

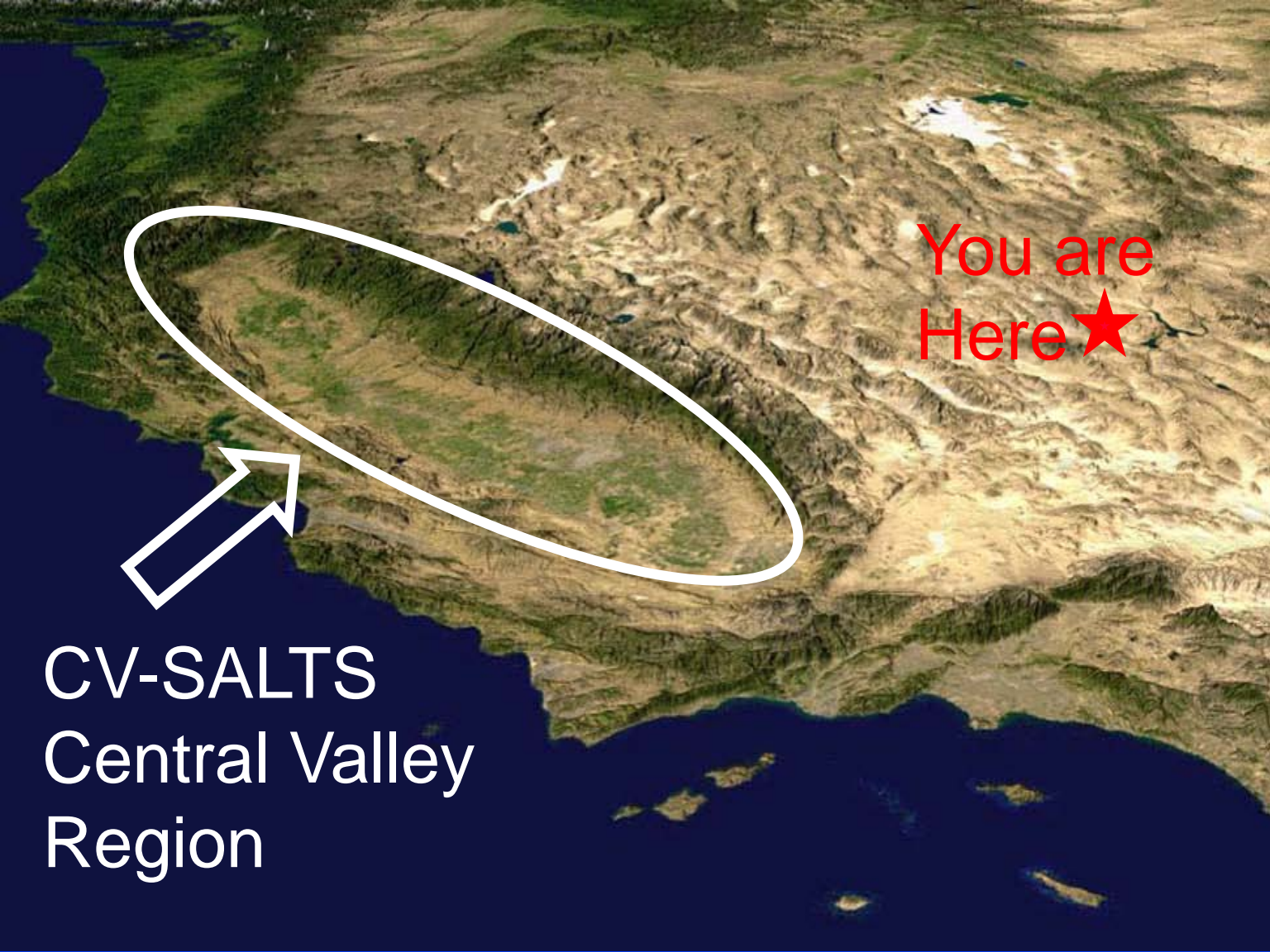


Central Valley Salinity/Nutrient Management Planning Through CV- SALTS

Multi-State Salinity Coalition
Annual Summit

2/19/2010





You are
Here ★

CV-SALTS
Central Valley
Region



CV



SALTS

Central Valley

Salinity Alternatives for Long-term Sustainability

Today's Presentation

- What is CV-SALTS?
- How does it relate to the Salt and Nutrient Management Plans Required by California Water Board
- How will it accomplish the work for Science and Policy needed for a Salinity and Nutrient Management Planning for the Central Valley?
- What is the Salinity Coalition's role
- What have we done and learned so far?



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Salinity Alternatives for Long-term Sustainability

Problem

- Increasing salinity and nitrate in groundwater, increased use of groundwater drought demands
- Salinity and nitrate exceedences require attention
- No economic method for salt removal or ocean discharge
- Uncoordinated regulatory approach to solutions impacts communities and business and limits successes
- Old outdated basin plan results in overly conservative or inadequate standards today



The Environmental Maze of Uncertainty



Slide Courtesy of Hilmar Cheese



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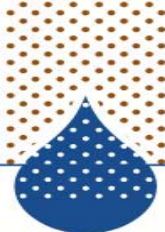
Solutions

- Alternative regulatory process to ensure stakeholder engagement
- Stakeholders lead collaborative funding/oversight
- Maximum benefits and long term sustainability
- Innovative programs
 - ◆ Real time management in surface water
 - ◆ Source water changes
 - ◆ On-farm management/reuse
 - ◆ Product reformulation and reuse
 - ◆ Waste alternatives



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- New Regulatory Program
- Salt Management Plan
- Salt and Nutrient Management Plan
- Basin Plan Amendment
 - Stakeholder Driven
 - Little Hoover Commission Endorsed

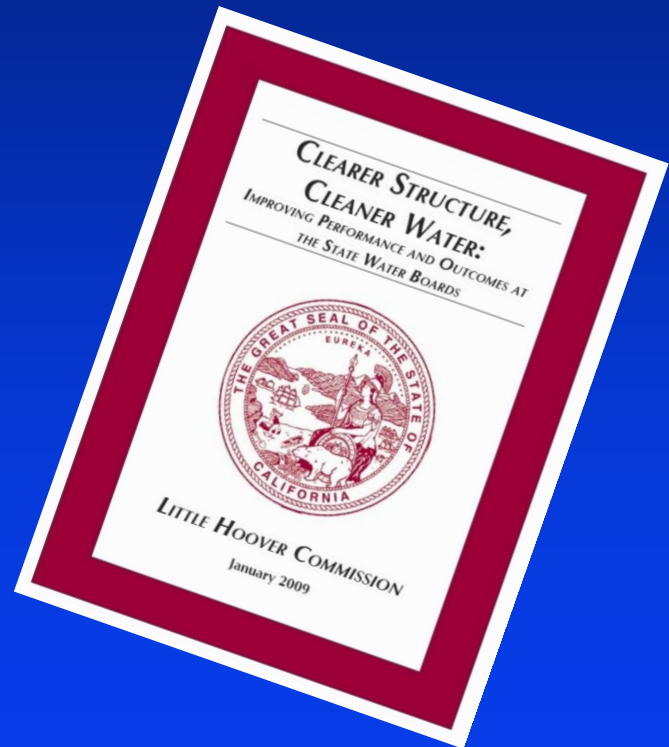
STAKEHOLDER

ANY USER
OF CENTRAL
VALLEY
SURFACE OR
GROUND
WATERS



Stakeholder Efforts Work

“The boards should emulate the model created by the Santa Ana Regional Water Quality Control Board, which created a stakeholder task force that led to robust research, consensus building and a largely re-written basin plan in 2004. Stakeholders ...funded the basin plan update.”





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Leadership Group Goals

- All users of Central Valley surface waters and groundwaters are engaged and actively participating in the effort
- All users contributing to and/or impacted by salts and nitrate in Central Valley waters contribute financial or other resources to planning and control efforts
- A regional Salinity Management Plan is developed and implemented through amendments to the Central Valley Basin Plans and Delta Plan



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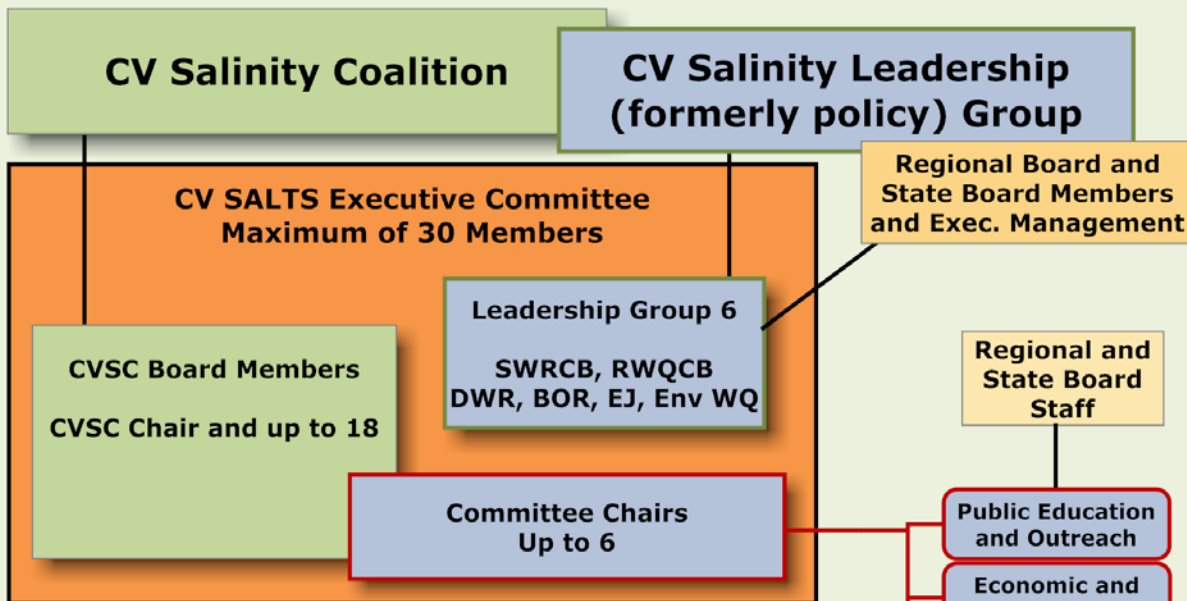
Central Valley Salinity Coalition

- Non-Profit coalition of users of Central Valley Water
 - ◆ Water and wastewater
 - ◆ Agricultural and irrigation
 - ◆ Industry and others
- Effective efficient manner developing and funding studies, planning and implementation efforts

CV Salinity Coalition and CV SALTS Initiative

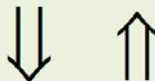
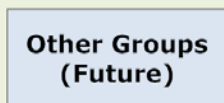
Ensuring Sustainable High Quality Water Supply
For All users of Central Valley Waters

Leadership
Steering
Groups



Efforts
Approval

Group membership is nonexclusive



Outcome

Working
and
Review
Groups

Basin Plan Amendment **without** CV Salinity Coalition and CV SALTS Initiative

Leadership
Steering
Committee

Regional Board and State Board
Members and Exec. Management

Stakeholders
Scoping

Efforts
Approval

Regional and State Board Staff

Public Review
and Comment

Approval

Regional Board and State Board



Regulatory Implementation

Permit Limits

WDRs

Prohibitions

Discharger
Compliance
Efforts

Implement

The logo for Central Valley, consisting of the letters 'CV' in a bold, blue, sans-serif font.

Central Valley



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Salinity Alternatives for Long-term Sustainability

Central Valley Salinity Coalition

New Members 2009:

- ❖ E. San Joaquin Water Quality Coalition*
- ❖ City of Manteca*
- ❖ California Rice Commission*
- ❖ Pacific Water Quality Association
- ❖ City of Modesto*
- ❖ Sacramento Reg. Co. Sanitation District*
- ❖ San Joaquin River Group Authority*
- ❖ Discovery Bay CSD
- ❖ Iron House Sanitary District
- ❖ City of Tracy*
- ❖ City of Stockton*
- ❖ Mountain House CSD
- ❖ Agricultural Council of CA

Founding Members:

- ❖ California League of Food Processors*
- ❖ The Wine Institute*
- ❖ Western United Dairymen
- ❖ City of Fresno*
- ❖ San Joaquin Valley Drainage Authority*
- ❖ California Assoc of Sanitation Agencies*
- ❖ Central Valley Clean Water Agencies*

* Denotes Board of Directors Member

Coalition Status and Efforts

- Next round funding progress \$450K-\$1.5M
- Funding salt sources study and looking to match State Board CAA funding (\$1.2M)
- Tiered contribution based on entity size
- All Leadership Group members who can should participate in the Coalition
- Long range budget is large; more members critical for both financial viability and diversity of perspectives.



Executive, Technical and Economic and Public Education and Outreach

- Governance clarity, Standing Rules and MOA
- Levels of Participation
- Policy Issues
- Sound science and policy
- Scope work for studies and planning
- Outreach Video
- Education materials



Major Technical Study Areas

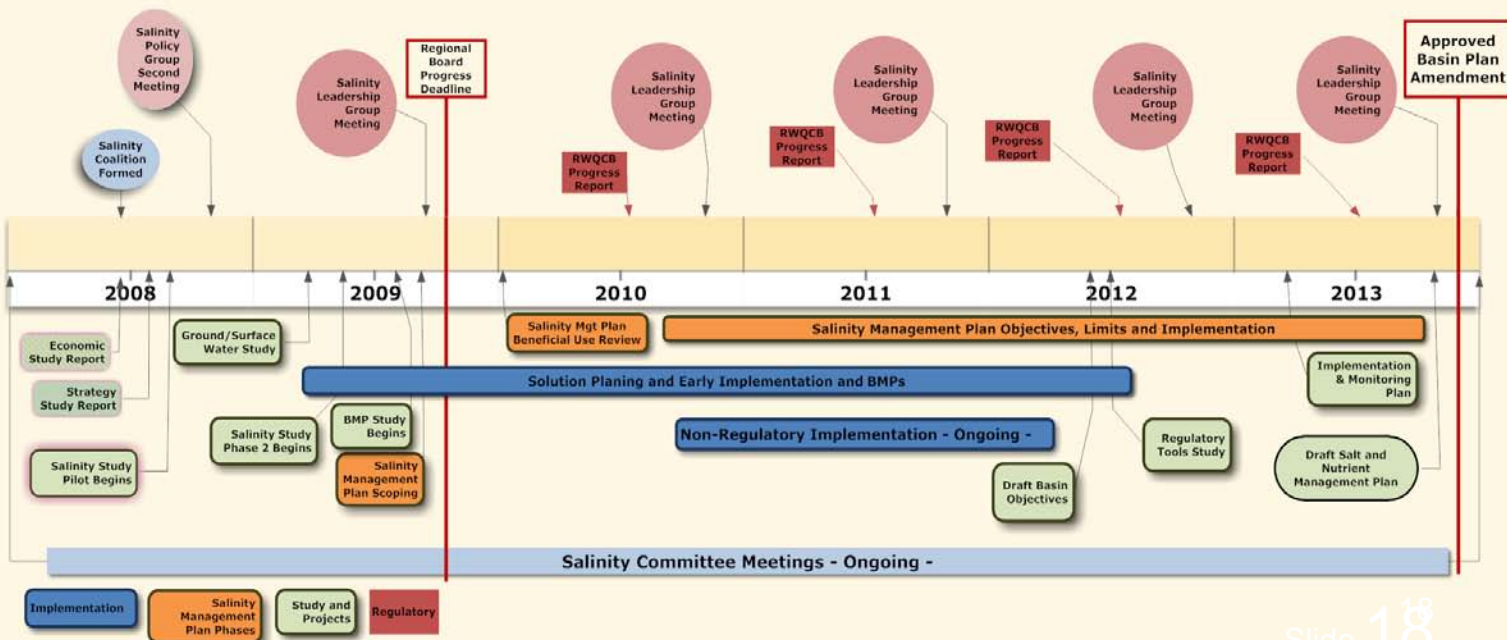
- Three major efforts for Salinity and Nitrate
 - ◆ Beneficial Use and Objective Study tasks
 - ◆ Collaborative Surface and Groundwater Data Collection/Analysis
 - ◆ Limit Implementation Planning & Analysis



CV-SALTS Initiative

Salt Management Plan Development
through Collaborative Stakeholder Process to Basin Plan Amendments

Public Education and Stakeholder Outreach - Ongoing -





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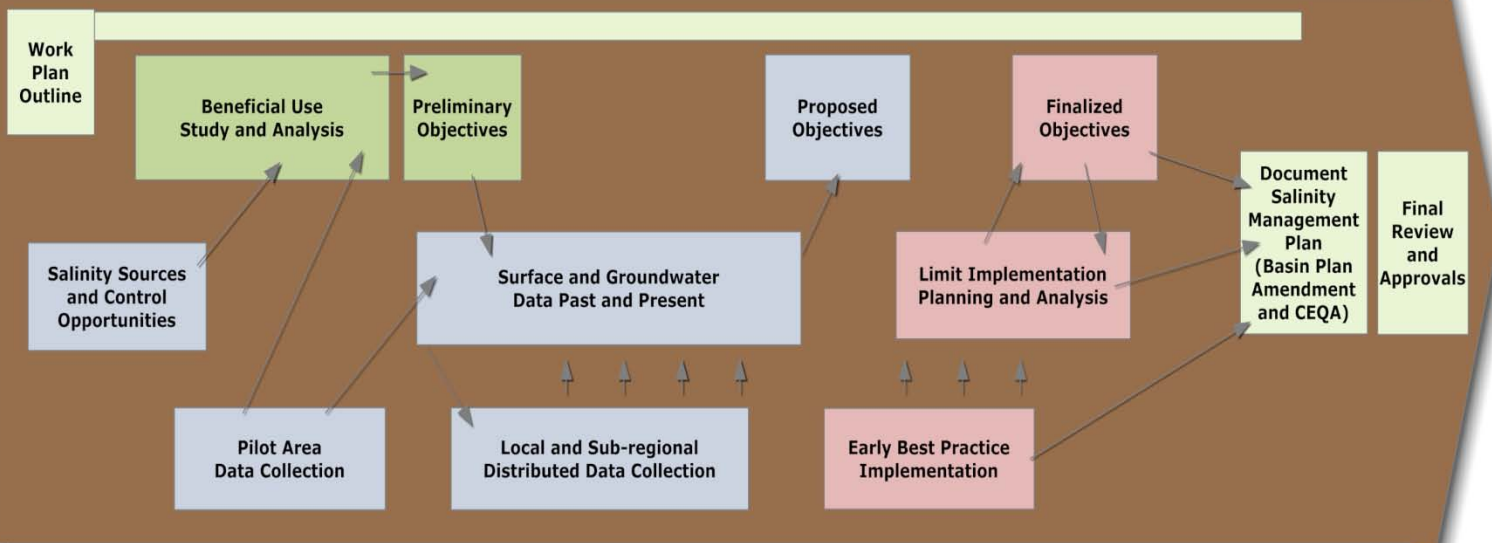
Plan Attributes

- Overarching Work Plan Outline
- Distributed implementation for efficiency
- Cost efficient management opportunities
- Economic benefits of salt management
- Stakeholder and public outreach
- Monitoring and adaptive management
- Stakeholder implementation
- Grant opportunities and matching



Salinity and Nutrient Management Planning

Program Management - Work Planning - Funding



Technical Committee

- Developed Work Plan Outline
 - ◆ Cost and Schedule Estimates
 - ◆ 13 phases and 71 tasks/subtasks
 - ◆ \$ 22M to \$ 42M with local costs
 - ◆ Complete in 2013-2014



Work Plan Outline

Management/Administration

- 1) Program Management

Technical

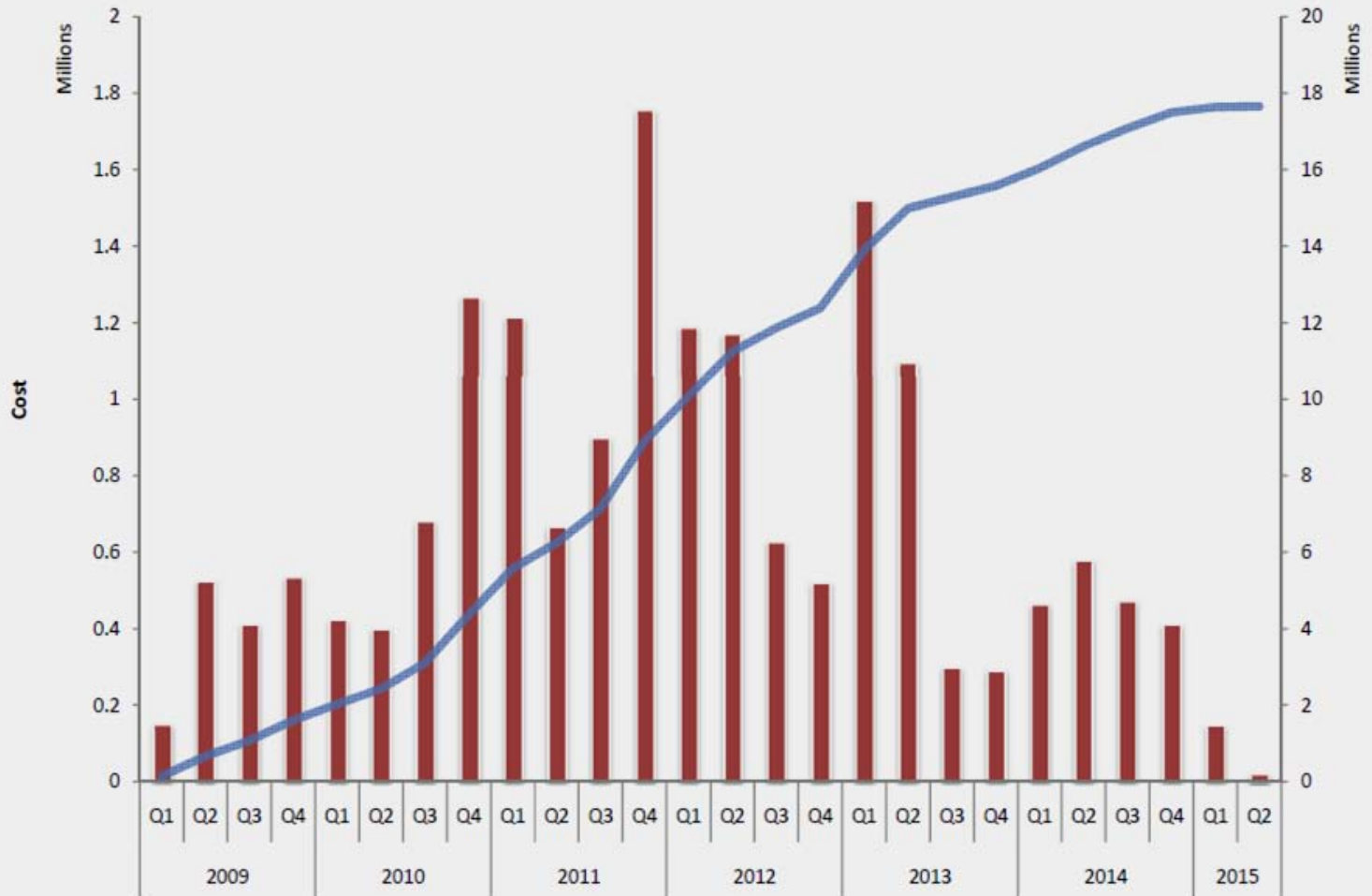
- 2) Identify Salt Constituents and Data Requirements
- 3) Develop and Populate Regional Database and Process Data
- 4) Monitoring or Other Methods to Fill Data Gaps
- 5) Develop Conceptual Models and Decision Assistance Tools
- 6) Implementation Planning /Analysis Policy and Decision Making
- 7) Identify Management Goals
- 8) Identify Beneficial Uses and Achievable Protective levels
- 9) Identify Water Quality Goals and Objectives
- 10) Regulatory and Non-Regulatory Implementation Planning

Document Preparation

- 11) CEQA Documentation
- 12) Draft Basin Plan Amendment
- 13) Long-term Monitoring and Compliance Reporting

Budget by Quarter

Fixed Cost Cumulative Cost



What We are Learning

- Must coordinate with other efforts and programs
- Pilot indicates land use is important to salt

Coordination Program and Matrix

- Embarked on a critical effort in 2009 to reduce duplication and increase efficiency for stakeholders and staff
- Improve outcome for CV-SALTS and Basin Plan

Coordination Matrix

CV-SALTS Salinity Programs Coordination Matrix

EMAP Version 10 Updated annual meeting, County, State, San, CVSC, Harbor, Bay, Delta and Taylor addresses

										Timeline										
No.	Program Project or Effort	Tasks	Purpose Objective	Requirement Driver	Data or Deliverables	Geographic Region	CV-SALTS Tool #	Website Updates	Agency/Group	Contact	Title	Agency	Next Date	Completion	DEADLINE	Milestones 2009	Decision Points 2009	Criticality to CV-SALTS	Source/Address	Monitoring
1	San Sources Pilots Study		Plan and Characterize Salt Sources in pilot areas	CV-SALTS	Data on standards	TEC	2 + 9	cvsalts.org	CVSC	Current Contact	CD	CVSC		11/30/2009	1/31/2010			Integral part of CV-SALTS	Salt and Nitrate	Existing only
1.1		Michigan														RD draft WP	RDW WP approval	Critical/Significant		
1.2		Flint																		
2	SR Review																			
2.1	Salinity Real Time Management		USBR effort to work with water managers to coordinate discharges to	USBR	Data/Real reduction	San Joaquin	1, 6, 10		Reclamation	Gene Leo				1/2/2009	3/2/2009					IC
2.2		Workshops and Workshops							Reclamation											
2.3		Pilot Implementation	Demonstrated SR/TAP on SR																	
3	Seasonal wetland real-time salinity monitoring and management		USWD-DFO led effort to implement real time monitoring of wetland salt reports and exports as part of a basin-wide real-time salinity management program		Real time flow salinity monitoring network	Sanjoan	1, 8, 10	http://www.uswdnet.com/USWD/Default.aspx?ID=USWD-00		Regal Quinn RC George		Funding from PARKER, CALIF., USBR, DWR		San-ongoing						SE and EC Salt
4	San River Upstream Objectives (MCD)		San River Upstream Salinity water WQSW																	
4	Update of Bay-Delta Plan addressing South Delta Salinity Objectives & San Joaquin River Flows														Apr 12		Model Approach and Feedback May 2009	Critical/Significant		40
4b	Water supply and quality modeling															Workshop by end of summer 2009	Participation in workshops	Critical/Significant		
4c	Ag Criteria (Drift/Innate works)															See DR/Ag/Drift Report	Drift Report feedback	Critical/Significant		
4d	Soil salinity modeling															Apr 10	Participation in workshops	Critical/Significant		
4e	Environmental Documentation															Apr 10	Participation as a stakeholder	Critical/Significant		
5	Mesa Mendota Canal Restoration Feasibility Study		The study is divided into three phases: Phase 1 - Initial Plans Phase, Phase 2 - Alternatives Plans Phase, and Phase 3 - Recommended Plan Phase objectives through the use of excess capacity in existing pumps and																	
5a	Phase 1 - Initial Plans																			
5b	Phase 2 - Alternatives Plans																			
5c	Phase 3 - Recommended Plan																			
6	San Joaquin River Restoration Program (SRRP)		The SRPP consists of the Restoration Goal and the Water Management Goal.	San Joaquin River Restoration Settlement is a direct result of a Settlement reached in September 2008 on an 18 year license to provide sufficient fish habitat in the San Joaquin River below Friant Dam near Fresno, California, by the U.S. Department of the Interior and Commerce, the National Resources Defense Council (NRDC), and the State of California.	San Joaquin River Restoration Settlement is a direct result of a Settlement reached in September 2008 on an 18 year license to provide sufficient fish habitat in the San Joaquin River below Friant Dam near Fresno, California, by the U.S. Department of the Interior and Commerce, the National Resources Defense Council (NRDC), and the State of California.	San Joaquin	1, Program ERDC 2008-05-01	Public Law 111-11 when signed into law by the President in March, 2009	Implementing Agency: U.S. Bureau of Reclamation U.S. Fish and Wildlife Service National Marine Fisheries Service California Department of Water Resources California Department of Fish and Game	Jason Phillips	Program Manager	Bureau of Reclamation	beginning 2006	On-going	Phase 1 improvements to be complete no later than 12/31/2011	The project intends to initiate interim flow in 2009 and complete the final program flow in December 2009	Flow in the restoration flow schedule and preliminary projections on flow and quality.	Critical/Significant		Restore flow and water quality at key locations; groundwater levels, surface water profiles, discharge measurements, bed profiling, bed material WQ sampling
6a1	Restoration Phase 1	Phase 1 - Includes the interim flows along with several construction projects to enhance channel stability and flow restoration.	The Restoration Goal is intended to restore and maintain fish populations in a "good condition" in the main stem of the San Joaquin River below Friant Dam to the confluence of the Merced River, including naturally reproducing and self-sustaining populations of salmon and other fish.	2. Initiate Interim Flows - Fall 2009, Phase 1 Improvements to be complete no later than 12/31/2011	http://www.restoriny.net/curator/activities.html				Setting Parties: Jason Phillips	Program Manager	Bureau of Reclamation				Phase 1 improvements to be complete no later than 12/31/2011			The implementing legislative mandates for protection of the restoration flow which is critical to the restoration and water management goals of the Settlement. The restoration flows may improve quality in the lower San Joaquin River depending on hydrology and the timing of the flows.	Restore flow and water quality at key locations; groundwater levels, surface water profiles, discharge measurements, bed profiling, bed material WQ sampling	
6a2	Restoration Phase 2	Phase 2 - Includes additional construction projects to enhance channel	To implement necessary channel and structural improvements in order to fully achieve the Restoration Goal.	3. Initiate Phase 1 Environmental Review - Summer 2009, Full Restoration Flows commence by 1/2/2014, Phase 2 Improvements to be complete no later than 12/31/2016.	http://www.restoriny.net/index.html			Implementing Agency: U.S. Bureau of Reclamation U.S. Fish and Wildlife Service National Marine Fisheries Service California Department of Water Resources California Department of Fish and Game	Jason Phillips	Program Manager	Bureau of Reclamation				Full Restoration Flows commence by 1/2/2014, Phase 2 Improvements to be complete no later than 12/31/2016.				Restore flow and water quality at key locations; adaptive monitoring	
6b	Water Management Goal	Development and implementation of a plan for the restoration, acceptance, reuse, exchange for transfer of the interim flows and restoration flows for the purpose of reducing or avoiding impacts to water deliveries	The Water Management Goal is intended to reduce or avoid adverse water supply impacts to all of the Friant Division long-term contractors that may result from the interim flows and restoration flows provided for in the Settlement.	4. Friant Division Long-Term Contractors that may result from the interim flows and restoration flows provided for in the Settlement.	http://www.restoriny.net/program_flow/rdw/rdw.html			Setting Parties: Jason Phillips	Program Manager	Bureau of Reclamation									Restore flow and water quality at key locations; adaptive monitoring	

Timeline

Data or Deliverables

Purpose Objective

Requirement Driver

Pilot Study Areas

Yolo County

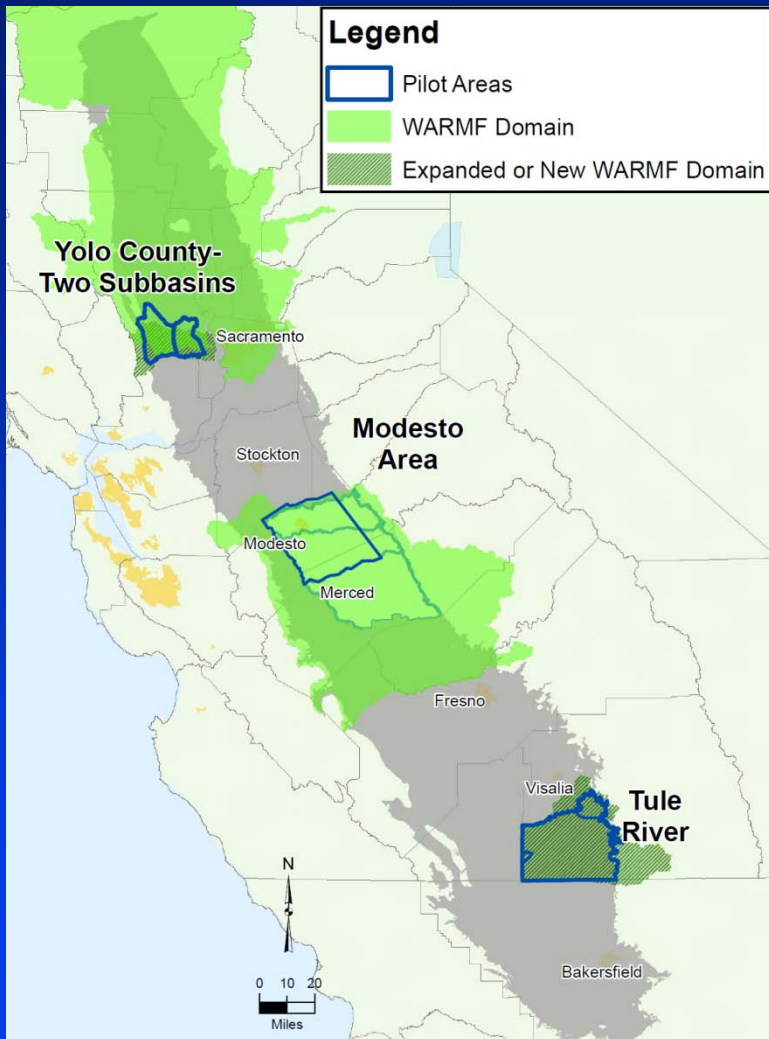
- Western Yolo and Lower Cache-Putah Subbasins
- Mix of urban, rural, ag
- Mix of SW & GW supplies

Modesto Area

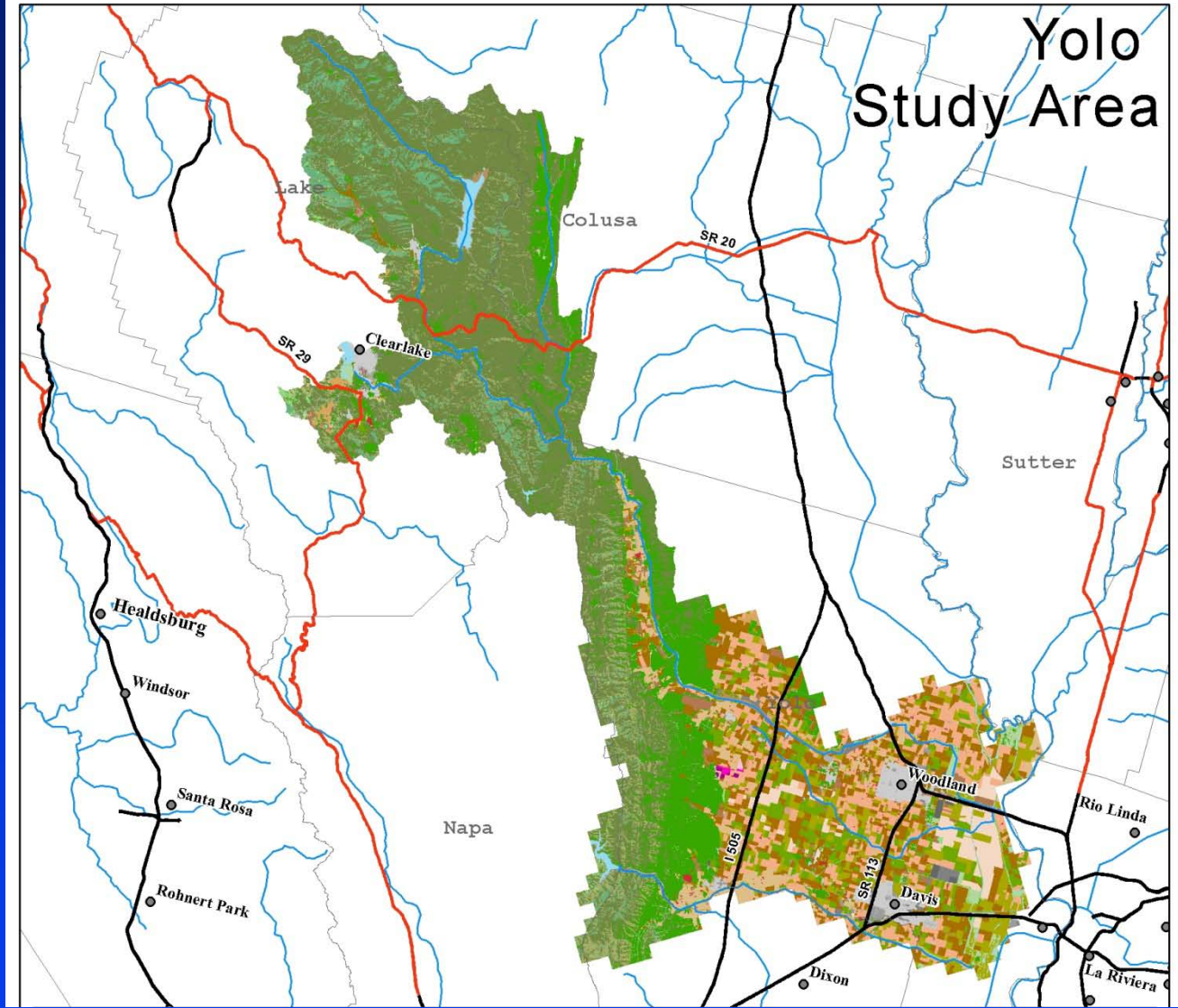
- Parts of Modesto, Turlock, & Delta Mendota Subbasins
- Urban with food processing, rural, ag
- Mix of SW & GW supplies

Tule River

- Entire Tule Subbasin, also parts of Tulare Lake and Kaweah Subbasins
- Mostly ag land, some urban
- Mix of SW & GW supplies

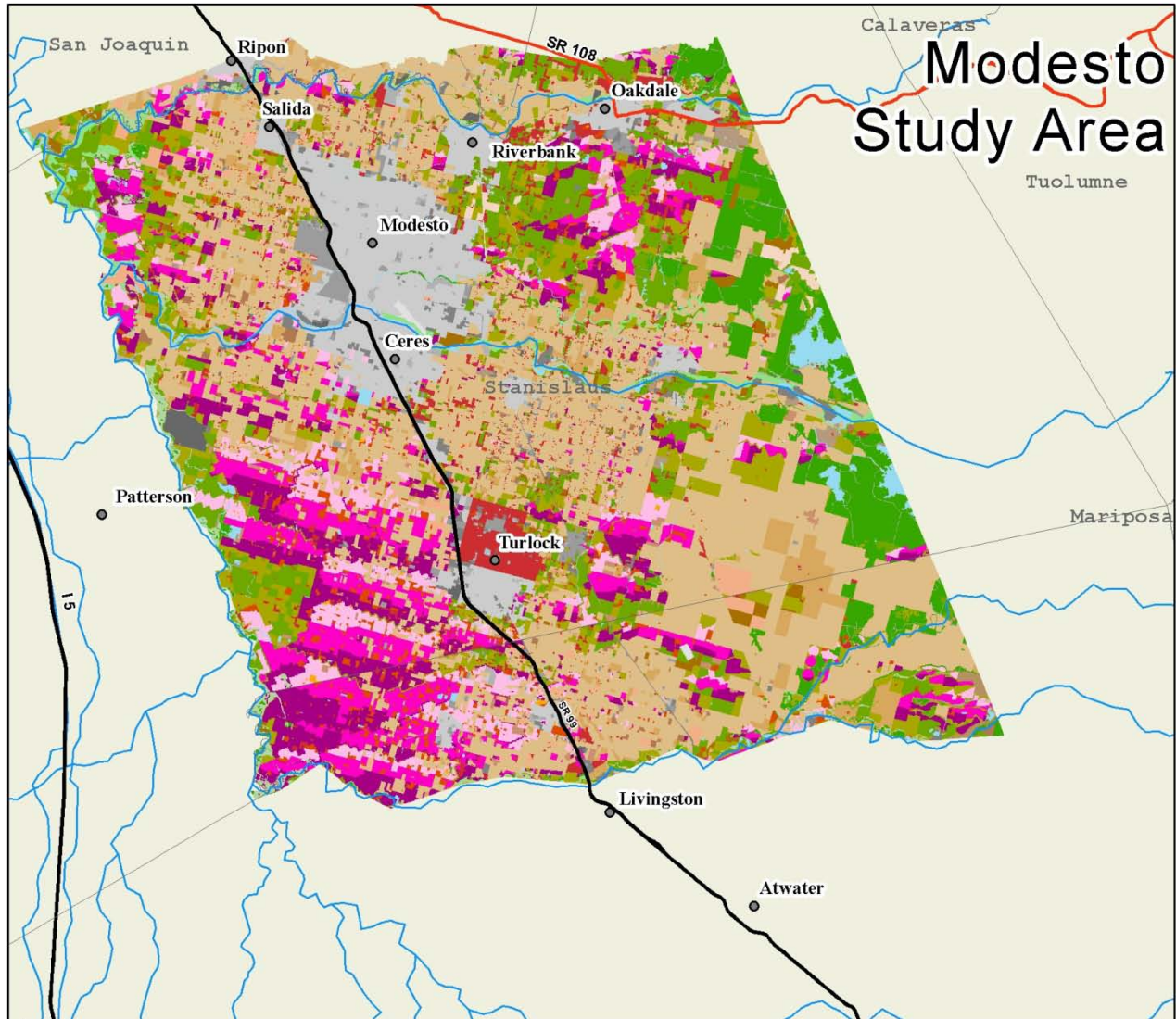


Yolo Study Area



Modesto Study Area

Tuolumne



Tule River Study Area

