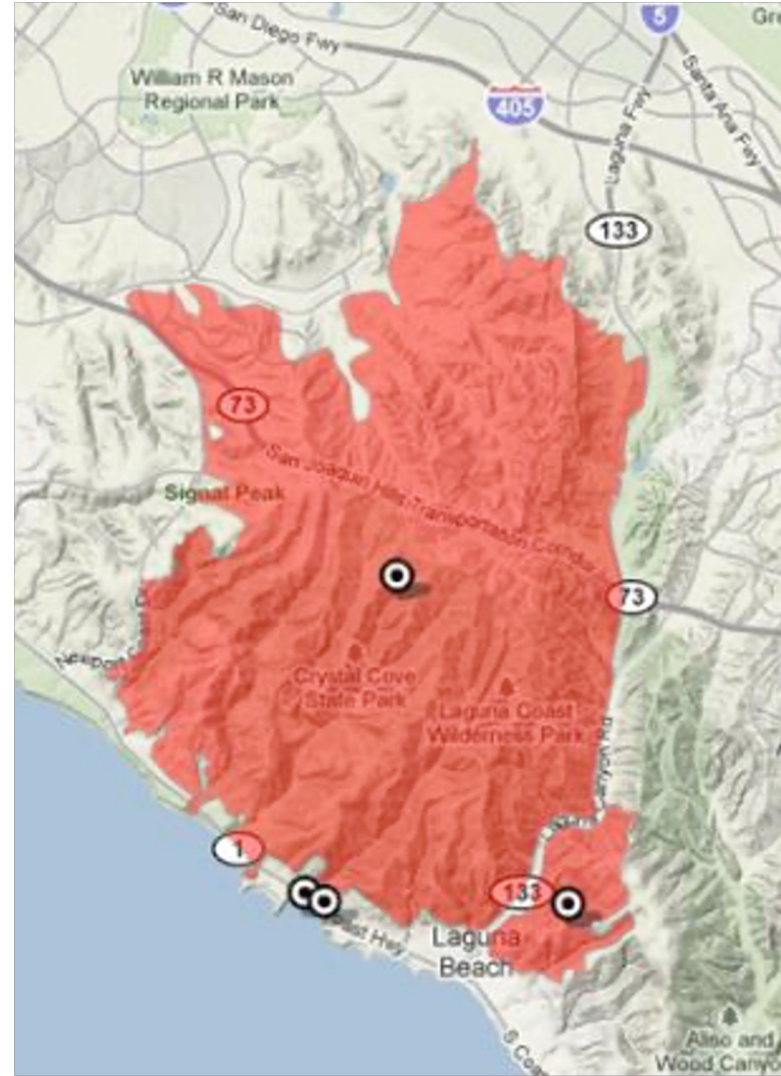
South Coast Water District (SCWD)

Water, Recycled Water, and Wastewater Public Agency serving:

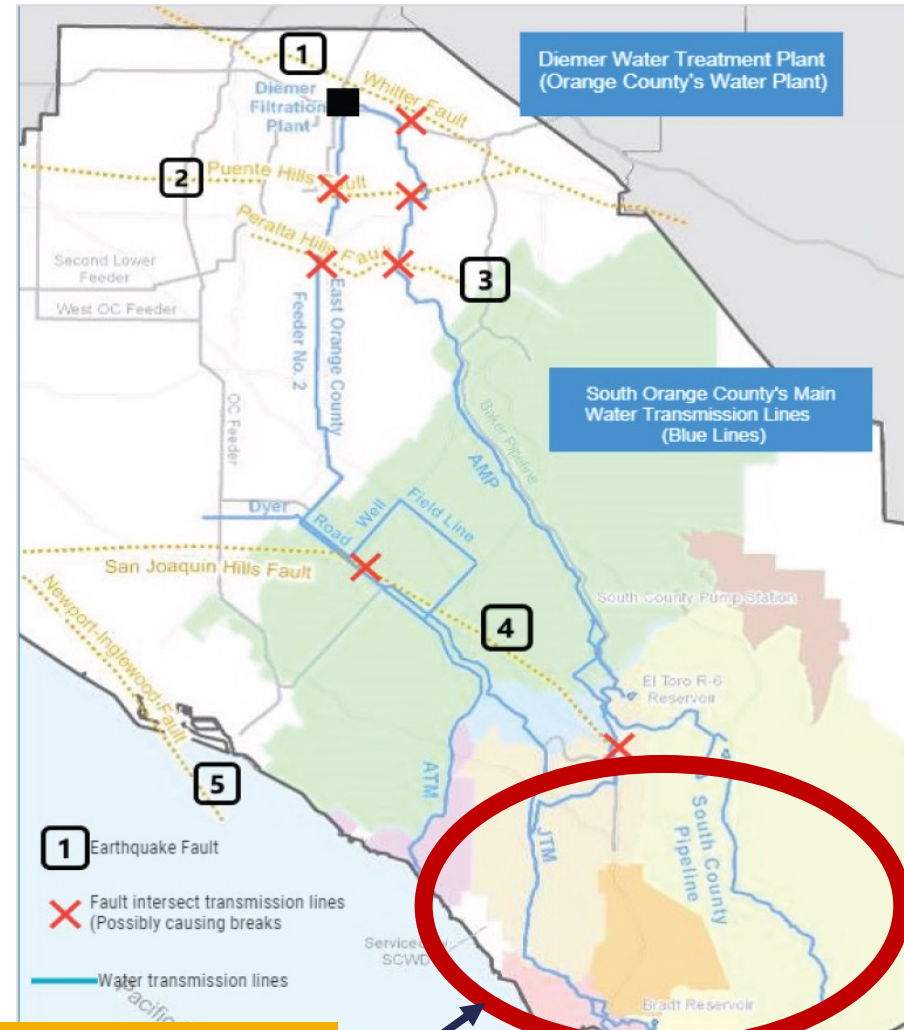
- South Laguna Beach
 - Dana Point
 - Portions of San Clemente
 - Portions of San Juan Capistrano
-
- ~40,000 Residents
 - 1,000 Businesses
 - Over 2 Million visitors per year



Water Reliability for Natural Disasters and Unprecedented Drought



Water Reliability for Seismic Risks

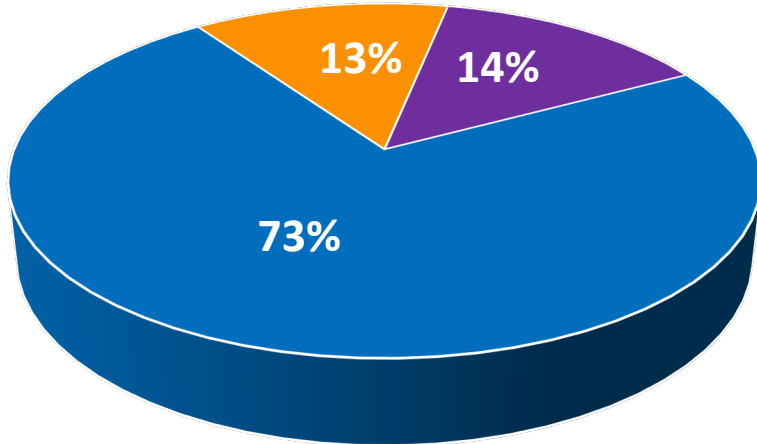


South OC – 90% Dependent on MWD Imported Supply

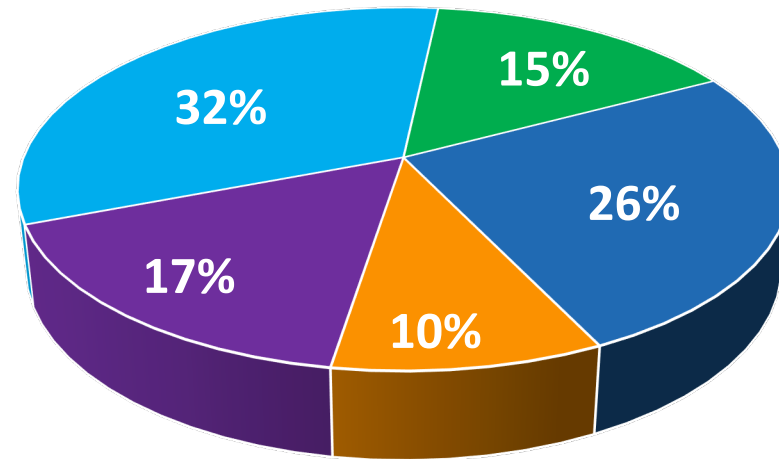
SCWD's Water Supply Portfolio

Doheny Project would provide up to 5 Million Gallons per Day (MGD)

CURRENT PORTFOLIO



2035 PORTFOLIO*



- Metropolitan Water District (MWD) Imported
- Local Groundwater
- Recycled Water
- Doheny Ocean Desalination
- Indirect/Direct Potable Reuse (IPR / DPR)

*SCWD's Board Approved 2021 Integrated Water Resource Plan (IWRP)

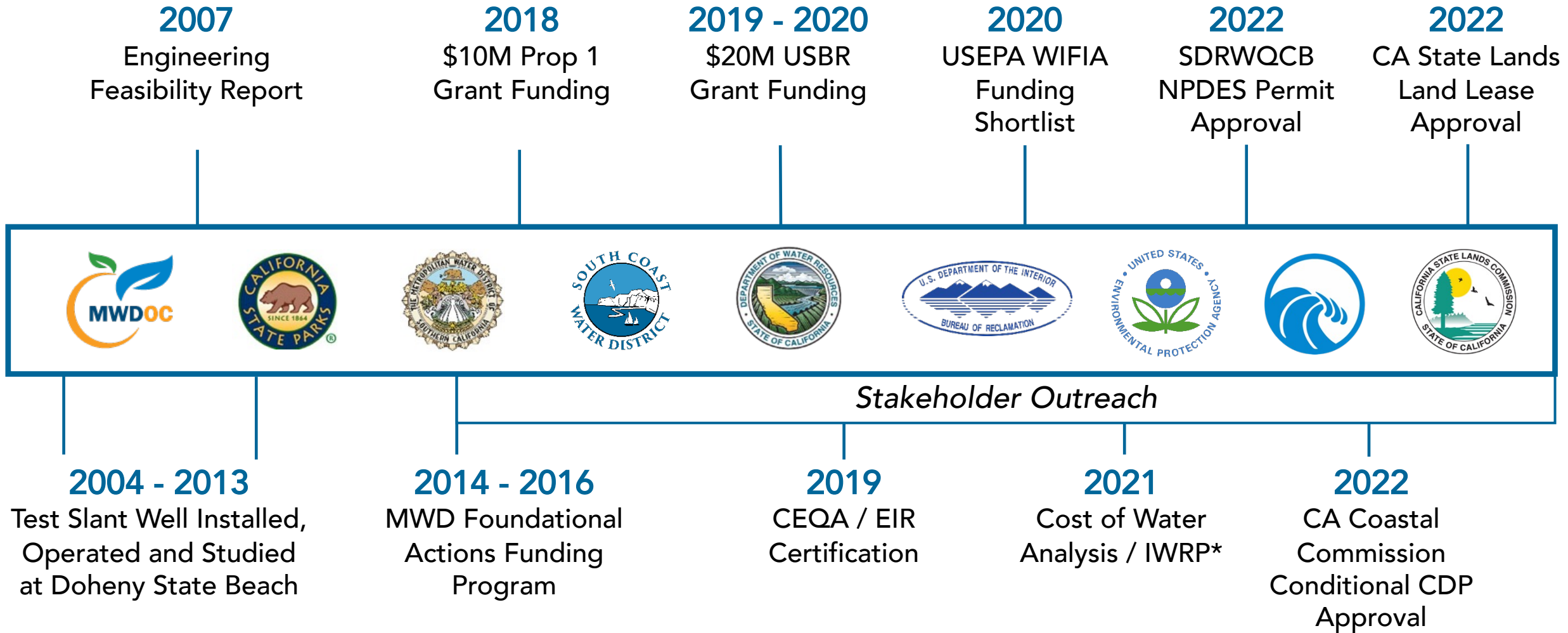
Doheny Ocean Desalination Project

Why Ocean Desalination?



- **System and Supply Reliability – Drought and Earthquakes**
- **Drought Proof and Resilient to Climate Change**
- **Sustainable Local Water at a Reasonable Cost**
- **Up to 5 MGD of drinking water supplies**
- **Potential Long-Term Local and Regional Benefits**

Project History

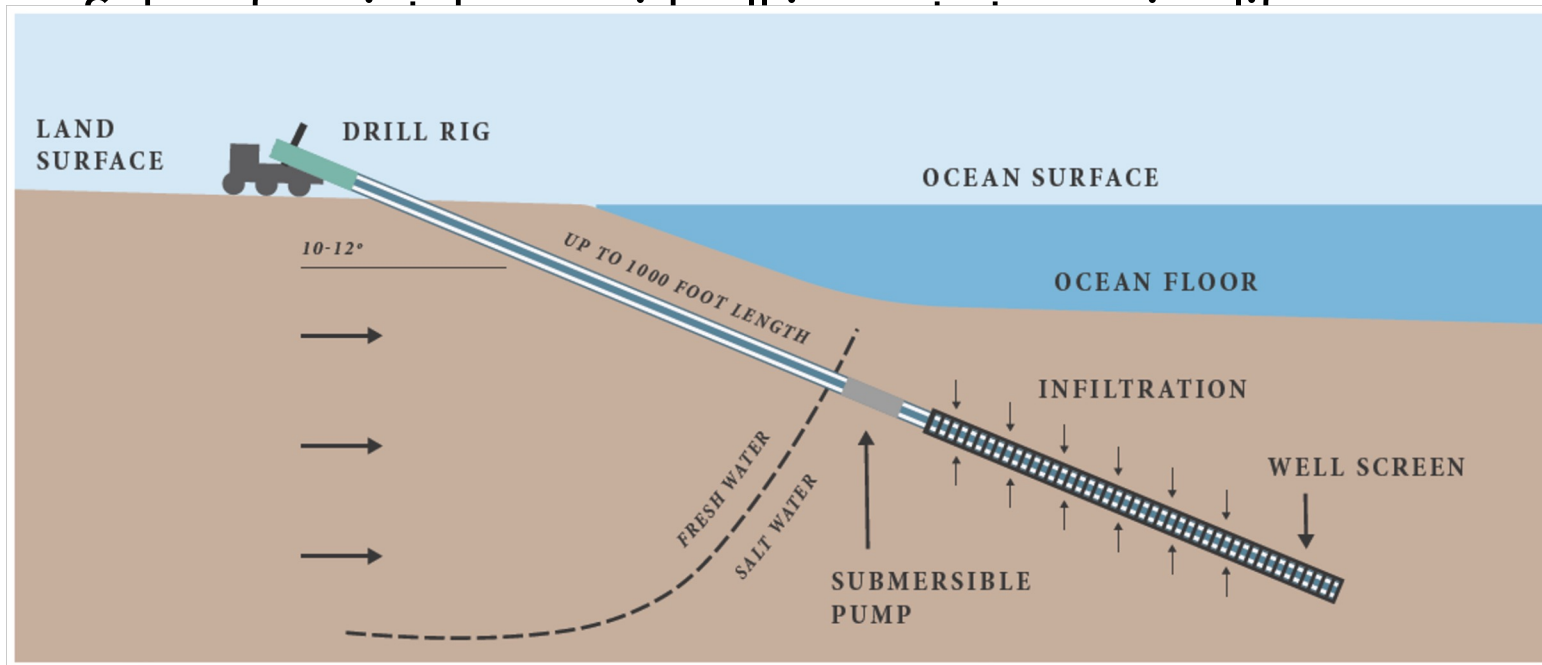


*SCWD's Board Approved 2021 Integrated Water Resource Plan (IWRP)

State Ocean Plan Preferred Methods: Subsurface Intake & Commingled Discharge

Subsurface Water Intake – Slant Well Technology

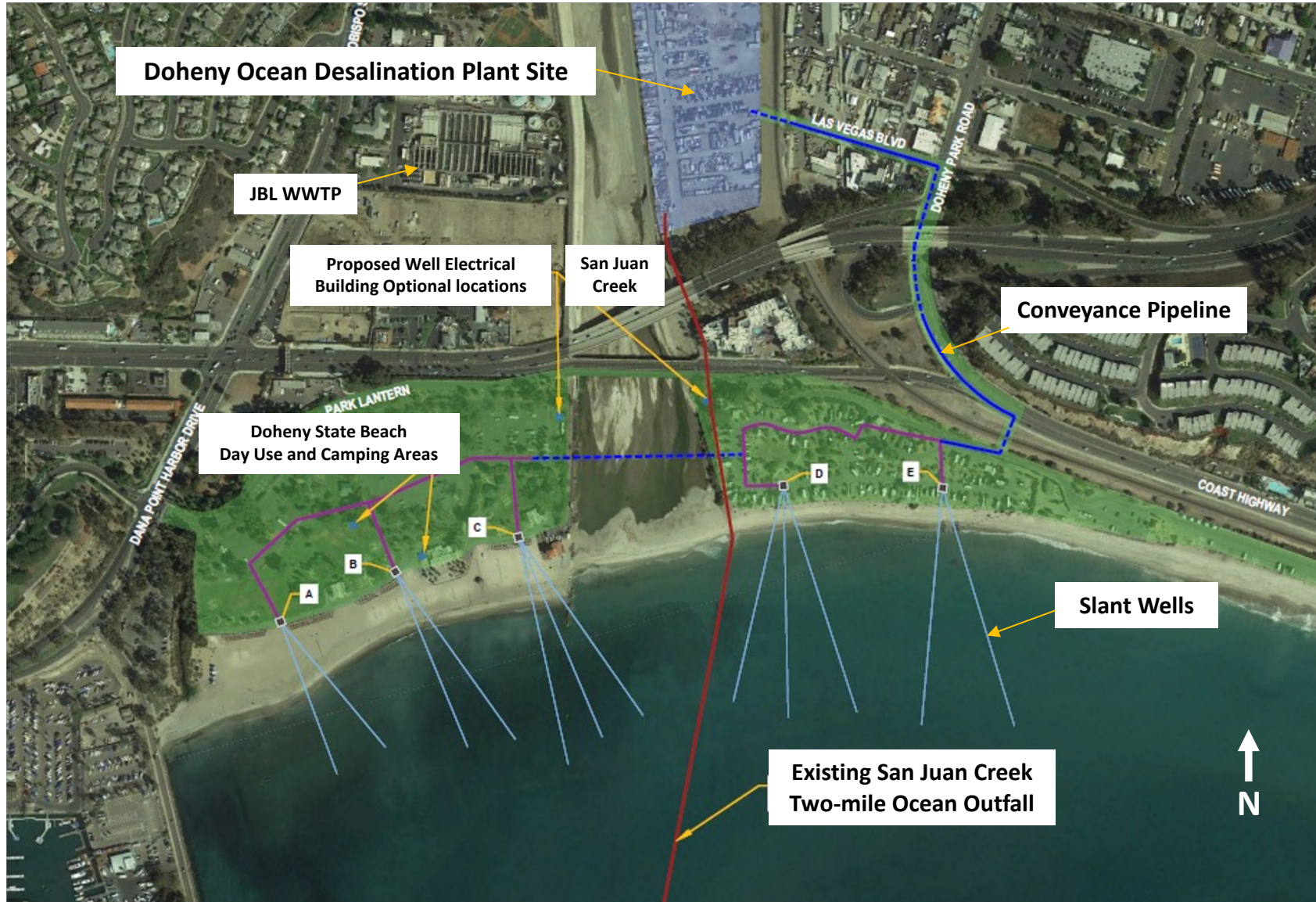
- Intake method preferred by regulators and Ocean Plan Desal Amendment
- Wells draw ocean water from below the ocean floor
- Slant Wells fully buried at Doheny State Beach
- Submersible pumps reduce noise



Commingled Discharge

- Brine diluted with treated wastewater through existing San Juan Creek Ocean Outfall more than two miles offshore
- Blended effluent would minimize impact on coastal and marine water quality

"Ideal" Project Site & Preferred Technology



Modified Project – Reduced Footprint and Impacts



Benefits of Modified Project – Doheny State Beach

- Collaborative effort - Align Project construction with State Parks DSB General Plan implementation
- Repair and restoration of DSB Campground:
 - New water sewer and electrical hookups
 - Improvements to pedestrian/bike access and circulation
 - Replace interpretive area, landscape, and restrooms



Project Cost

Grants Secured:

California Department of
Water Resources
Desalination Construction
Grant

\$10M



US Bureau of Reclamation
Water Infrastructure Improvement
for the Nation (WIIN) Act Grants
(Sponsor: Congressman Levin)

\$20M



EPA Grant – Slant Well
(Sponsor: Senator Padilla)

\$2.4M

SCWD will continue to pursue grants up to Federal Cap of \$30M

Capital Cost \$140 Million

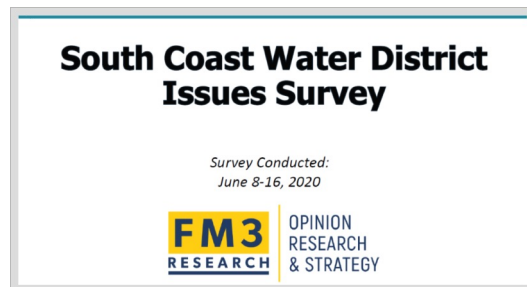


Doheny Ocean Desalination Customer Survey Findings

SCWD Customer Survey conducted during pandemic & recession

Results:

- 74% favor Project after Description
- 80% favor Project after Education
- 72% favor Project after Critical Statements
 - Economic/Cost
 - Environment
 - Perceived unproven technology



**78% willing to pay
\$5 more per month**

**76% willing to pay
\$7 more per month**

**69% willing to pay
\$10 more per month**

**63% willing to pay
\$15 more per month**

**SCWD Residential
Rate Impact:
~\$2 more per month
for 5 MGD Project**

Bi-partisan and Collaborative Support

Bi-partisan Elected Official Support

- US Senator Feinstein
- US Senator Padilla
- Congressman Mike Levin
- Congresswoman Michelle Steel
- CA State Senator Pat Bates
- CA State Senator Dave Min
- CA State Assemblymember Cottie Petrie-Norris (AB-1752)
- CA State Assemblymember Laurie Davies
- OC Supervisor Lisa Bartlett

Environmental and Regulatory Support

SDRWQCB

- NPDES Discharge Permit Approval
- Ocean Plan Compliance Determination
- Mitigation Defined
- October 2022

California Coastal Commission

- Coastal Development Permit Conditional Approval
- Special Conditions Defined
- October 2022

California State Lands Commission

- State Lands Lease
- Slant Well Construction at Doheny State Beach

State and Federal Grant Funding Support

California Department of Water Resources Desalination Construction Grant

\$10M

US Bureau of Reclamation Water Infrastructure Improvement for the Nation (WIIN) Act Grants (Sponsor: Congressman Levin)

\$20M

EPA Grant – Slant Well (Sponsor: Senator Padilla)

\$2.4M

Community Support and Potential Partner Letters of Interest

CA State Parks

South Laguna Water & Sewer Advisory Committee

LA and OC Building and Construction Trades Council

HOAs: Cape Cove, Harbor Creek, Regatta

Cities of:

- Dana Point, Laguna Beach, San Juan Capistrano, San Clemente

Neighboring Agencies & Utilities:

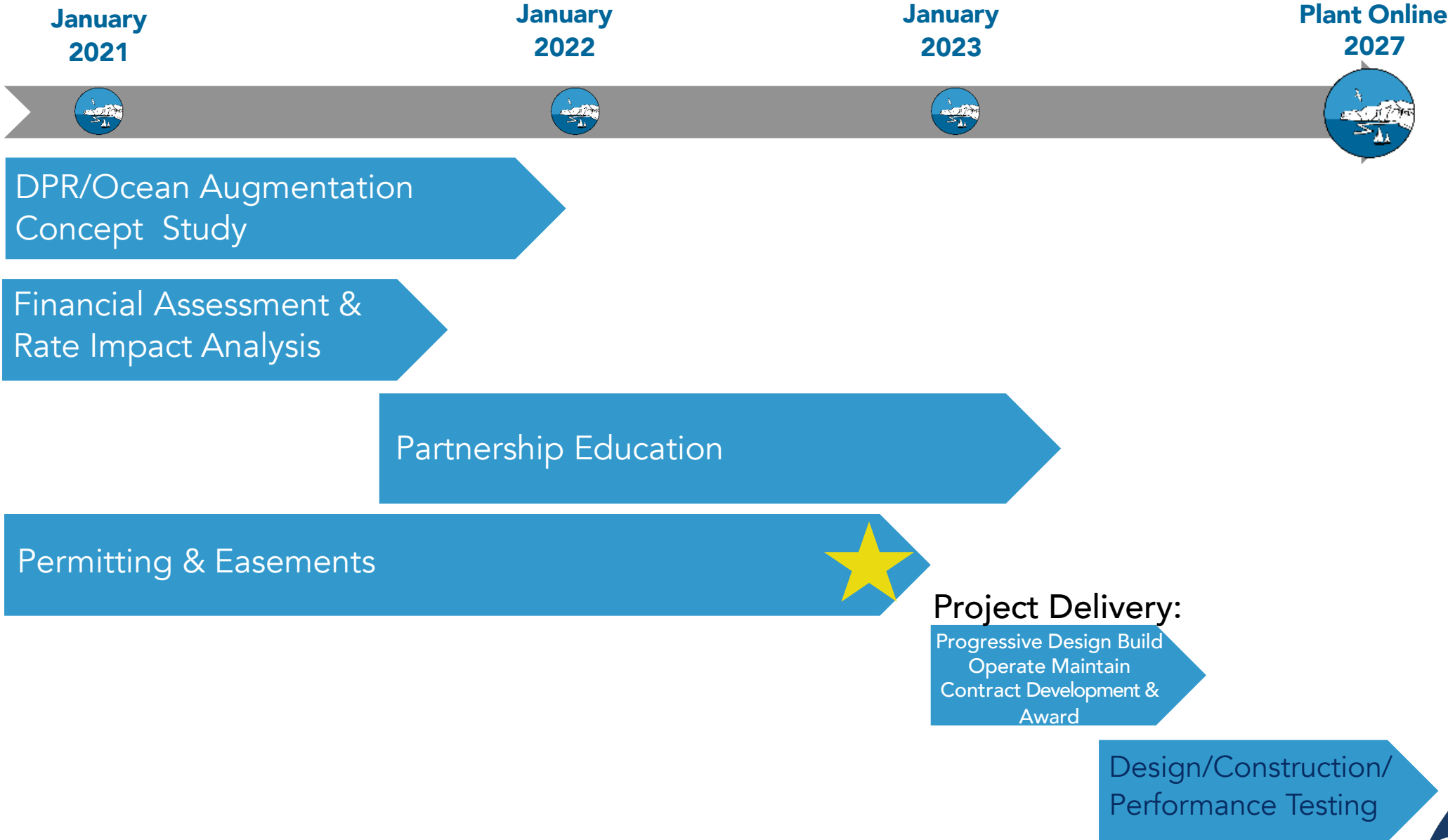
- MWD, MWDOC & ISDOC, ETWD, IRWD, EBCSD, EVMWD, IEUA, LVMWD, Mesa Water, TCWD, SMWD, Rancho Water, SOCWA

Letters of Interest

- City of San Clemente

- Laguna Beach County Water District

Anticipated Implementation Schedule



It Takes a Team!

SOUTH COAST
WATER DISTRICT
Partnering With The Community



Kimley»»Horn

Michael Baker
INTERNATIONAL



GEOSCIENCE
The First Name in Groundwater

K&A
KATZ & ASSOCIATES

KIDMAN GAGEN LAW_{LLP}





**SOUTH COAST
WATER DISTRICT**
Partnering With The Community

Thank You!

SCWD.ORG/DohenyDesal



@SouthCoastWater

Desalination Treatment Processes

Pretreatment (Potential for Fe and Mn)

Chemical Handling Facilities

Reverse Osmosis (with Partial Second Pass RO)

Energy Recovery

UV

Post Treatment (Remineralization)

Potable Water Storage Tank

Distribution Pumps

Brine Holding Tank and Discharge Pumps

Control / Administration Building

Renewable Energy (Solar + Battery Storage)

Seawater Desalination is Subject to Surface Water Treatment Rule



California Coastal Commission

- Public Hearing October 13, 2022
- Conditionally Approved Coastal Development Permit
- 16 Special Conditions
 - Public Coastal Access, loss of coastal camping
 - Improvements to Doheny State Beach Campgrounds
 - Seismic conditions, coastal hazards, sea level rise
 - Marine Life Mitigation
 - Energy and Greenhouse Gas Minimization
 - Environmental Justice / Low-Income Ratepayer Assistance and Disadvantaged Communities
 - Tribal Consultation and Cultural Resources



A pivot on desalination plants: California approves project in Orange County

CALIFORNIA

California Coastal Commission OKs desalination plant in Orange County

NEWS • ENVIRONMENT • News

Coastal Commission approves ocean desalination plant off Orange County coast

Agency permit is a key step. Commissioners say Doheny project ticks most boxes and can serve as model for converting ocean water into drinking water.



Amid historic drought, California approves \$140 mln desalination plant

- November 2022 - Addendum to Final EIR to address Campground Modifications
- Public Hearing December 9, 2022
- Land lease for slant wells below mean high tide line and modified lease for ocean outfall
- Areas of Concern
 - 20-year slant well lease
 - Greenhouse Gas Mitigation – preference to local projects
 - Environmental Justice / Low-Income Ratepayer Assistance and Disadvantaged Communities
 - Tribal Consultation and Cultural Resources



State Clearinghouse No. 2016031038
ADDENDUM TO THE
FINAL ENVIRONMENTAL IMPACT REPORT
DOHENY OCEAN DESALINATION PROJECT

November 2022



CEQA Responsible Agency:
California State Lands Commission
100 Howe Avenue, Suite 100 South
Sacramento, CA 95825

CEQA Lead Agency/Applicant:
South Coast Water District
31592 West Street
Laguna Beach, CA 92651