

Achieving Regional Salinity Management – Southern California Salinity Coalition



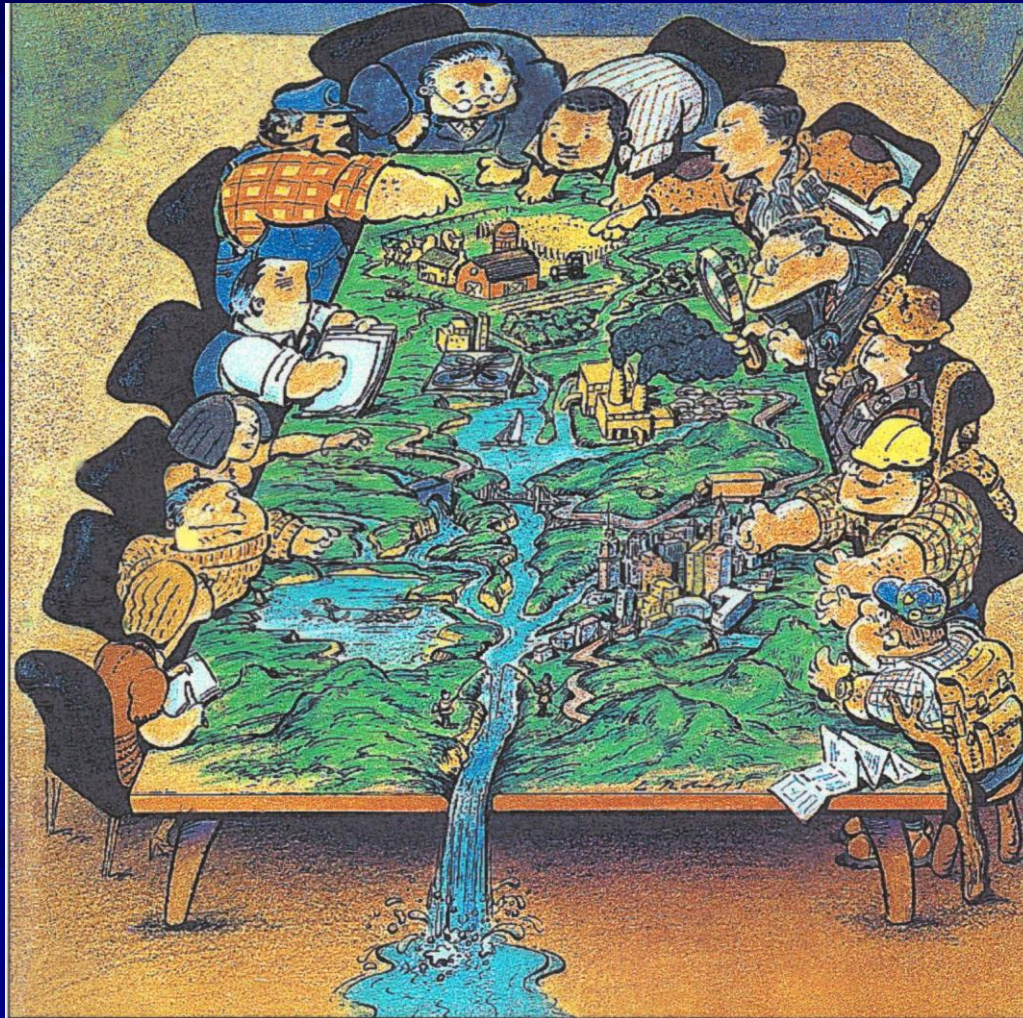
Mark Norton PE, Southern California
Salinity Coalition Chair
Santa Ana Watershed Project Authority

Origin of Salt in Southern California and Santa Ana River Watershed

- Historical agricultural uses
 - irrigation of crops, dairies
 - Dairy Washwater, Manure
- Imported water from Colorado River, State Water Project
- Natural sources
- Salt Imbalance
 - Long term



SAWPA planning and SAWPA multi-agency task forces support integrated watershed planning to address salinity management



Mission Statement



***“WORKING
COLLABORATIVELY
TO MINIMIZE THE
ADVERSE EFFECTS
OF SALINITY ON
SOUTHERN
CALIFORNIA WATER
SYSTEMS”***

Southern California Salinity Coalition

Formed in 2002

Members include:

- 🔹 Eastern Municipal Water District
- 🔹 Inland Empire Utilities Agency
- 🔹 Metropolitan Water District of Southern California
- 🔹 Orange County Sanitation District
- 🔹 Orange County Water District
- 🔹 San Diego County Water Authority
- 🔹 Sanitation Districts of Los Angeles County
- 🔹 Santa Ana Watershed Project Authority



Southern California Salinity Coalition Areas of Focus



ACCOMPLISHED OUTREACH



ACCOMPLISHED **ADVOCACY**



SCSC SOUTHERN CALIFORNIA
Salinity Coalition

Salinity and

Controlling Salt from Water Softeners
The use of residential self-regenerating water softeners can increase the levels of salinity in our water supplies. Controlling all sources of salinity is necessary to protect our water supplies. Water softeners are considered a leading controllable source of salinity.

What Is Salinity?
Salinity is viewed as one of the most under-recognized water quality issues. Total dissolved solids (TDS), salinity is the concentration of magnesium, sodium, sulfate, and chloride. Agricultural and urban activities have increased salinity in our water. In fact, groundwater basins in California are being depleted by saltwater intrusion. Other sources of salinity include natural weathering of rocks and minerals into the wastewater collection system, such as by septic systems.

Impacts of Salinity
Salinity deteriorates residential, commercial, and industrial water treatment to address salinity. High levels of salinity can also affect the ability to augment California's water supplies – as utilities and Quality Control Boards if salt levels impair beneficial uses.

Salinity Levels in Water Supplies
Salinity is commonly expressed as milligrams per liter (mg/L) or parts per million (ppm). Drinking and recycled waters with salinity levels of more than 1,000 mg/L could be considered impaired for certain applications.

Natural Source Water	Total Dissolved Solids (mg/L)
Snowfall and Rainfall	5 to 10
Snowmelt and Rainfall Runoff in Watersheds	50 to 100
Sacramento River at the City of Sacramento	120
Groundwater	200 to 10,000
Colorado River at Imperial Dam	750
Ocean Water	35,000

Final Project Report
Automatic Water Softener Rebate Program – Phase II: Public Outreach Program

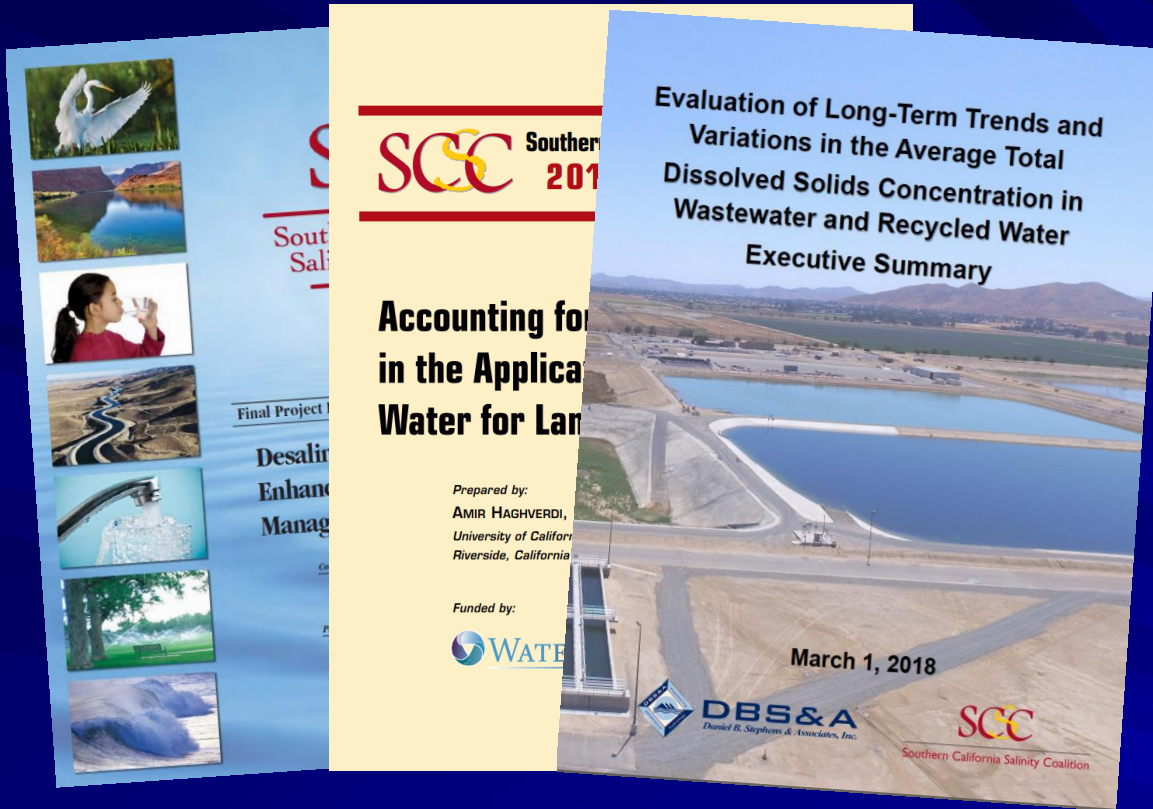
Prepared by:
County Sanitation Districts of Los Angeles County
WHITTIER, CALIFORNIA

Keep Everyone's Sewer Bill Lower – Take the Rebate and Run

Southern CA Salinity Coalition are working together to investigate salinity trends



ACCOMPLISHED RESEARCH

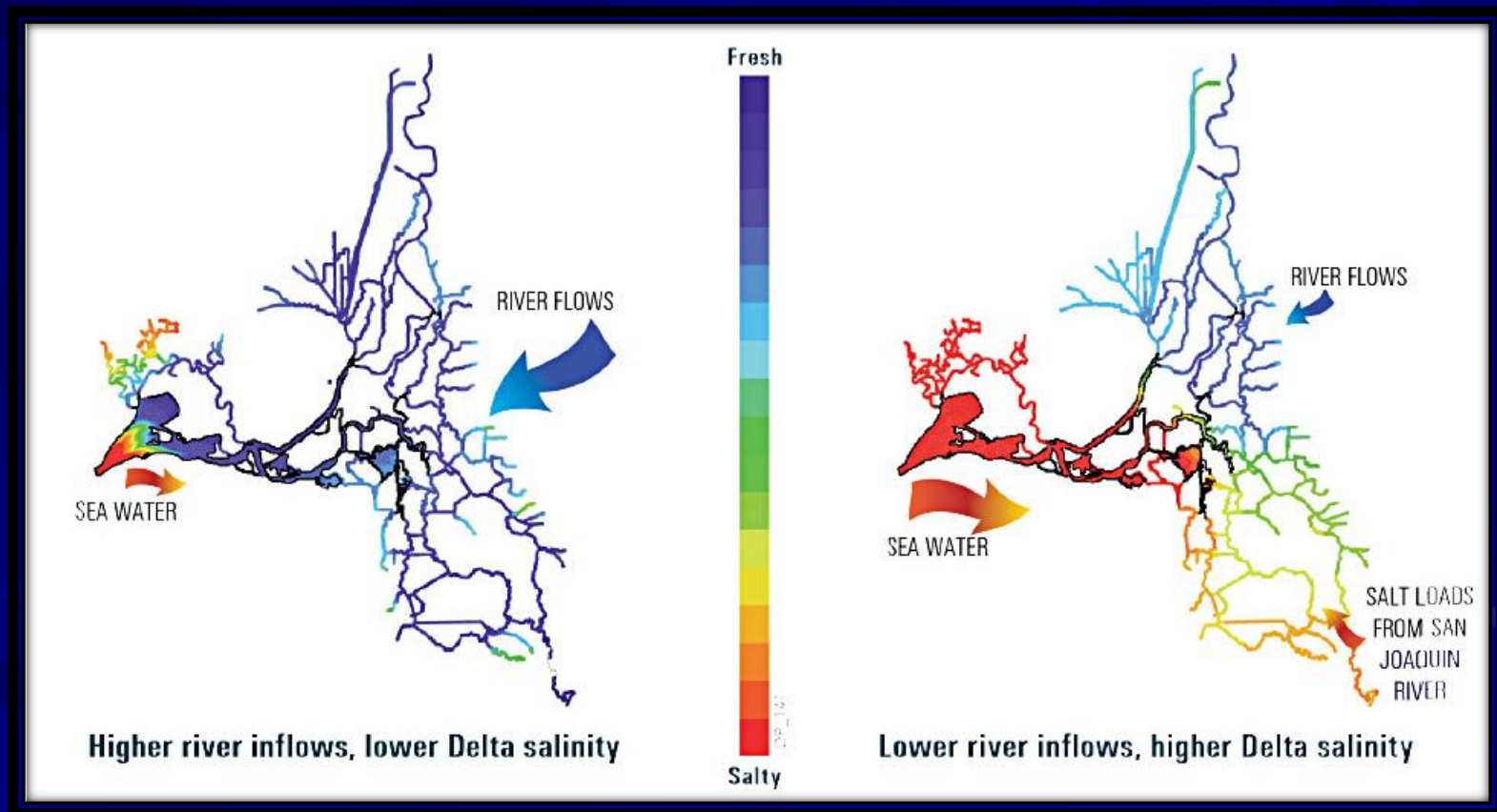


\$10,000 Fellowship grant program is offered to support graduate students for salinity research every two years

Drought Impacts



Drought conditions impact local water recycling agencies due to less lower TDS State Project Water



Wastewater treatment plants have generally been able to comply with permit limits but have very little margin for error.



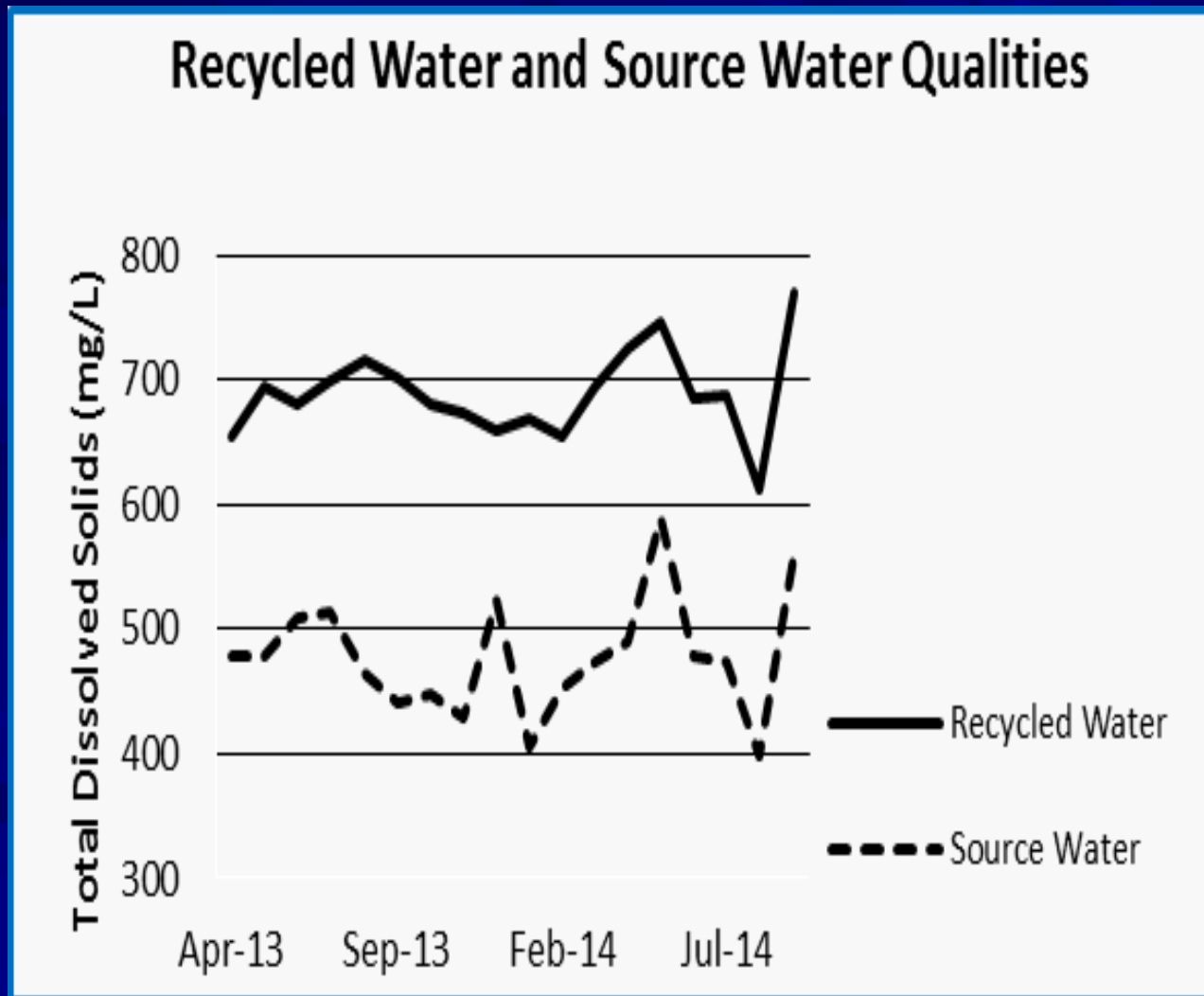
Increasing wastewater treatment costs are likely if nitrate and salt compliance becomes unaffordable



Santa Ana Regional Water Quality
Control Board listed drought policy
as a top priority in 2016



Technical analysis conducted by SCSC to document long term rising TDS trends for recycled water due to drought



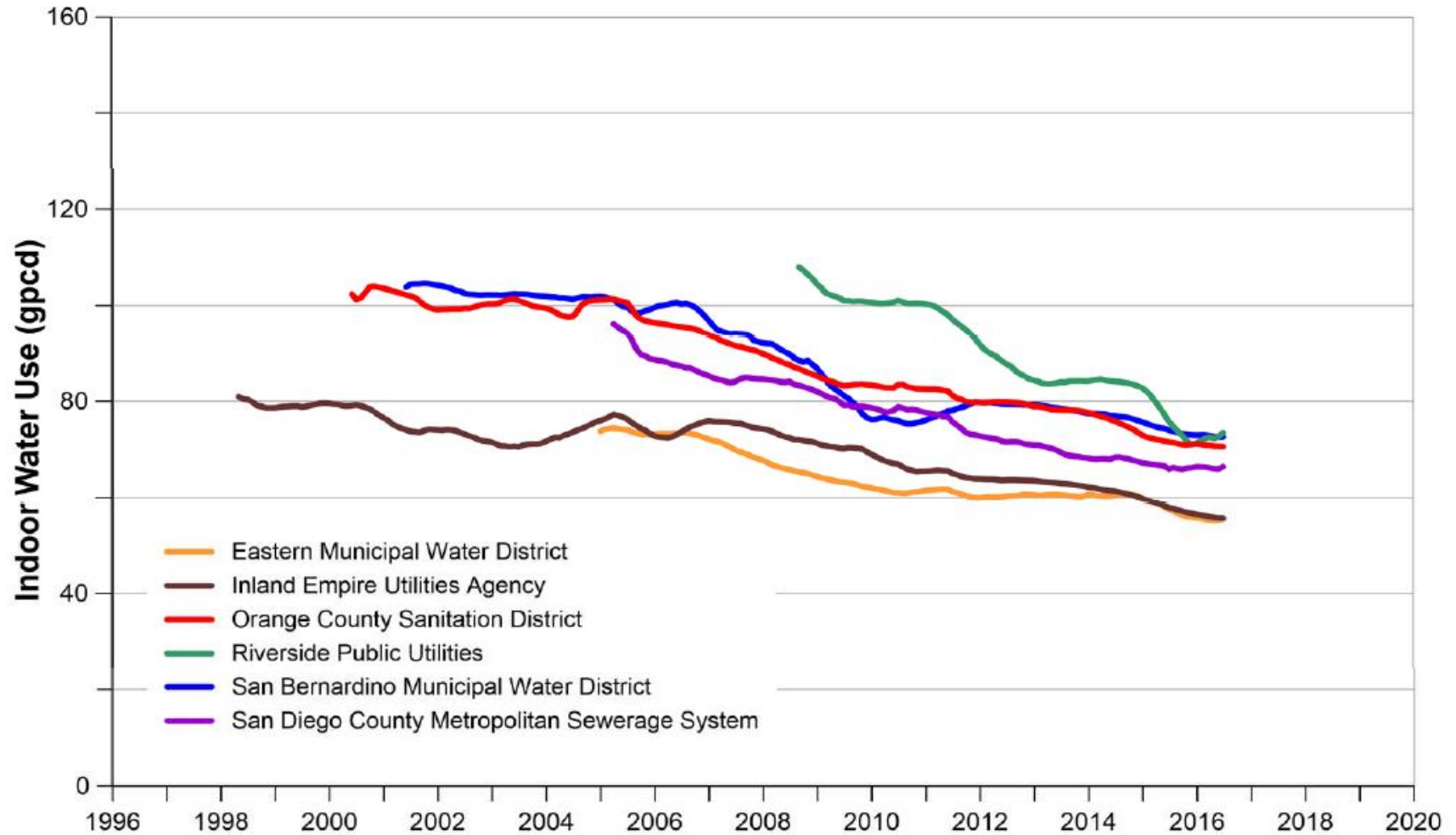


Figure 3



Over past eight year drought period, per capita water used declined by 15 gpcd and resulted in approximate 25 mg/L of TDS increase thus demonstrating the impacts from local and statewide conservation.

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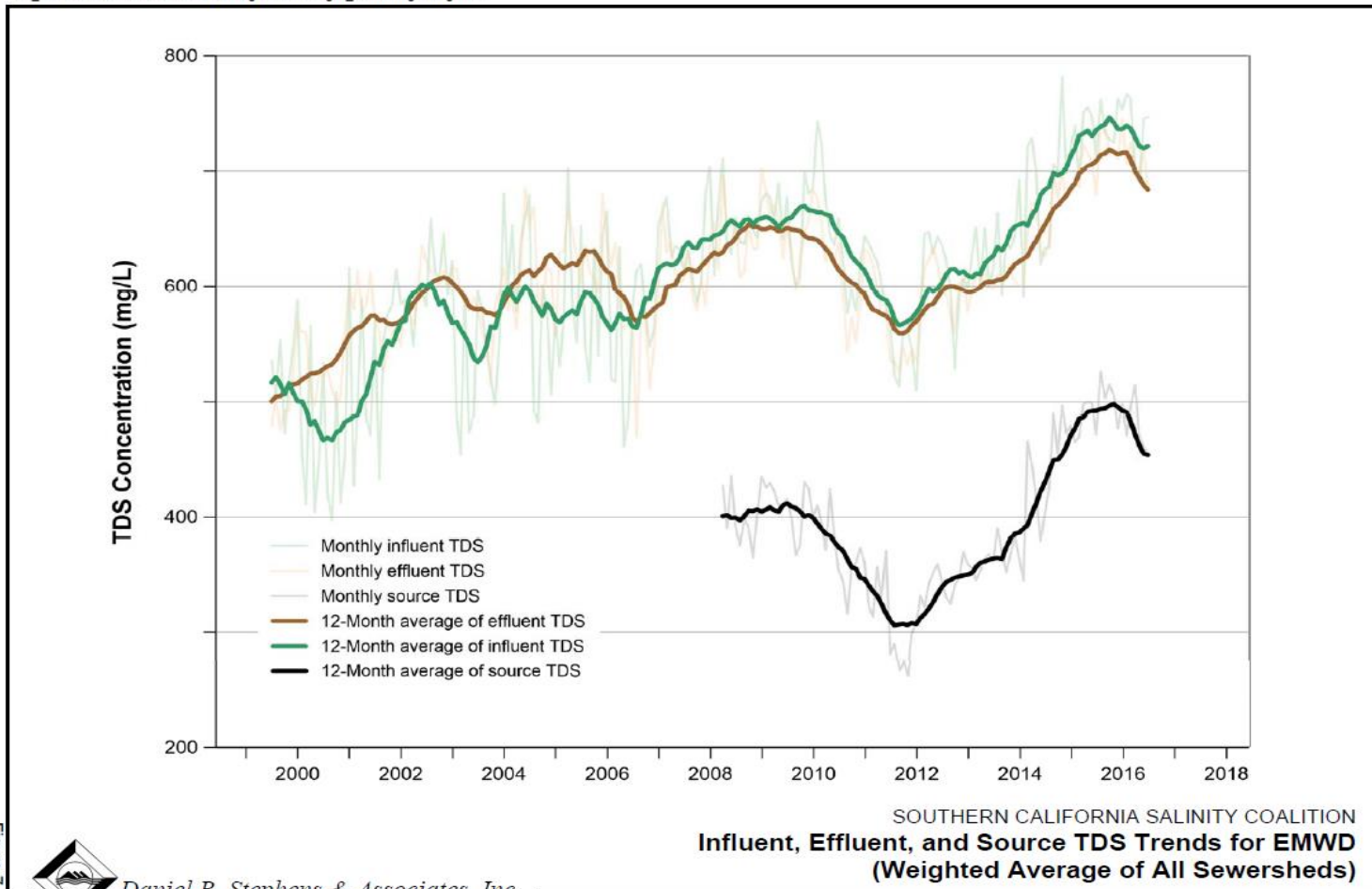


Figure 7



Next steps will be to work with regulators on changing TDS levels in discharge permits to adjust averaging periods for compliance.

Benefit:

Sharing SCSC study results to leverage impacts and streamline permitting compliance

