

# SALINITY MANAGEMENT

## Overview and Opportunities



Michael R. Welch, Ph.D., P.E.  
CONSULTING ENGINEER

## Salinity Management Plans Discussion Topics:

1. **Regulatory context**
2. Plan elements
3. Potential benefits
4. Regional issues
5. Potential approaches

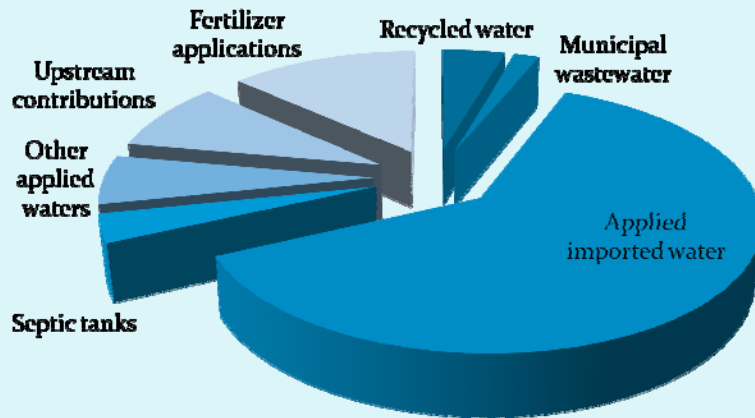
## OBSERVATIONS: State Recycled Water Policy

- The need for salinity management plans is driven by recycled water regulatory issues
- Salinity management activities in the Santa Ana Region (Region 8) significantly influenced the Recycled Water Policy
- The San Diego Region Basin Plan has always envisioned development of salinity management plans

## Regional Board Regulation of Salinity

- Basin Plan numerical water quality objectives
- Basin Plan implementation policies
- Waste discharge permits regulate discharges or threatened discharges of “wastewater”

## Salinity Sources



## Evolution of Recycled Water Regulation in the San Diego Region

### 1970s:

- Original Basin Plan and “one-third” rule

### 1980s:

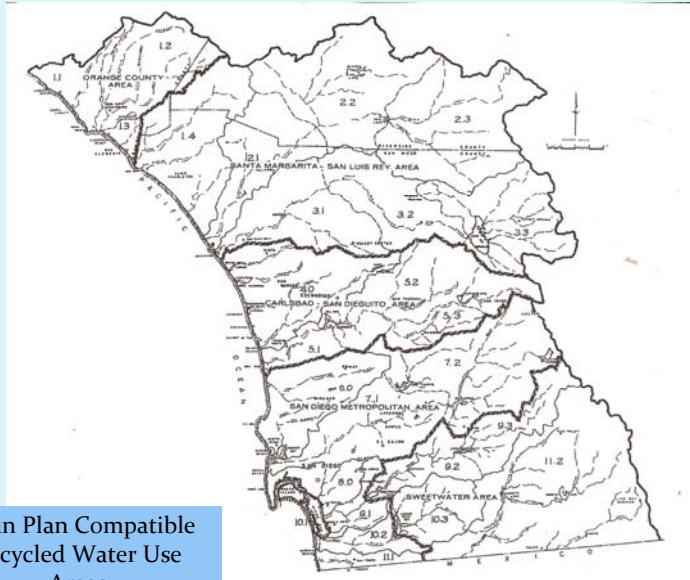
- Watershed-specific Basin Plan modifications

### Early 1990s:

- Modification of Basin Plan implementation policies

### 2009

- State Recycled Water Policy – Salinity Management Plans



Basin Plan Compatible  
Recycled Water Use  
Areas  
1970s

## Evolution of Recycled Water Regulation in the San Diego Region

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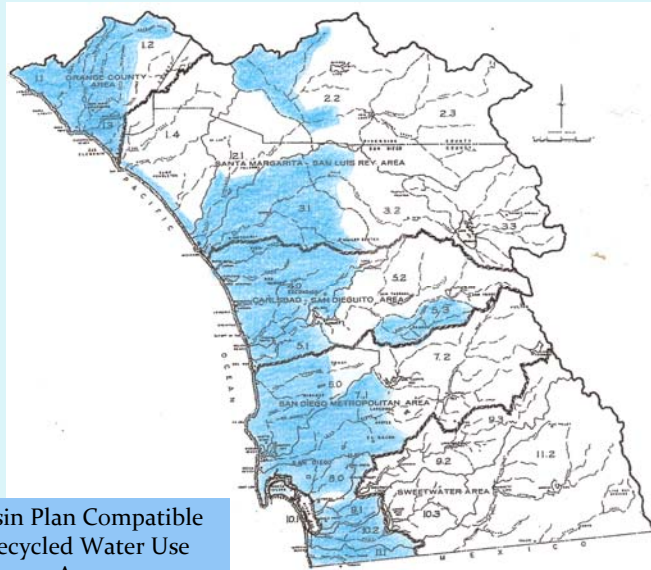
- Watershed-specific Basin Plan modifications
- Watershed-specific assimilative capacity studies

**Early 1990s:**

- Modification of Basin Plan implementation policies

**2009**

- State Recycled Water Policy – Salinity Management Plans



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## Evolution of Recycled Water Regulation in the San Diego Region

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- State Recycled Water Policy – Salinity Management Plans

The San Diego Region Basin Plan has always envisioned the development of salinity management plans:

- *“Detailed salt balance studies are recommended . . . to determine limiting mineral concentration levels for discharges.”*
- *“Upon completion of the salt balance studies, significant revision of water quality objectives may be necessary.”*

- San Diego Region Basin Plan

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## Terminology: “Watershed” or “Basin”

- Basin Plan groundwater quality objectives apply to specific hydrologic areas or subarea
- Salinity management plans should address specific hydrologic areas or subareas

## Salinity Management Plan Elements:

- Identify and characterize the basin
- Identify stakeholders
- Identify constituents of concern
- Identify sources and loads
- Assess trends
- Identify management strategies
- Select management strategies
- CEQA and Basin Plan documentation

## Prior Salinity Studies:

- Areawide Section 208 studies (1970s)
- DWR studies (1970s-)
- Cooperative groundwater studies (1980s-1990s)
- Assimilative capacity studies (1980s-1990s)
- Basin Plan studies (1980s-1990s)
- Conjunctive use/recharge studies (1990s-2000s)
- Source water assessment studies (1990s-2000s)
- MWD/Water Authority studies (1990s-2000s)

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## Salinity Management: What's in it for you?

- Influence Basin Plan objectives and policies
- Protect/enhance groundwater quality
- Increase groundwater production/yield
- Enhance recycled water use opportunities
- Address recycled water compliance issues


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## Groundwater Quality:

- Salinity
- Nitrate
- Iron and manganese
- Organic contaminants



## Recycled Water:

- Salinity compliance
- Iron and manganese compliance
- Fluoride compliance

## Facilities Planning:

- Groundwater treatment
- Groundwater recharge/recovery
- Brine disposal
- Coordination with storm runoff management

## Salinity Management Plans Discussion Topics:

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## Potential Approach:

- Identify issues that should be addressed on a region-wide basis
- Develop guidance for agencies interested in preparing watershed-specific salinity management plans
- Identify means for future coordination of these efforts

## Region-Wide Issues:

### IRON AND MANGANESE

- Region-wide modification of Basin Plan implementation policy

### FLOURIDE

- Modify Basin Plan numerical objectives within MWD service area

## Potential Approach:

- Identify issues that should be addressed on a region-wide basis
- **Develop guidance for agencies interested in preparing watershed-specific salinity management plans**
- Identify means for future coordination of these efforts

## Salinity Management Plan Guidelines:

- Would provide a “work plan” template for agencies interested in pursuing watershed-specific salinity management plans
- Would be developed with Regional Board approval
- Would minimize the potential for inconsistencies among basins
- Would offer opportunity for agency coordination
- Could be “tiered” to address varying character of San Diego Region groundwater basins

Level of effort could be tied to character of basin:

POTENTIAL BASIN CATEGORIES

- Larger basins with significant potential yields/use
- Smaller basins with limited beneficial use
- Smaller basins with limited yields
- Basins outside MWD service area

Potential Approach:

- Identify issues that should be addressed on a region-wide basis
- Develop guidance for agencies interested in preparing watershed-specific salinity management plans
- Identify means for future coordination of these efforts

## Potential Approach for Initial Regional Coordination:

- Initial Assistance:  
Water Authority/Salinity Coalition/Regional Board
- Informal coordinating committee

Questions/Discussion