

Monitoring Irrigated Agriculture – Strategy and Results



Central Valley Regional Water Quality Control Board, Irrigated Lands Regulatory Program

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Presentation Overview

- Regulatory Background
- Scope of the Irrigated Lands Regulatory Program
- Collaborative Approach to Problem Solving
- Findings of First Three Years of Monitoring

Regulatory Background

Regional Water Quality Control Board Structure

- Nine Regional Water Quality Control Boards
- Board members appointed by the Governor (no compensation)
- Decisions are made in a public meeting
- State Water Resources Control Board
 - Sets state-wide policies
 - Serves as appellate body for Regional Water Board decisions
 - Oversees water rights (primarily for surface water)

Porter-Cologne Water Quality Control Act

- Applies to:
 - “waters of the state” – any surface water or groundwater
 - discharges of waste to waters of the state – “waste” associated with human habitation



Central Valley Regional Water Quality Control Board

- Covers ~ 40% of State
- Offices in Sacramento, Redding, Fresno
- Responsible for protection of all of the beneficial uses of water



Tools for Regulating Discharges of Waste

- Basin Plans
 - Establish the water quality objectives, regulations, and policies
- Waste Discharge Requirements (WDRs)
 - Essentially a permit that sets limits on discharge of waste constituents to surface or groundwater
- Waiver of WDRs
 - Waives requirements to obtain WDRs, if certain conditions are met
- Prohibition of Discharge
 - Prohibits discharge of waste in certain areas, unless specific conditions are met

Scope of the Irrigated Lands Regulatory Program

Scope of the Irrigated Lands Regulatory Program

- Addresses discharges from irrigated lands to surface waters
- Irrigated lands include commercial operations, managed wetlands, nurseries, and greenhouses
- Discharges include return flows (tailwater), rainfall-runoff, from sumps to lower water table (tile drains)

Irrigated Lands Regulatory Program

- 1999 - Senate Bill 390
 - Sunset all existing waivers of WDRs
 - Established new rules for waivers of WDRs
- 2003 New Conditional Ag Waivers adopted by the Water Board
 - Coalition Waiver
 - Individual Waiver
 - Renewed in 2006 w/several Amendments since

Irrigated Lands Regulatory Program

- Two Conditional Waivers of WDRs – Coalition Group and Individual
 - (almost) All growers have chosen enrollment in a Coalition Group
 - Eight Coalition Groups
 - WDRs are an option



Conditional Waiver Requirements

- Monitoring
- Toxicity testing
- Two exceedances in 3 years triggers management plan & increased monitoring



Surface Water Quality Issues in Agriculture

- Water quality issues – likely ag source
 - Pesticides, nutrients, salts, sediment
- Water quality issues – potential ag source
 - Toxicity to test species, pathogens, dissolved oxygen, organic carbon, metals
- Many instances in which monitoring shows no ag related issues

Collaborative Approach to Problem Solving

Active Stakeholders

Interest Group	Agency Name
Coalitions	Southern San Joaquin Valley Water Quality Coalition
	Sacramento Valley Water Quality Coalition
	Westside San Joaquin Water Quality Coalition
	San Joaquin County & Delta Water Quality Coalition
	East San Joaquin Water Quality Coalition
	California Rice Commission
	Westlands Water District Coalition
	Goose Lake Water Quality Coalition
Irrigation Districts	Modesto ID
	Merced ID
	Oakdale ID
	Turlock ID
	South San Joaquin ID

Other Active Stakeholders

Environmental Interests

Consulting Firms

Commodity Groups

Academia

USEPA

Analytical Laboratories

Food and Agriculture

State Pesticide Regulators

County Ag Commissioners

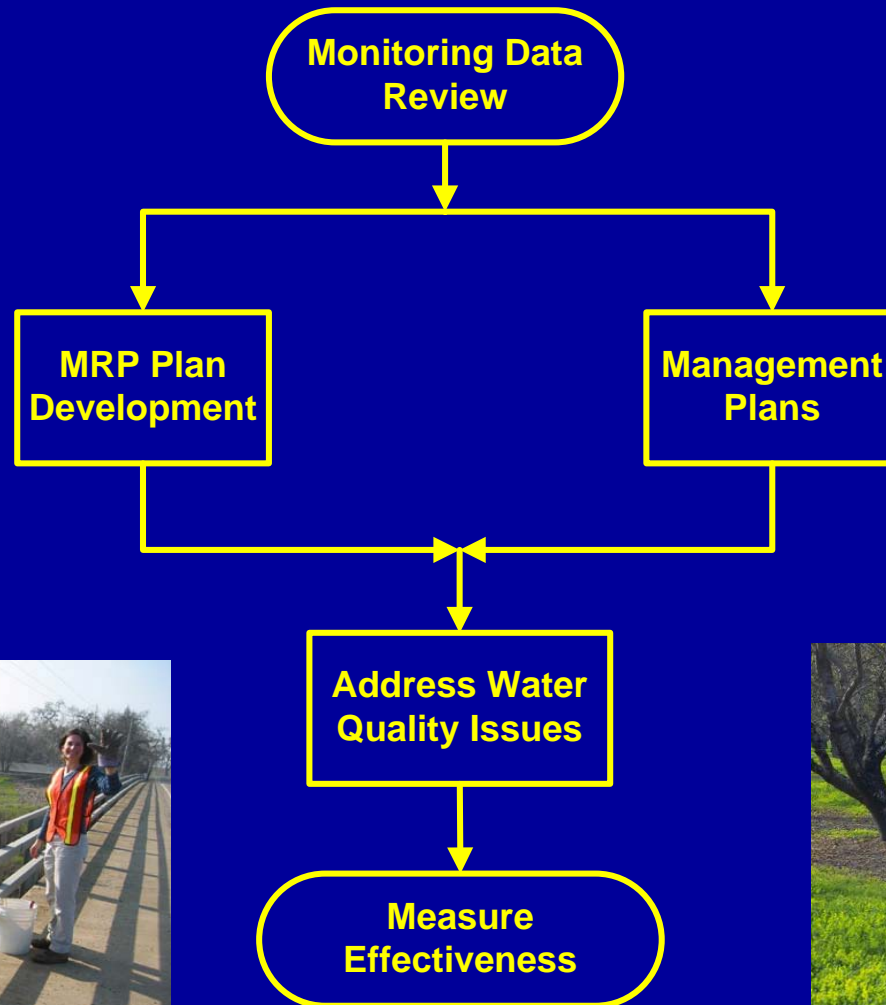
Resource Conservation Districts



Technical Issues Committee

- Includes program staff, Board Members, Academia, Coalition and Irrigation District Representatives, DPR
- Focus groups within the TIC:
 - Triggers Focus Group
 - Lab Round Table
 - Sediment Toxicity Focus Group
 - Legacy Pesticides Focus Group
 - Management Practices Focus Group
 - Nutrients Focus Group
 - Pathogens Focus Group
 - Bottles, Bioassessment, etc., as needed

Current Approach



October 24, 2008

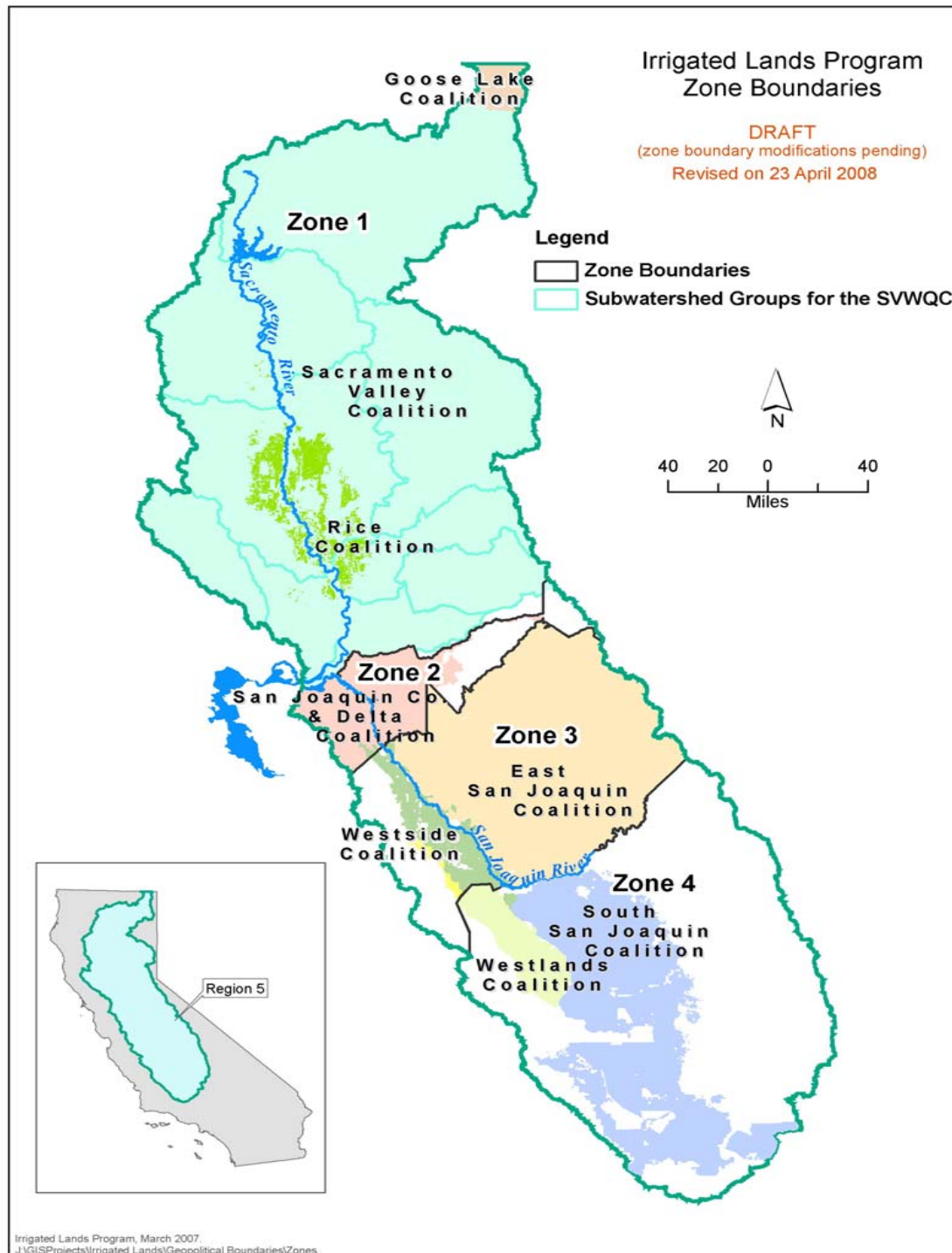


CALFED Science Conference
2008

18

Findings from the First Three Years of Monitoring

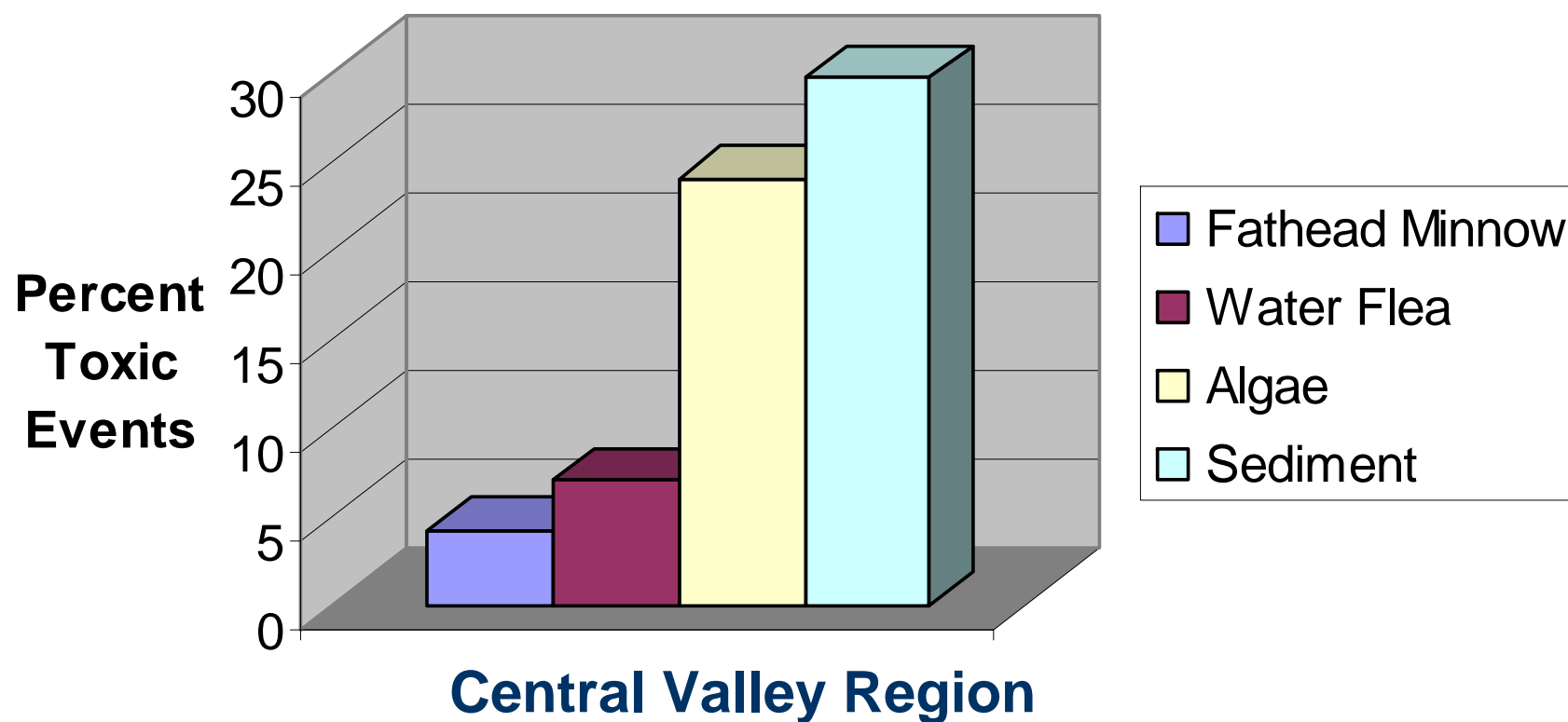
Central Valley Zones



Monitoring

- Toxicity to four test species
- Pesticides
- Nutrients
- Metals
- E. coli as an indicator for pathogens
- Salinity
- General parameters (pH, DO, turbidity)

Summary of Toxic Events (2004-2006)



Example of Pesticide Testing Results

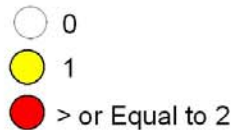
Zone 3

Monitoring Results for Chlorpyrifos

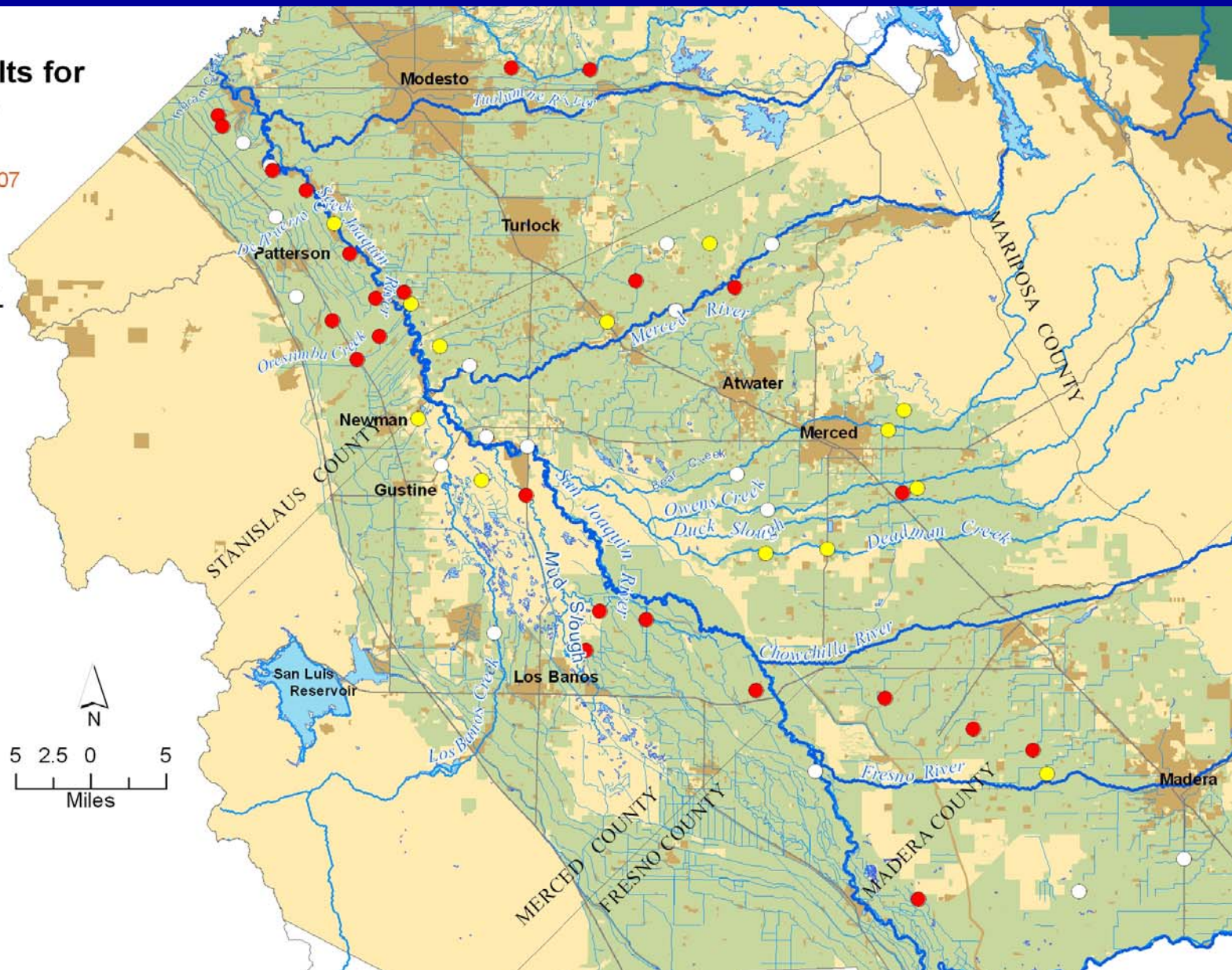
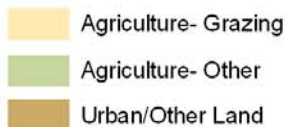
Revised on 20 July 2007

Legend

of analyses >0.015 ug/L



Land Use: FMMP 2004*



**Further information in next
presentation and...**

website information at:

**[www.waterboards.ca.gov/centralvalley/
programs/irrigated_lands/index.html](http://www.waterboards.ca.gov/centralvalley/programs/irrigated_lands/index.html)**

Thanks for listening....