

**Salt & Nutrient Management Plans
and
Basin Plan Amendments
for
San Fernando Valley Groundwater Basin**

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Introduction

- Need for Salt and Nutrient Management
 - To optimize recycled water use
 - To protect groundwater supply and beneficial uses
 - To protect agricultural beneficial use and
 - To protect human health

Introduction

- Salt & Nutrient Management Plans required by the Recycled Water Policy
 - Basin-wide approach to groundwater management
 - Stakeholders to develop implementation plans for meeting objectives for salts and nutrients.
 - Implementation plans to be adopted by Regional Water Boards as Basin Plan Amendments.
 - Completion by 2014 - 2016

Introduction

- What if basin-wide Salt & Nutrient Management Plans are not completed?
 - Individual monitoring programs for each recycled water project
 - Sole mitigation requirements
 - Lose opportunity for regional salinity management
 - Stakeholders loss opportunity to control regional salinity management

Overview of Presentation

- Elements of Salt & Nutrient Management Plans
- Groundwater Basin Data
- Basin Planning Process
- Funding

Salt & Nutrient Management Plan: Required Elements

- Basin-wide Monitoring Plan
 - Assess basin groundwater quality
 - Constituents and frequency
 - Monitor groundwater and surface water connectivity
 - Identify responsible stakeholders
- Provision for monitoring constituents of emerging concern (CECs) in recycled water

Salt & Nutrient Management Plan: Required Elements

- Water Recycling and Stormwater Recharge/Use Goals and Objectives
- Salt/Nutrient Source Identification, Basin/Sub-Basin Assimilative Capacity, Loading Rates, Fate and Transport of Salt and Nutrients
- Implementation Measures to Manage Salt and Nutrient Loading
- Antidegradation Analysis

Salt & Nutrient Management Plan: Suggested Elements

- Groundwater Basin Overview
 - Physiographic description
 - Groundwater basin identification and boundaries
 - Watershed boundaries
 - Geology
 - Hydrogeology/Hydrology
 - Recharge areas
 - Climate
 - Landcover and landuse
 - Water sources

Salt & Nutrient Management Plan: Suggested Elements

- Basin Water Quality
 - Groundwater quality: Past and present
 - Beneficial uses
 - Surface water quality: Effect on groundwater
 - Delivered water, imported water, and recycled water
- Basin Water Balance
 - Conceptual model
 - Basin inflow and outflow

Salt & Nutrient Management Plan: Suggested Elements

- Salt and Nutrient Balance
 - Conceptual model
 - Source identification
 - Loading estimates
 - Basin assimilative capacity
 - Fate and transport of salt and nutrients

Salt & Nutrient Management Plan: Suggested Elements

- Salt and Nutrient Management Strategies
 - Load reduction goals
 - Changes in land development and use
 - Salt and Nutrient management options
 - Feasibility analysis
 - Cost analysis

Salt & Nutrient Management Plan: Additional Elements

- The need for additional studies will be dictated by the complexity of the basin
 - Type and number of sources of salts and nutrients
 - Quantity (load) of salts and nutrients discharged
 - Impairments and/or threats to groundwater quality and beneficial uses
 - Data gaps

Next Up...

- Groundwater Basins

Los Angeles Region Groundwater Basins

- Eleven major basins identified by hydrographic area (Central, West, San Gabriel, San Fernando, Las Posas, Santa Monica, Raymond, Pleasant Valley, Hollywood, Ventura, Santa Clara)
- Thirty three basins and sub-basins within the Los Angeles Region (DWR Bull. 118)

FIGURE 1-9

REGIONAL GROUNDWATER BASINS

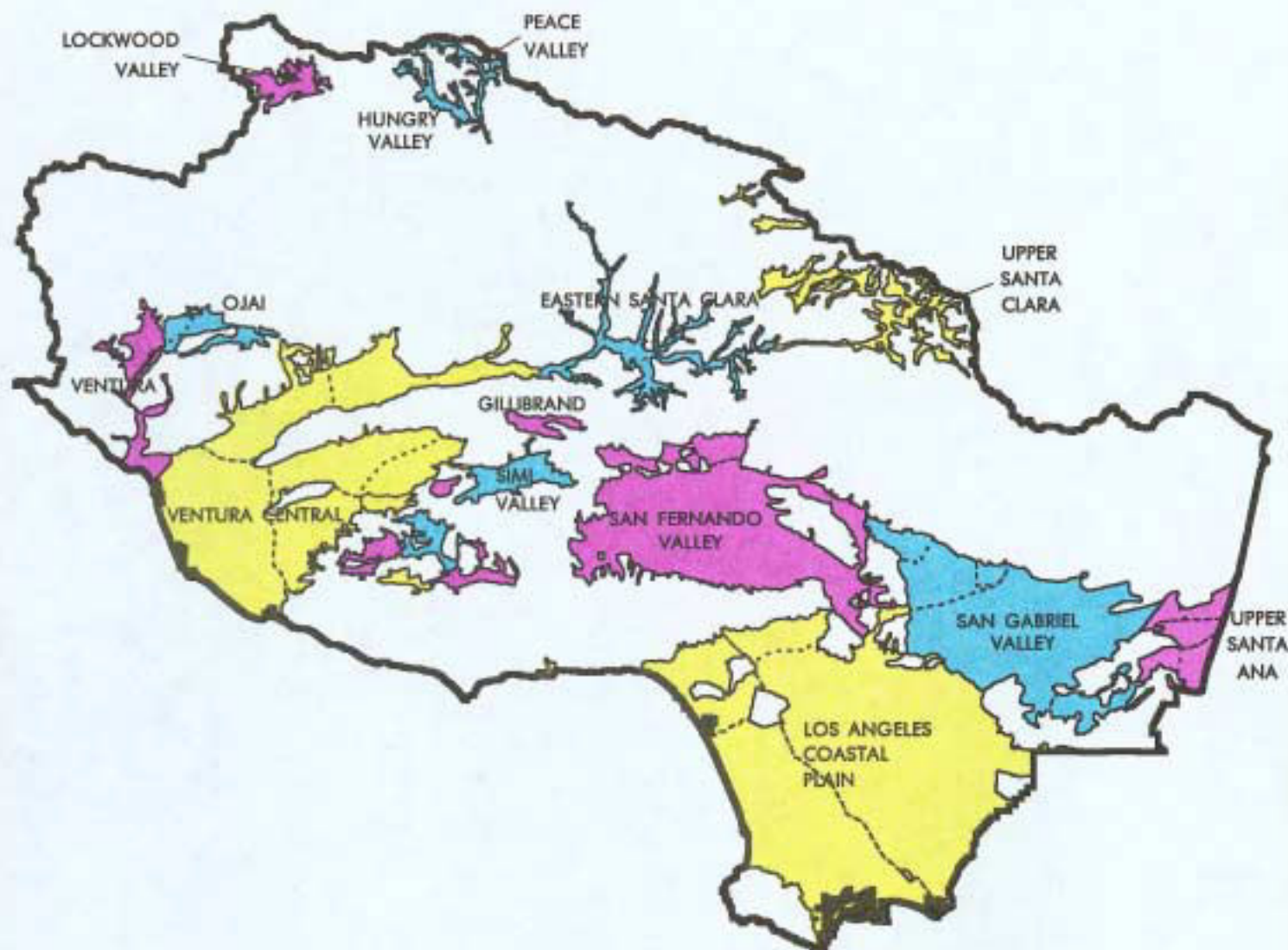
CALIFORNIA
REGIONAL
WATER QUALITY
CONTROL BOARD
LOS ANGELES REGION
(4)

— REGIONAL BOUNDARY

NOTE: THIS FIGURE
SHOWS ONLY MAJOR
GROUNDWATER BASINS
IN THE LOS ANGELES
REGION. DESIGNATIONS
OF BASINS CONFORM TO
CA DEPARTMENT OF
WATER RESOURCES
DESIGNATIONS (1980)

N
Miles

0 10 20



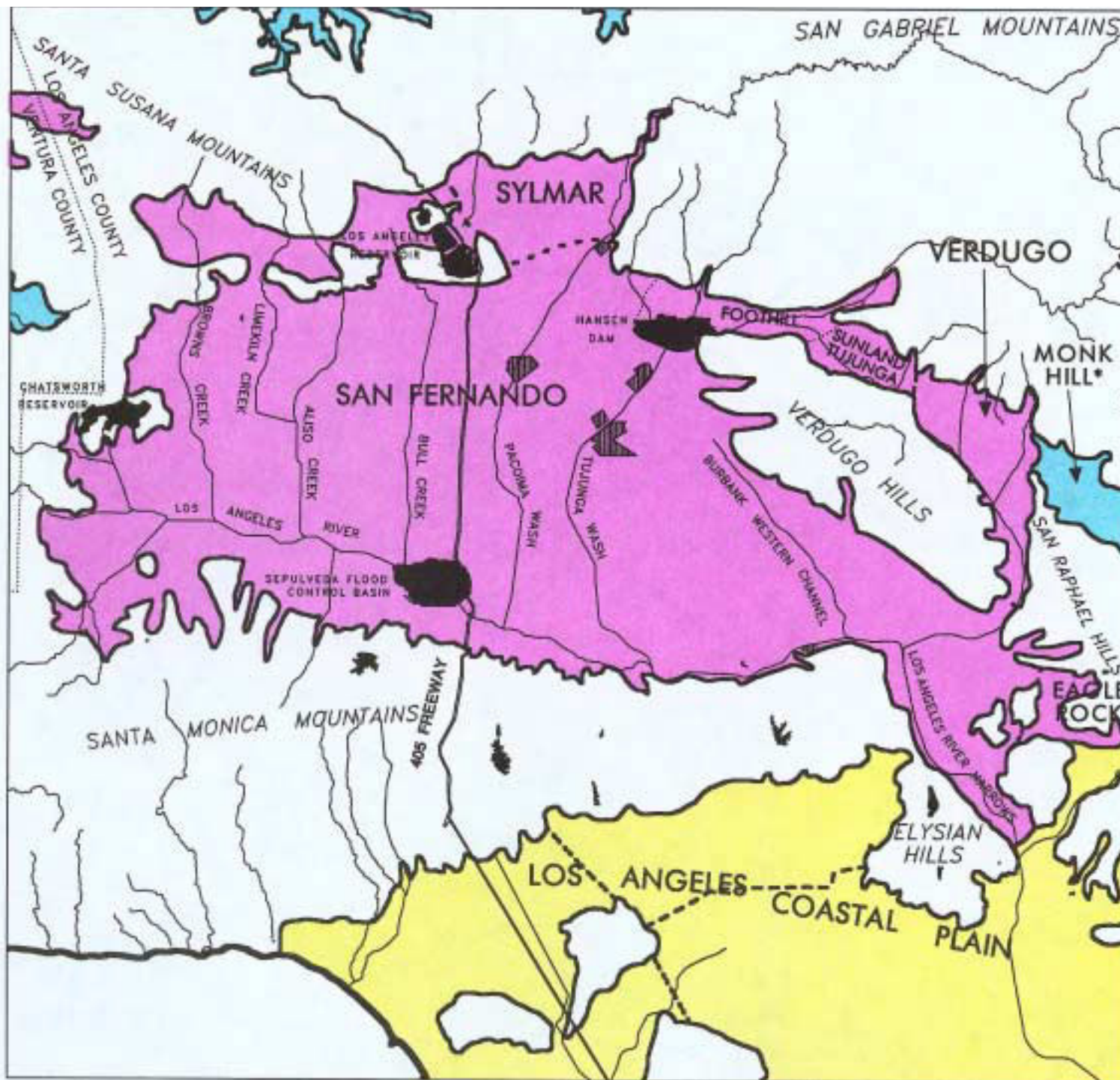


FIGURE 2-16

SAN FERNANDO VALLEY GROUNDWATER BASINS

CALIFORNIA
REGIONAL
WATER QUALITY
CONTROL BOARD
LOS ANGELES REGION
(4)

— REGIONAL BOUNDARY

— STREAMS

..... COUNTY LINE

▨ SPREADING GROUNDS

* MONK HILL IS A
PART OF THE
RAYMOND GROUNDWATER
BASIN



Miles

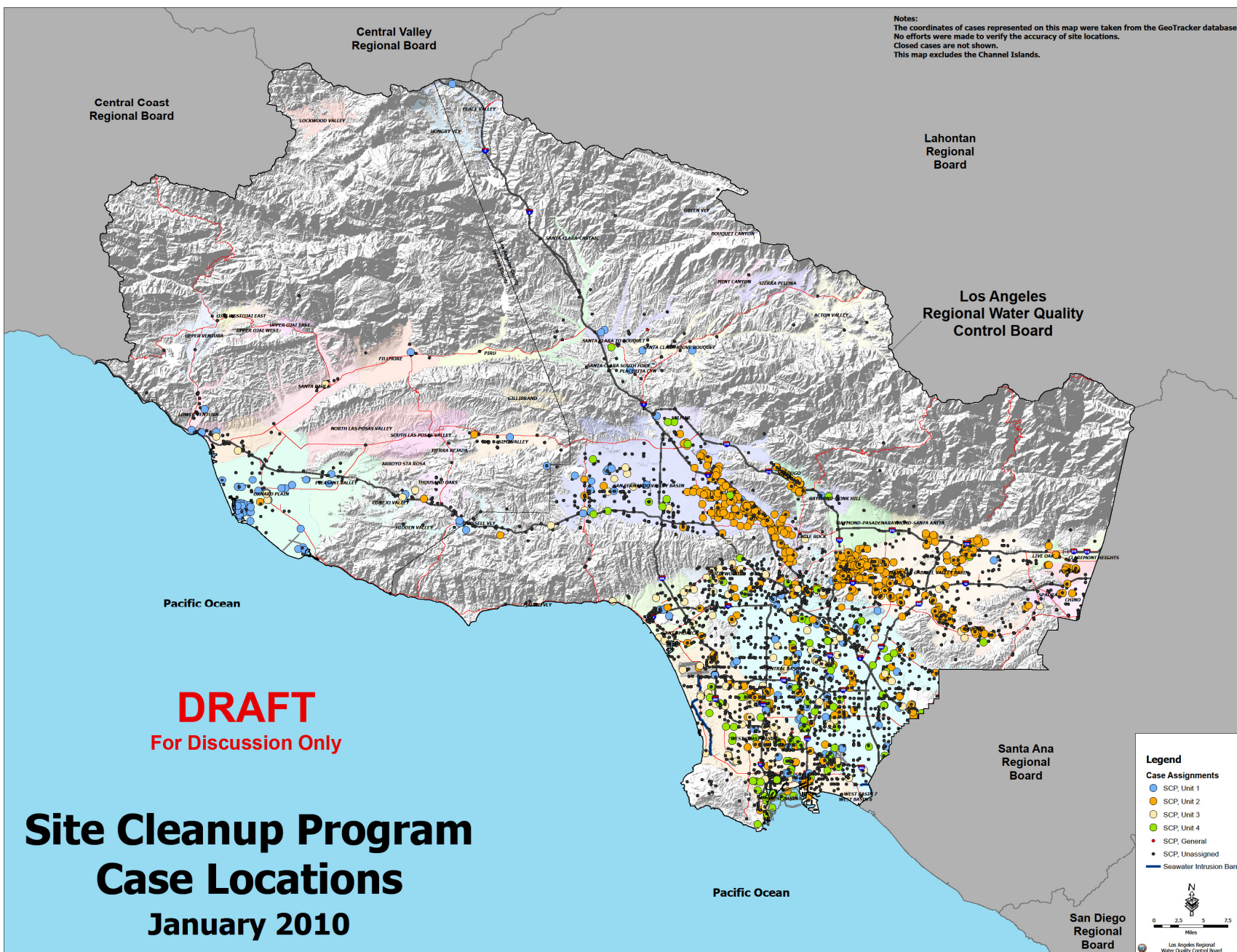


Groundwater Beneficial Uses

- **Las Posas Valley:** MUN, IND, PROC, AGR
- **Pleasant Valley:** MUN, IND, PROC, AGR
- **Raymond:** MUN, IND, PROC, AGR
- **San Fernando:** MUN, IND, PROC, AGR
- **San Gabriel:** MUN, IND, PROC, AGR
- **Santa Clara:** MUN, AGR
- **Ventura:** MUN, IND, PROC, AGR
- **West/Central/Hollywood/Santa Monica:** MUN, IND, PROC, AGR

Limitations on Quality

- **Central and West:** Seawater Intrusion
- **San Gabriel:** Nitrate, VOC, Superfund Site
- **San Fernando:** Nitrate, VOC, PCE, Sulfate, Metals, Superfund Site
- **Raymond:** Nitrate, VOC, Superfund Site
- **Santa Clara:** Salts, Nutrients



Next Up...

- Basin Plan Amendments

Basin Plans – Brief Overview

- Regional Water Quality Control Plan = Basin Plan
- 10 Regional Water Quality Control Plans
 - 9 Regions in California
 - Central Valley Water Board has 2 Plans
 - Central Valley and Tulare Lake
- Salt and Nutrient Management Plans will be incorporated into the Basin Plan

Basin Plans – Brief Overview

- Basin Plans are adopted as regulations
 - They have the force and effect of law.
- Basin Plans must be reviewed “from time to time”
- Basin Plans may be revised
- Basin Plan Revisions must be done in accordance with State and Federal Laws
- Basin Plans apply to both surface and ground water in California

Basin Plans – Brief Overview

- Basin Plans consist of a designation or establishment for the waters within a specified area of the following:
 - (1) Beneficial uses to be protected.
 - (2) Water quality objectives.
 - (3) A program of implementation needed for achieving water quality objectives – including monitoring and surveillance

Statewide Consistency for Basin Plan Amendments

- Documents designed to accommodate range of Basin and Salt & Nutrient plan complexity
 - Can accommodate additional water quality issues
- Documents include:
 - Standardized basin plan list of ground water basins and associated beneficial uses
 - Basin plan amendment in table format
 - Environment analysis check list
 - Regional Water Board Staff Report format
 - Suggested Salt & Nutrient Plan table of contents

Basin Plan Amendments for Salt and Nutrients

- Envision three types of Basin Plan Amendments, characteristics include:
 - **Big Plan**-basin large in size, complex land-use, heavily used, water quality threatened
 - **Limited Plan**-basins with less extensive water quality limitations not currently used as a source of water
 - **No Threat Plan**-basins with minimal or no known current threat to water quality-address all within a Region with single basin plan amendment

Next Up...

- Funding

Funding

- State Water Board working with DWR on Integrate Regional Water Management Grant-Prop 84 guidelines language
- \$870 million implementation, \$30 million in planning funds to update 46 IRWM Plans
- State Water Board will send letter to IRWM Regions asking them to support S/N Planning
- S/N Stakeholders need to work with IRWM Regions to update Plans to incorporate S/N Planning Language

Prop 84 Requirements

- Eligible projects must:
 - Implement an IRWM Plan
 - Be consistent with an adopted IRWM Plan or its functional equivalent
 - Provide multiple benefits
- Draft guidelines can be found at:
- <http://www.water.ca.gov/irwm/integregionew10.cfm>

Prop 84 Requirements Related to S/N Plans

- Eligible projects must include one or more of the following project elements:
 - Storm water capture, storage, clean-up, treatment, and management
 - Groundwater recharge and management projects
 - Contaminant and salt removal through reclamation, desalting, and other treatment technologies and conveyance of reclaimed water for distribution to users

Prop 84 Requirements Related to S/N Plans

- Eligible projects must include one or more of the following project elements (cont.):
 - Water banking, exchange, reclamation and improvement of water quality
 - Planning and implementation of multipurpose flood management programs

Questions

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- DWR Bulletin 118

- [http://www.water.ca.gov/groundwater/bulletin118/
update2003.cfm](http://www.water.ca.gov/groundwater/bulletin118/update2003.cfm)