

# PILOT-SCALE GROUNDWATER DESALTER BRINE CONCENTRATOR STUDY

EASTERN MUNICIPAL WATER DISTRICT



EXISTING GROUNDWATER DESALTER BRINE STREAM

This project was funded in part through Metropolitan’s Foundational Actions Funding Program. The study report is available on [mwdh2o.com/AboutYourWater/FAFprogram](http://mwdh2o.com/AboutYourWater/FAFprogram).

## Brine Reduction Technology Improves Groundwater Recovery

**THE TECHNOLOGY EMPLOYS ELECTRODIALYSIS REVERSAL (EDR) TO FURTHER CONCENTRATE THE BRINE STREAM FROM A GROUNDWATER DESALTER FOR INCREASED RECOVERY**

The pilot study evaluated the AquaSel desalter system of General Electric Water Process & Technologies at the Menifee and Perris desalter facility to increase overall groundwater desalter recovery from 75% to 95%. Water yield increased without compromising water quality.

1

### GOAL

Evaluate effectiveness of the AquaSel EDR desalter system as a brine reduction option

2

### FINDINGS

Successful demonstration that EDR technology could achieve desired brine concentration and groundwater recovery; potential improvements identified

3

### NEXT STEPS

Test at an intermediate 100 gallons per minute demonstration scale, with process improvements identified in this study

**WATER TOMORROW**  
Foundational Actions Funding Program



### ISSUES ADDRESSING

Brine disposal and production losses



### POTENTIAL REGIONAL BENEFITS

Improve technology, reduce brine waste volume and increase potable water recovery



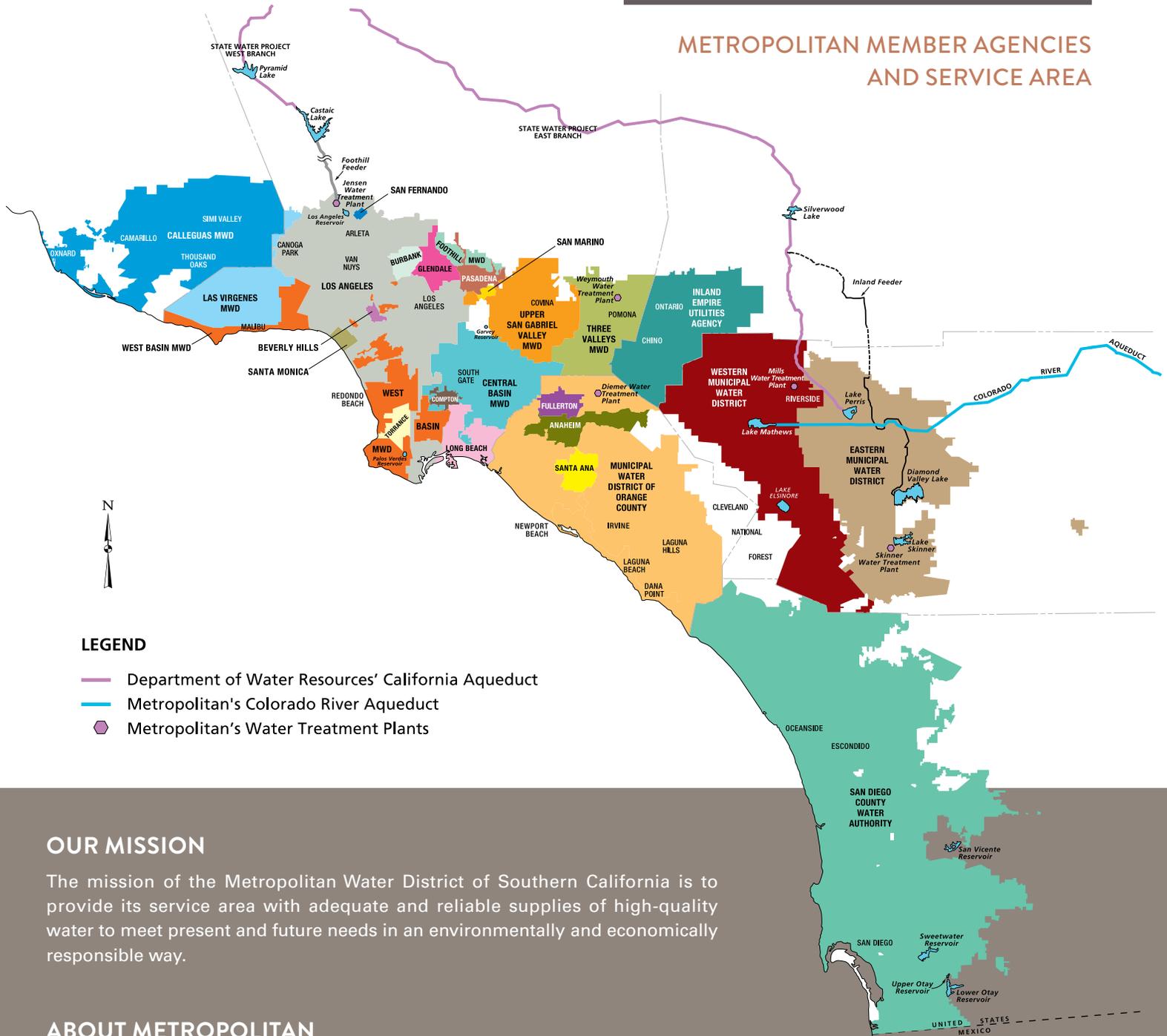
### PROJECT PARTNERS

Western Municipal Water District  
Inland Empire Utilities Agency  
Las Virgenes Municipal 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.

### BE INFORMED, BE INVOLVED

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