

ADVANCEMENT OF SLANT WELL TECHNOLOGY FOR SEAWATER DESALINATION

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY



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This project was funded in part through Metropolitan’s Foundational Actions Funding Program. The study report is available on mwdh2o.com/AboutYourWater/FAFProgram.

Development and Application of Subsurface Seawater Intake Technology

ADVANCING SLANT WELL TECHNOLOGY AND REGULATORY STRATEGIES

A slant well is a subsurface seawater intake technology that pulls water through a sand and gravel aquifer under the ocean floor. These wells have the potential to draw much higher volumes of water than vertical wells, with no impacts to marine life. This study included the development and refinement of various models, a geotechnical evaluation, and conceptual designs to further the understanding and utilization of slant well intakes.

1

GOAL

Develop and apply analytical methodologies to answer questions regarding slant well intake for seawater desalination

2

FINDINGS

Slant well technology is feasible at full-scale for the Doheny Desalination project

3

NEXT STEPS

Phased approach towards utilizing slant well intake for the Doheny Ocean desalination project; upgrades in capacity past Phase I will require further analysis and consideration

WATER TOMORROW
Foundational Actions Funding Program



ISSUES ADDRESSING

Intake challenges for seawater desalination



POTENTIAL REGIONAL BENEFITS

Increased understanding of slant well technology and more informed design of future subsurface intakes



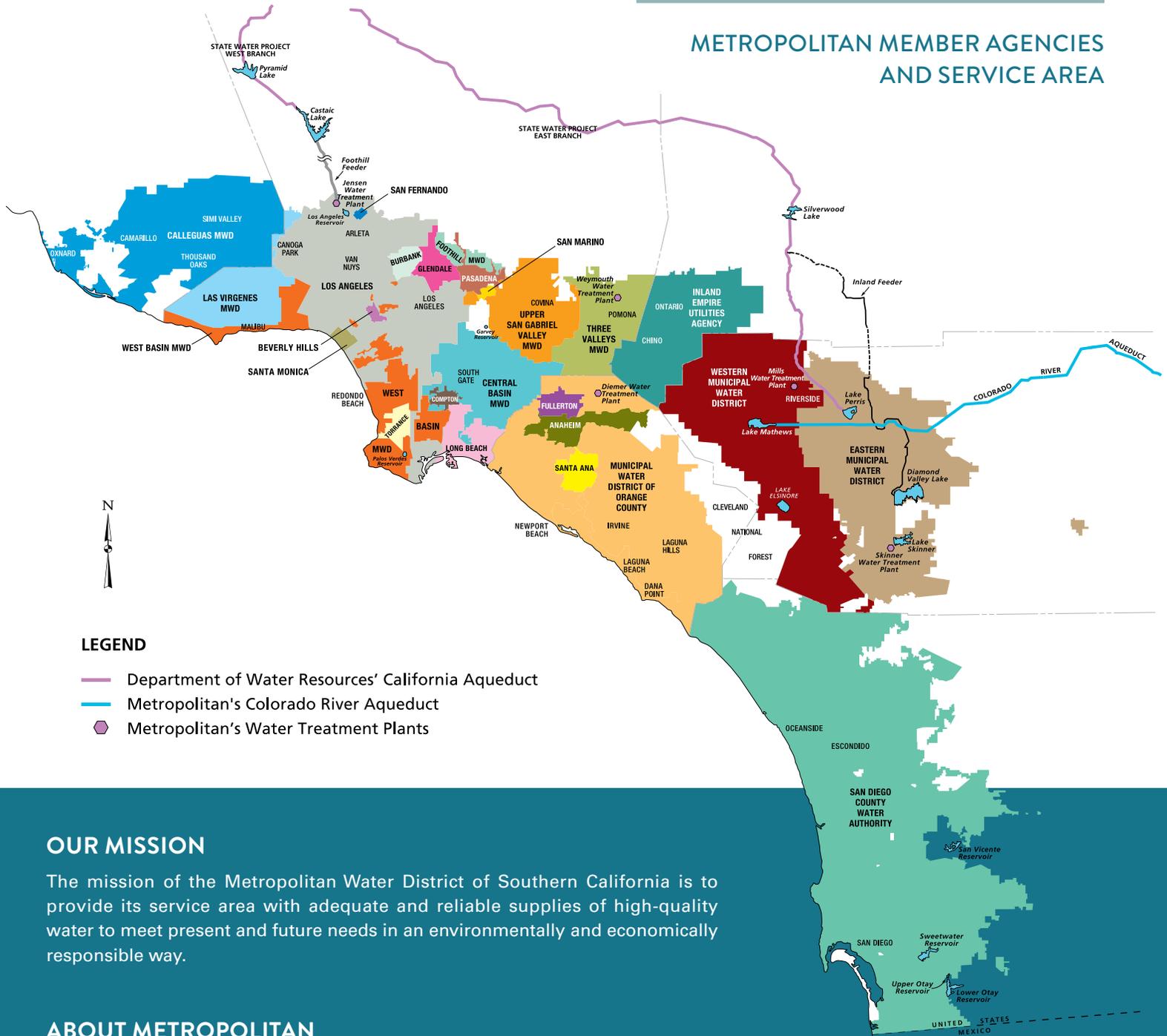
PROJECT PARTNERS

South Coast Water District

Reducing Barriers to Future Water Resource Production

Metropolitan’s Integrated Water Resources Plan was developed as a blueprint for water supply reliability for Southern California. To implement this plan and address future water supply uncertainties, Metropolitan’s Board of Directors approved a pilot funding program for technical studies and pilot projects that reduce barriers to future production of groundwater, recycled water, seawater desalination and stormwater. The request for proposals to Metropolitan’s Member Agencies resulted in agreements for 13 projects totaling approximately \$3 million in funding. These projects evaluated new water treatment technologies, developed data to inform regulations, studied options for infrastructure innovation and identified future resource potential.

METROPOLITAN MEMBER AGENCIES AND SERVICE AREA



LEGEND

-  Department of Water Resources' California Aqueduct
-  Metropolitan's Colorado River Aqueduct
-  Metropolitan's Water Treatment Plants

OUR MISSION

The mission of the Metropolitan Water District of Southern California is to provide its service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way.

ABOUT METROPOLITAN

The Metropolitan Water District of Southern California is a state-established cooperative of 26 member agencies – cities and public water agencies – that serve nearly 19 million people in six counties. Metropolitan imports water from the Colorado River and Northern California to supplement local supplies and helps its members develop increased water conservation, recycling, storage and other resource management programs.

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