

OCEAN WATER DESALINATION INTAKE BIOFOULING AND CORROSION STUDY

WEST BASIN MUNICIPAL WATER DISTRICT



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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.

Mitigating Corrosion and Biofouling in an Ocean Environment

BIOLOGICAL GROWTH CONTROL STRATEGIES AND PIPING MATERIALS

This two-part study focused on the biofouling of the intake pipes as well as the biofouling and corrosion of submerged seawater intake screens. The project consisted of testing sub-surface wedge wire screens and intake piping materials.



ISSUES ADDRESSING
Intake challenges for seawater desalination



POTENTIAL REGIONAL BENEFITS
Supports future design, implementation, and operation of intake facilities

1

GOAL

Assess corrosion and biogrowth for intake piping and screens

2

FINDINGS

Performance compared for different materials and treatment alternatives; intake screens with 70-30 copper-nickel alloy out performed stainless steel

3

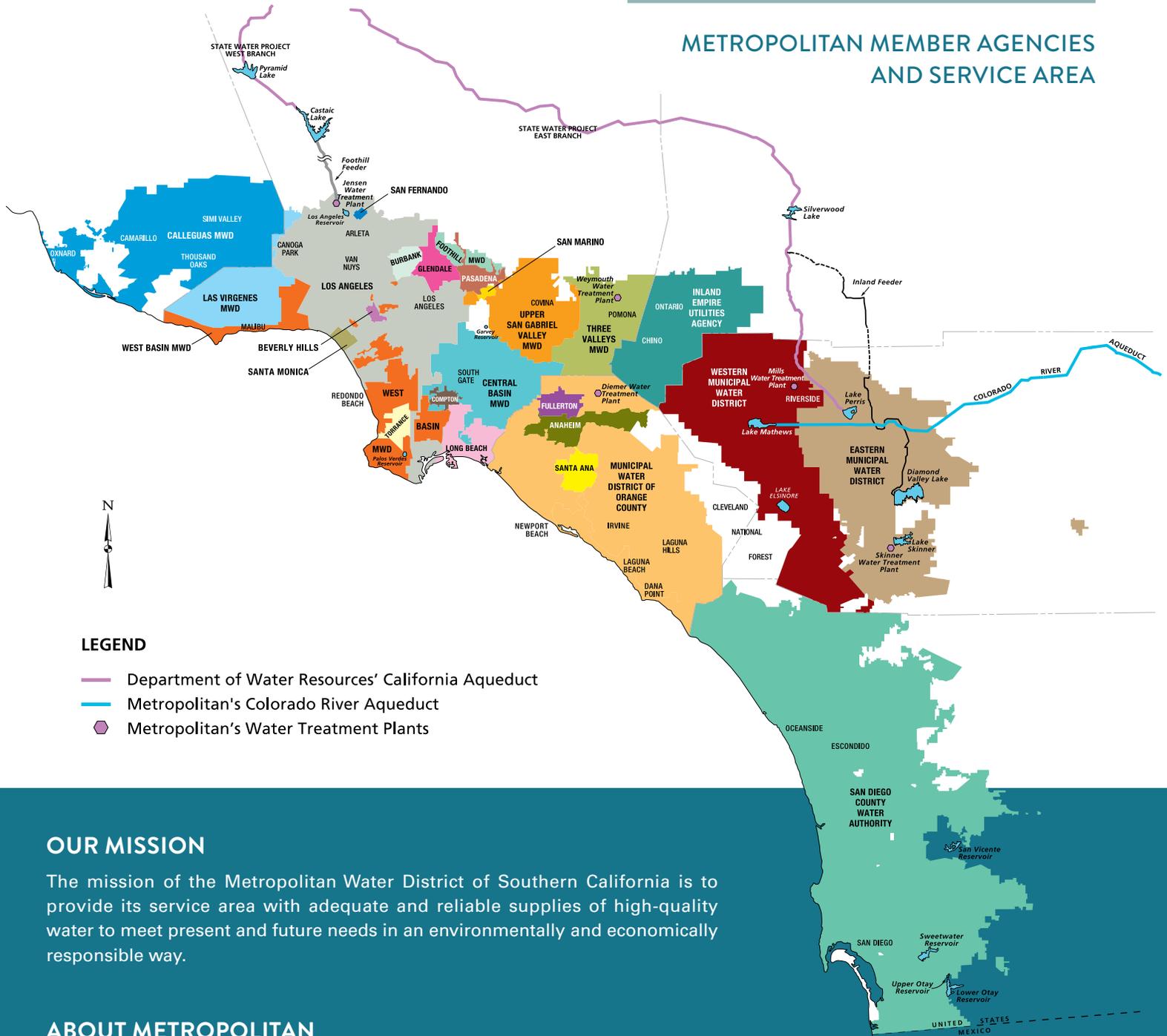
NEXT STEPS

Incorporate study findings for design of a future full-scale ocean desalination project

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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