Engineering and Operations Committee
Item #6d

Subject: Update on Salinity Management Plan

Purpose: Report on Metropolitan's recent efforts, in collaboration with the U.S. Bureau of Reclamation and the Southern California Salinity Coalition, to develop an updated Salinity Management Plan

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Summary

This presentation provides (1) background on Metropolitan's 1999 salinity management policy objectives; (2) historical and current salinity trends in Metropolitan's water supplies; (3) need for an updated salinity management plan; and (4) recent collaborative actions to initiate an updated plan.

Salinity Management Plan Update

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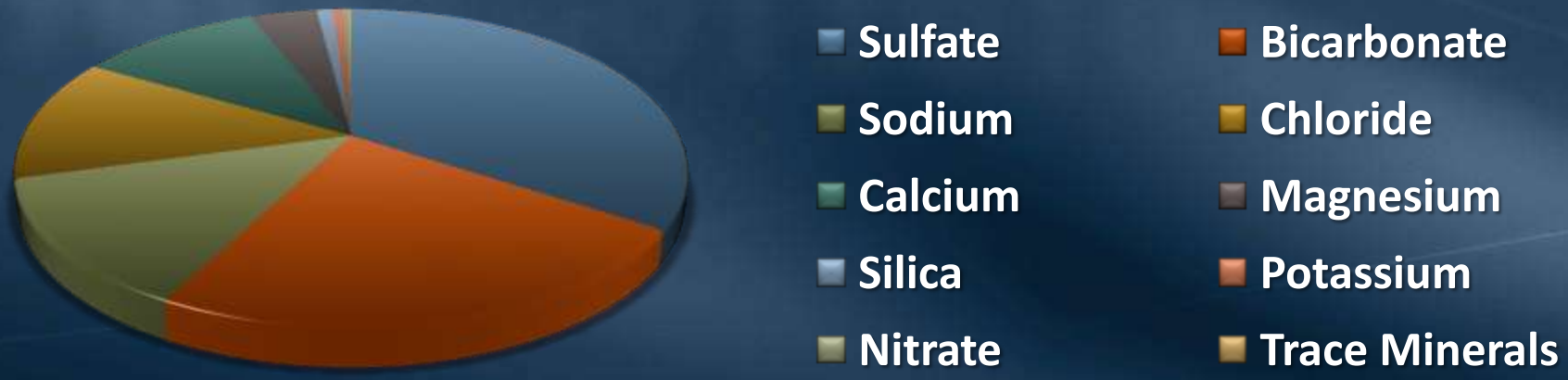
What is Salinity?

- Measurement of salts (minerals) dissolved in water
- Commonly expressed as Total Dissolved Solids or "TDS"

Typical mineral composition in Colorado River water

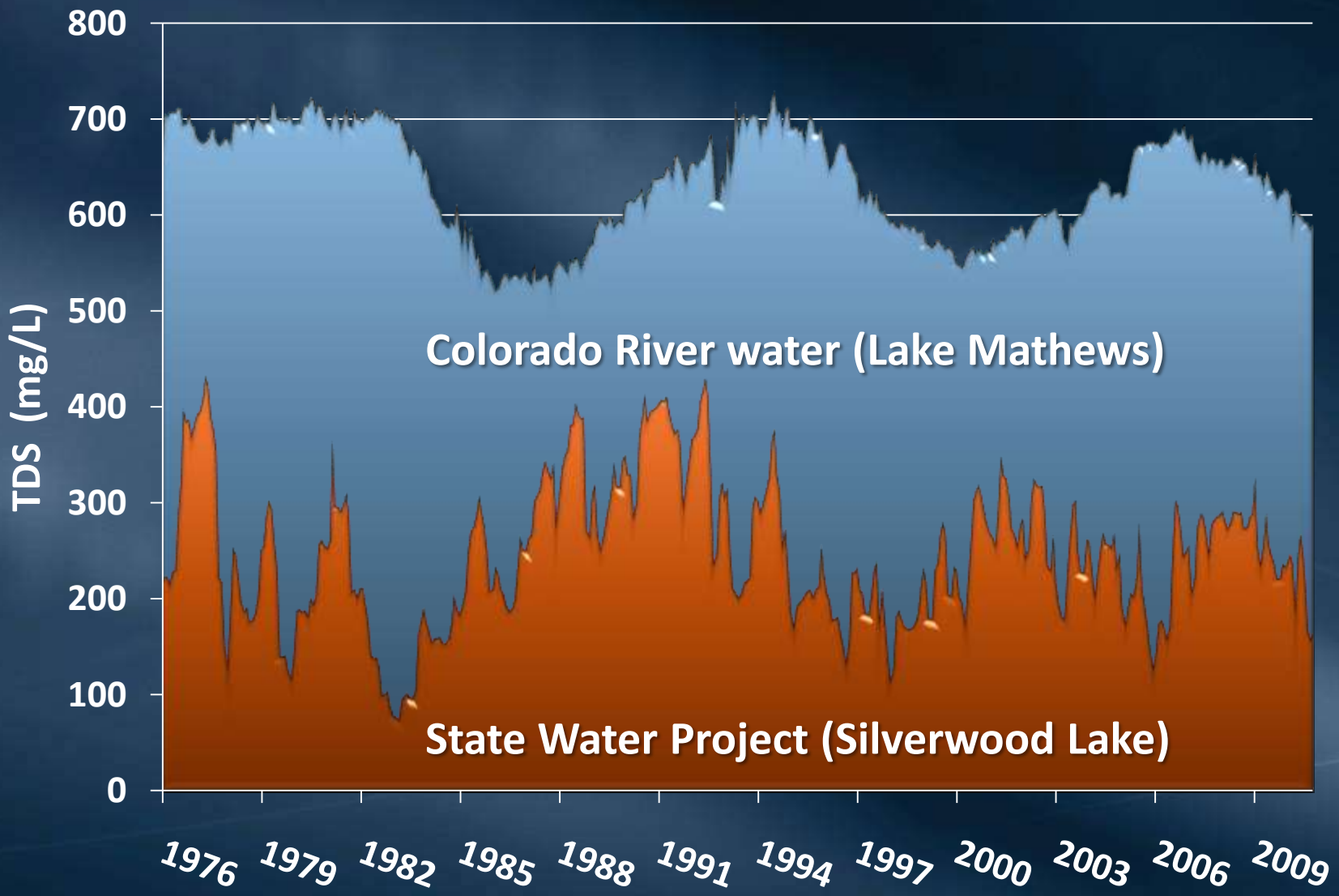


Salinity Background

- Sources
  - Naturally occurring, agricultural runoff, urban uses, seawater intrusion
- Effects
  - Limits use of groundwater basins for storage
  - Lowers usefulness and increases cost of recycled water
  - Impacts household appliances, plumbing, and industrial processes
  - Reduces agricultural crop yields
  - Imparts unpleasant taste in drinking water

Salinity in Imported Supplies

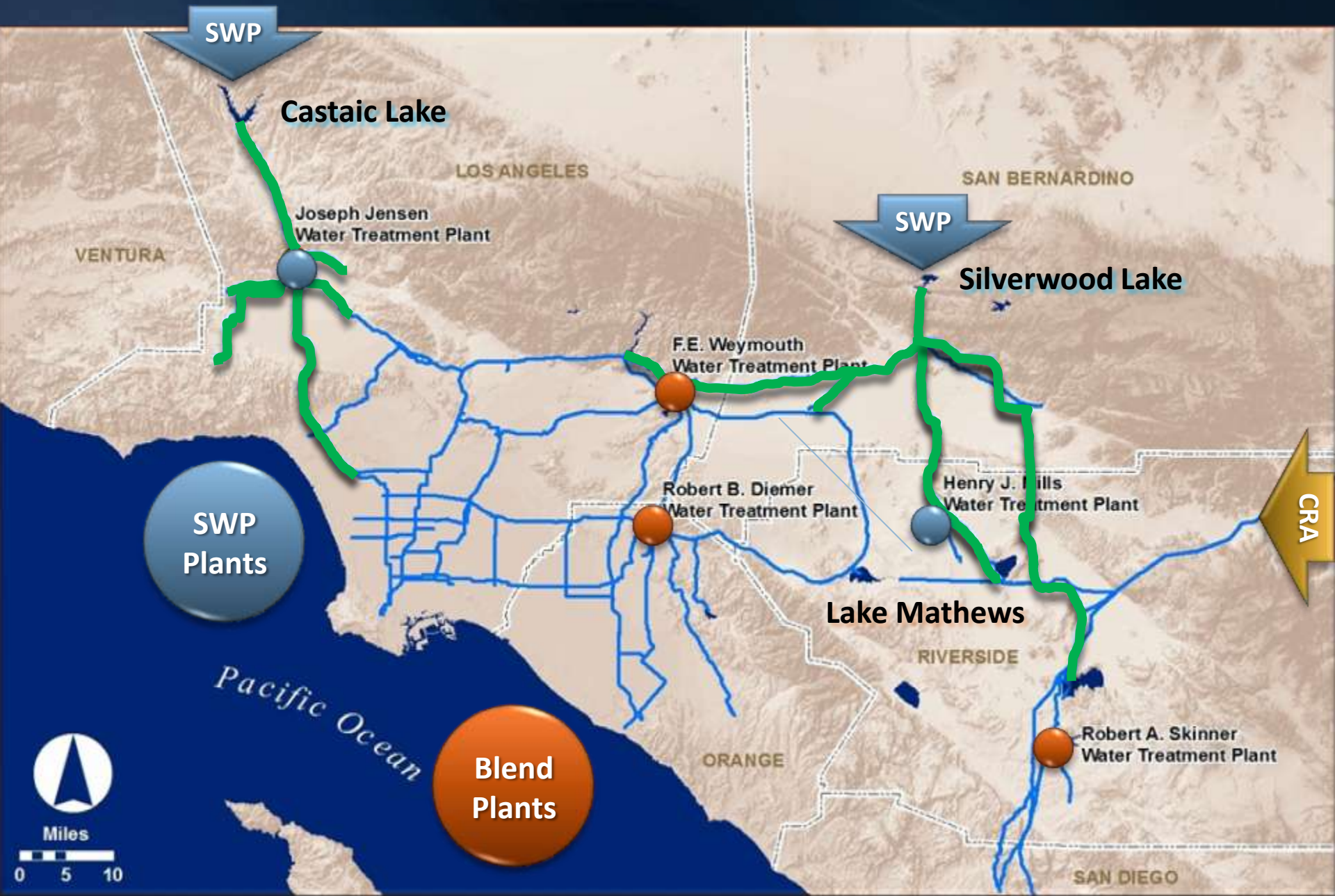
Historical Trends



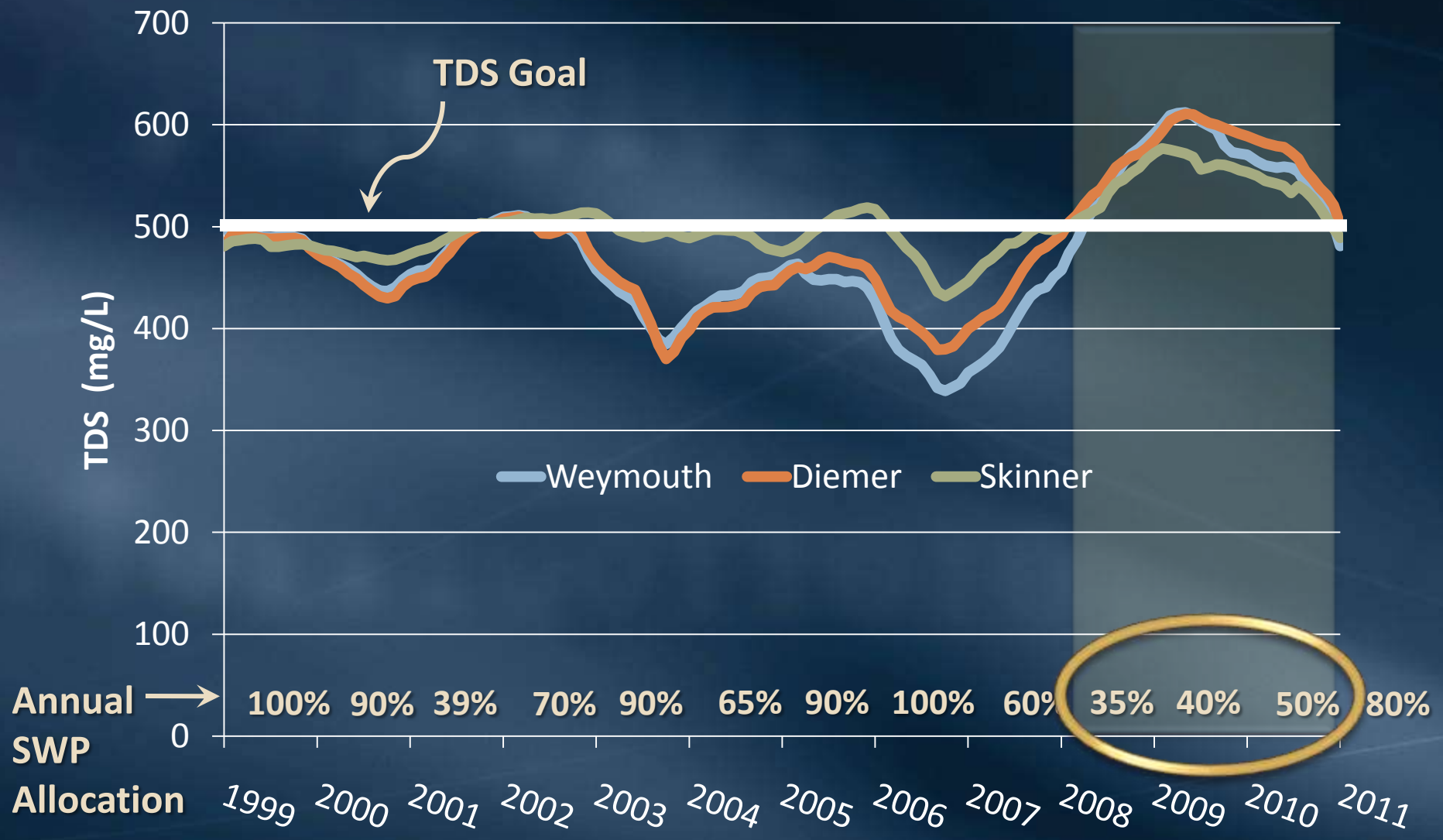
Salinity Management Policy

- Salinity Management Study (1999)
  - Assessed regional salinity problems and developed management strategies
  - Established ~$95 M/yr economic benefit from 100 mg/L salinity reduction
- Board adopted Salinity Management Policy in April 1999
- Established 500 mg/L TDS goal
  - Flow-weighted annual average
  - Focused on peak recycling months (Apr. – Sept.)
  - Recognized limitations of SWP availability, cost, water quality

System Blending



TDS at Blend Plants since Salinity Management Policy



Changed Conditions since 1999 Study

- Diamond Valley Lake, Inland Feeder, and ozone retrofits
- Delta pumping restrictions
- Quagga mussels in Colorado River water
- New water supplies as identified in IRP
- New regulations and policies
- Increased groundwater desalination and recycled water projects

Updated Salinity Management Plan

- **Goal:** Develop a long-term Salinity Management Plan to minimize the adverse effects of salinity on Southern California's water resources

- Primary Objectives
  - Convene salinity management stakeholder workshop
  - Update economic impact model and determine marginal cost of salinity changes
  - Update regional salinity conditions and identify opportunities for effective salinity management
  - Assess and update Metropolitan's salinity operational goals

Memorandum of Understanding

- MOU under development with study participants
  - U.S. Bureau of Reclamation
  - Southern California Salinity Coalition
  - Metropolitan Water District
- Two-year schedule proposed

Metropolitan's Next Steps

- Meet with partners to develop detailed scope of work
- Finalize and adopt Memorandum of Understanding
- Initiate planning for Salinity Management Plan stakeholder workshop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SOUTHERN CALIFORNIA
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