Salinity Management- A Regulatory Perspective

Los Angeles Regional Water Quality Control Board

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Regulatory Focus on Salinity

- Protection of long term local water supply
  - 50% of region's supply from imported water
  - Reduced availability of current sources
  - Greater reliance on local supplies in near future
- Promote sustainable water supply
  - Increased recycled water use, stormwater use, and water conservation
- Salinity impacts utility of available water resources

Regulatory focus on Salinity (cont'd)

- Protection of Beneficial Uses
  - Agriculture (AGR)
    - Reduced crop yield
    - Limited crop selection
  - Municipal and Domestic Use (MUN)
    - Increased treatment costs
    - Shut down of drinking wells
  - Aquatic Life (AQUA)
    - Reduction in species richness and abundance
    - Toxicity
    - Physiological stress
  - Industrial Process Water (IND/PROC)
    - Increased pretreatment costs

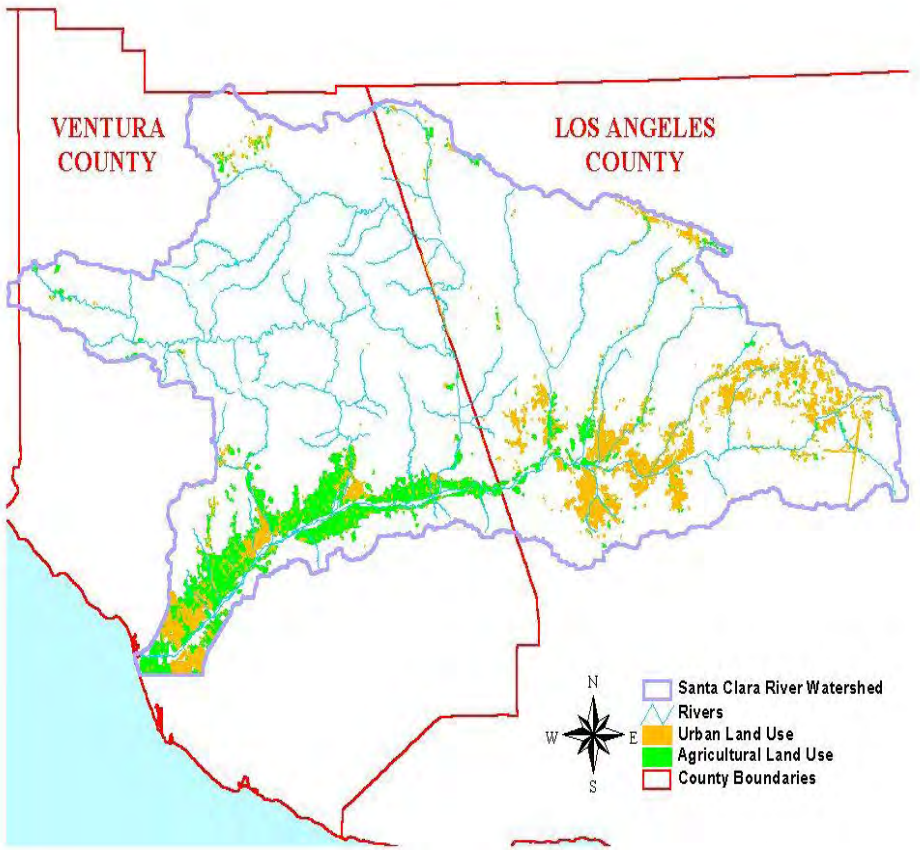
Regulating Salinity in LA Region

- Water Quality Objectives
  - TDS, sulfate, boron, chloride
- Recycled Water Permit Conditions
  - Salinity monitoring
  - Anti-degradation Analysis
- Total Maximum Daily Loads
  - Santa Clara River
  - Calleguas Creek

History of Salt Regulation

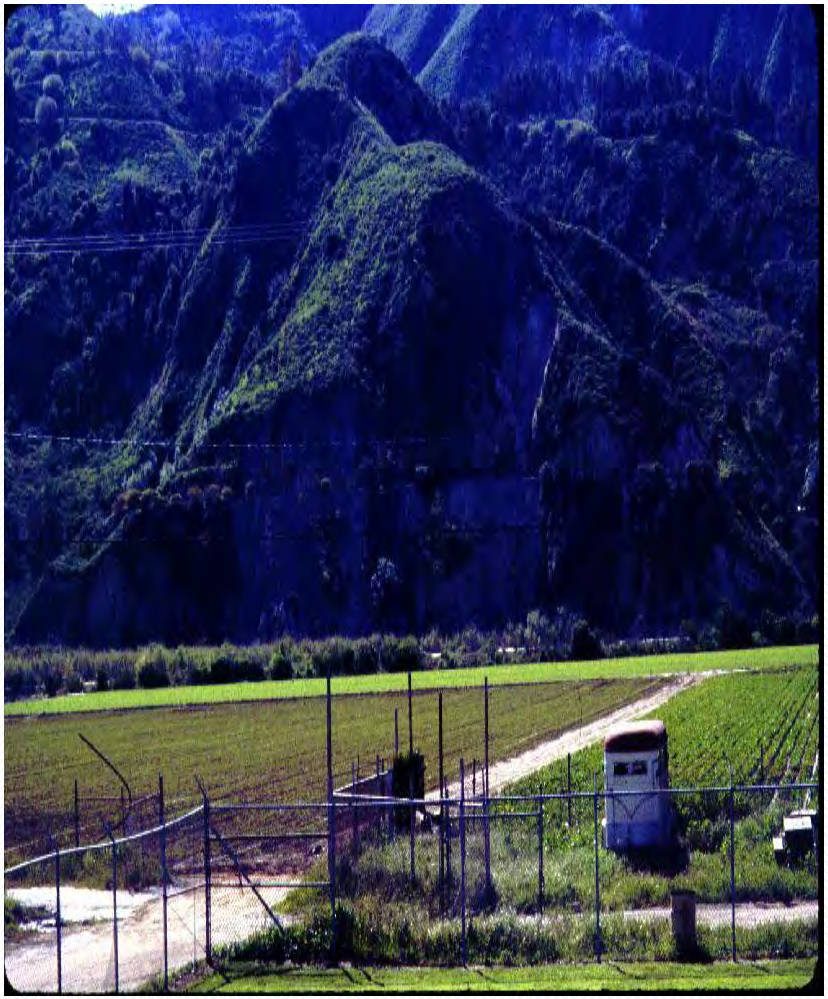
- 1975: Basin Plan Chloride Objectives
  - 50-150 mg/L
- 1990: Drought Policy
  - Interim chloride discharge limits
  - Based on imported water increase
- 1993 & 1995: Extension of Drought Policy
- 1997: Chloride Policy
  - Raised chloride limits in other watersheds
  - Extended interim limits in Santa Clara and Calleguas Watersheds
    - Extensive agriculture
    - Salt sensitive crop issues
- 1998: Santa Clara River and Calleguas Creek on 303(d) list

Salinity in Upper Santa Clara River



- Exceedance of chloride objective
- Impairment of AGR and GWR Beneficial uses
  - Reduced crop yield
  - Increased groundwater chloride levels
- Sources
  - WWTPs (70% of load)
- 2004 Interim WLA
  - Takes imported water into account (230 mg/L)

Salinity in Upper Santa Clara River

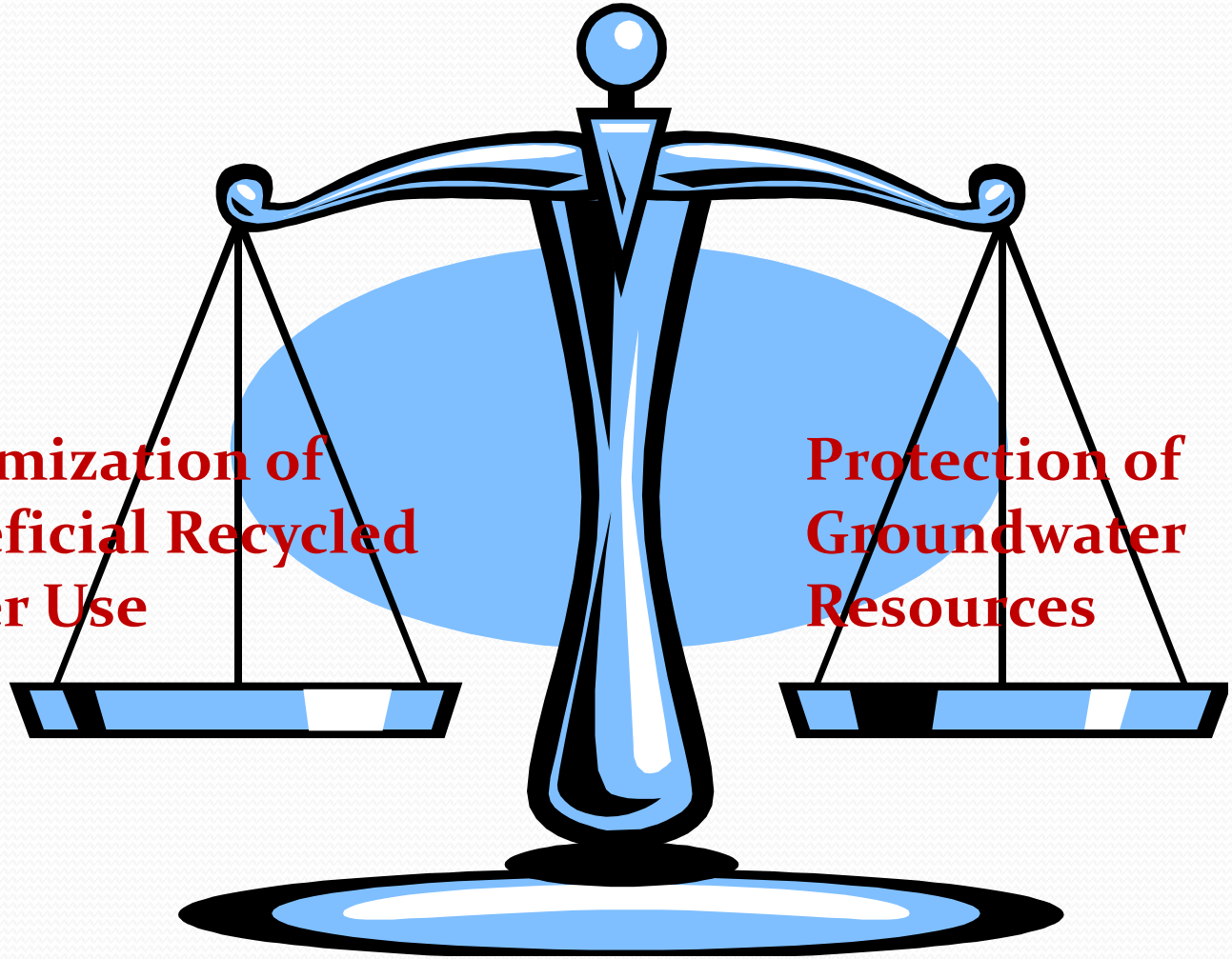


- 2004 TMDL Implementation
  - Determination of requirements for salt sensitive crops and endangered species
  - Evaluate effects on ground water
- 2008 TMDL Implementation
  - Based on 2004 studies
  - Allowed for alternative approach

Calleguas Creek Salt TMDL

- Developed to address surface water chloride impairments
- Watershed group engineered solution
  - Remedied surface water impairment
  - Promoted groundwater quality restoration

The Recycled Water Policy



Achieving the Balance

- Salt and Nutrient Management Plan
  - Provides directives for comprehensive regional salinity management
    - Source Identification
    - Fate and Transport Analysis
    - Basin wide monitoring/assessment
    - Comprehensive control/reduction strategies
  - Promotes stormwater use and recharge to augment local water supplies

SNMP development in LA Region

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