PILOT-SCALE 3D FLUORESCENCE EXCITATION EMISSION MATRIX

INLAND EMPIRE UTILITIES AGENCY

FLUORESCENCE EXCITATION EMISSION MATRIX TRACKING A WATER SOURCE AT DIFFERENT DEPTHS

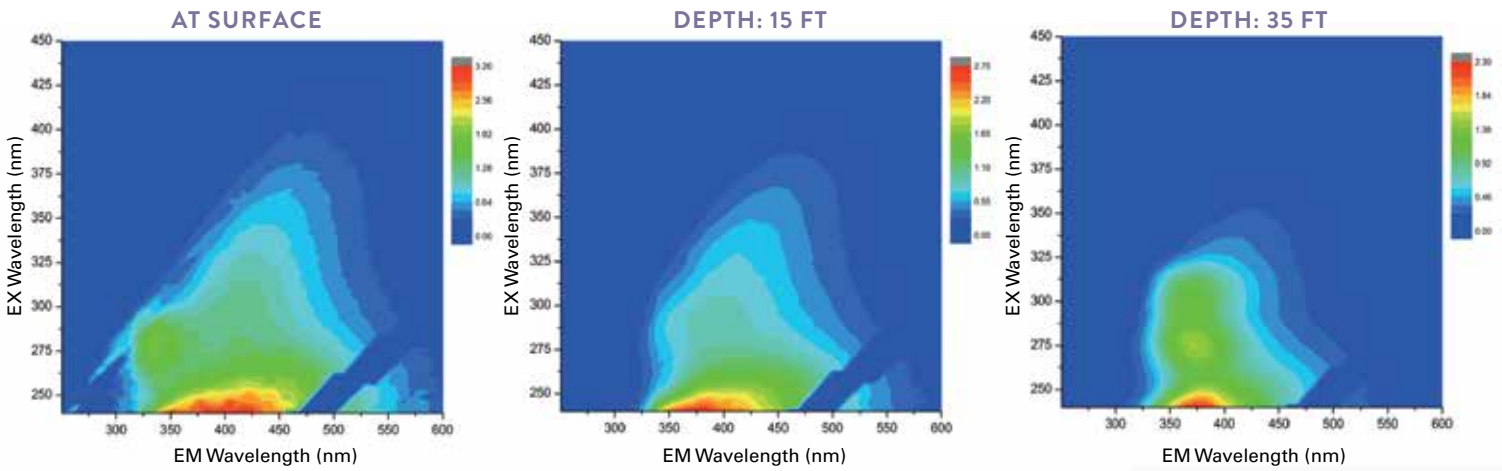


IMAGE COURTESY OF INLAND EMPIRE UTILITIES AGENCY

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

Verify Groundwater Testing Methodology to Increase Recycled Water Blend

3-D FLUORESCENCE EXCITATION EMISSION MATRIX (3D-FEEM) CAN DIFFERENTIATE TRACE DISSOLVED ORGANIC MATERIAL IN GROUNDWATER AND RECHARGE SOURCE WATERS BY PROVIDING UNIQUE FLUORESCENT LIGHT PATTERNS

Total Organic Carbon (TOC) standards limit the percentage of recycled water that can be blended for groundwater recharge. However, TOC can come from imported water and stormwater used in recharge as well and can be discounted from calculations towards TOC limits for groundwater recharge. Being able to differentiate the source of TOC could lead to increase recycled water use for groundwater recharge.

1

GOAL

Test effectiveness of 3D-FEEM in differentiating organic materials from non-recycled water in groundwater recharge

2

FINDINGS

3D-FEEM was found to be a potential tool in the dialogue with regulatory agencies regarding blending requirements

3

NEXT STEPS

Other regions seeking to increase recycled water used for groundwater recharge can apply the findings of the study

WATER TOMORROW
Foundational Actions Funding Program

ISSUES ADDRESSING

Indirect potable reuse blend requirements

POTENTIAL REGIONAL BENEFITS

Increase recycled water recharge while reducing blending water requirements

PROJECT PARTNERS

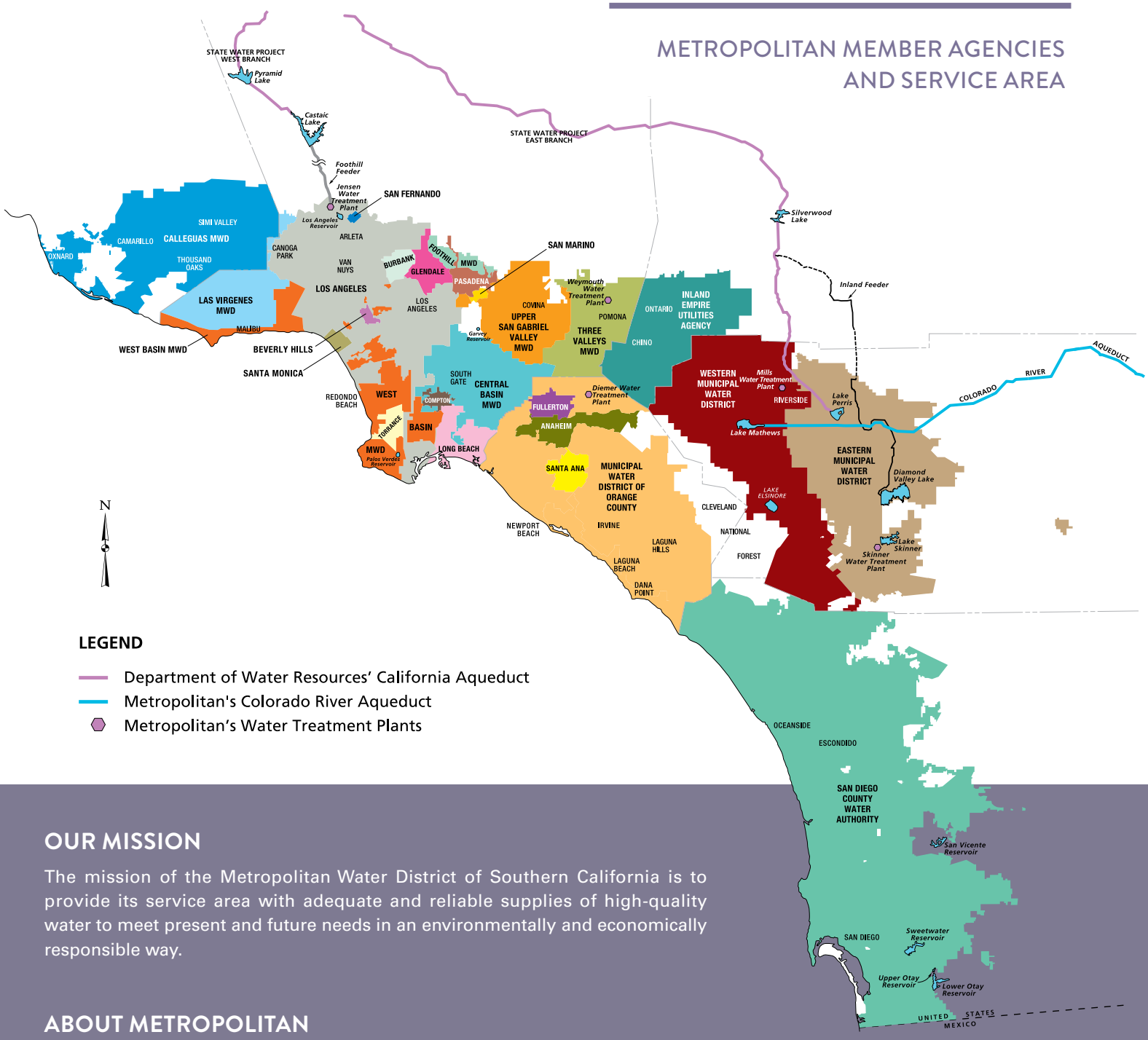
Western Municipal Water District

02/2017

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



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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