

CV-SALTS Annual Report and Consideration of Resolution to Release Remaining CAA Project Funds



CV

Central Valley



SALTS

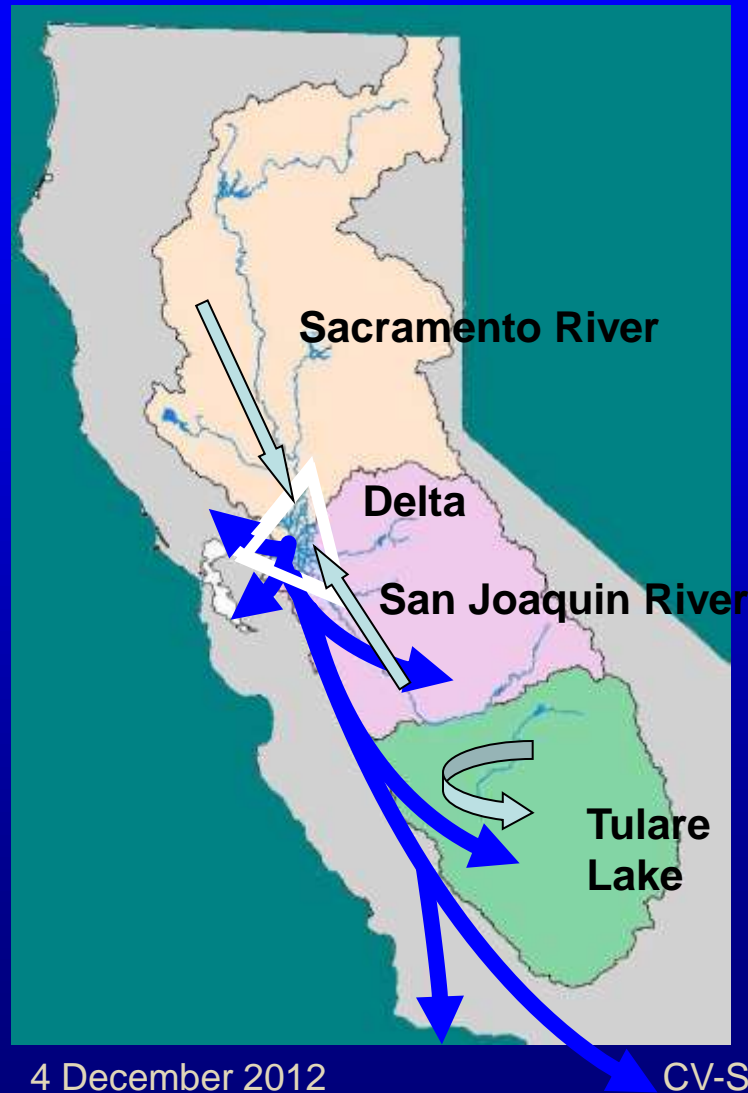
Salinity Alternatives for Long-term Sustainability



- Collaborative Basin Planning Effort
- Utilizing Stakeholder Process to Develop Salinity and Nitrate Management Plan

Central Valley Salt Issues

More salt enters the region than leaves



- Sacramento Basin has relatively few salt impaired areas but salt exported to the Delta can be picked up and redistributed by SWP and CVP
- San Joaquin River is the SJR Basin's sole outlet. Salt imports exceed export capacity
- Tulare Lake Basin has no reliable outlet

Central Valley Salt Issues

Salt build-up threatens agricultural productivity



Increasing salt concentrations (including NO_3) in groundwater threaten drinking water

Water used for dilution is (usually) water lost to other uses



Economic Cost

If the Region does not change its approach to salt, by 2030...

- Direct annual costs anticipated to range between **\$1 to 1.5 BILLION**
- Total annual income impacts statewide anticipated between **\$1.7 to 3 BILLION**

There is presently no means of distributing these costs equitably or assigning costs to all responsible parties.

Diverse Sources

Regional Sources

- Agricultural
- Urban
- Rural
- Environmental
- Industrial
- Water Providers



Local Sources

- Municipal Wastewater
- Septic Tanks
- Oil Field Brines
- Confined Animal Facilities
- Food Processors

Stakeholder Based Solutions

- Stakeholder involvement and ownership
- Better addresses all needs and concerns
- Utilize everyone's efforts & resources more efficiently and effectively
- Basin Plan - based on better data
- more effective

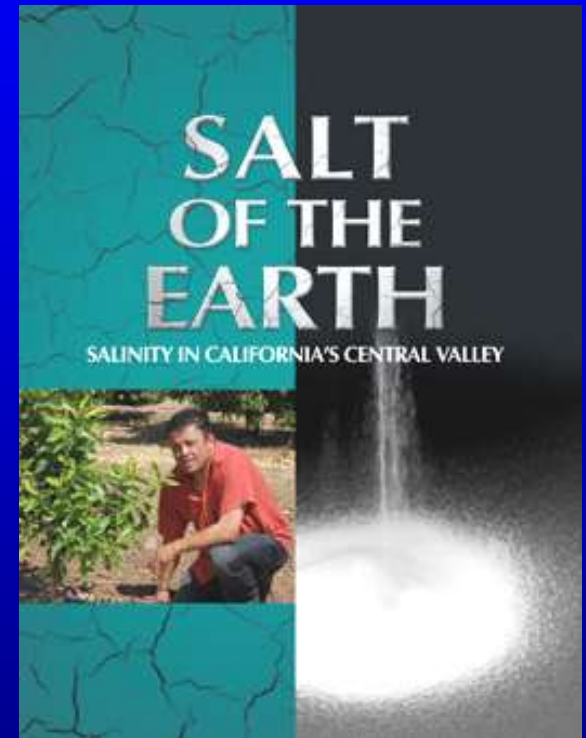
CV-SALTS Launch

2006: Joint Workshop

- Initial Products
 - Economic study
 - Metadata report
 - Educational Video
 - Strategy

2009: MOA

- State Water Board
- Central Valley Water Board
- Central Valley Salinity Coalition
 - Stakeholder JPA



Cleanup and Abatement (CAA) Funds Provided Seed Money

- \$1.2-million (Res. #2009-0023)
- \$3.8-million (Res. #2010-0042)
 - \$2.0-million initially
 - \$1.8-million after demonstration of progress to/approval by State Board

Additional Res. #2010-0042 Requirements:

- Annual Report at Public Hearing
 - Expenditures to Date
 - Services Provided
 - Contribution from Stakeholders
 - Accomplishments
 - Timeline to Complete Work

Expenditures to Date Services Provided Stakeholder Contributions

Debbie Webster
Executive Officer CVCWA

Expenditures for Services and Stakeholder Contributions

	Since July 2008
CAA Resolution #2009-0023	\$752,355
CAA Resolution #2010-0042	\$236,012
Central Valley Salinity Coalition (CVSC) expenditures through October 2012*	\$1,098,145
Additional Stakeholder Contributions --Treatment/Feasibility studies; basin planning support; water quality data	\$6,826,096
Total:	\$8,912,608*

*Does not include in-kind service participating on committee(s)

Services Provided

CAA Funded Projects Completed

- Updated 2012 Strategic Plan, Framework and Workplan
- GIS Database for Central Valley Beneficial Uses and Objectives
- Continued Outreach
 - Update CV-SALTS website
 - Central Valley Salinity Brochure
- LSJR: workplan, problem statement, background, beneficial use evaluation
- White papers
 - Salinity and nitrate impacts on MUN
 - Salinity impacts on irrigated agriculture

Services in Progress

CAA Funded Projects

- Administrative, Technical & Facilitation Support
 - Technical Project Manager
 - Policy Discussion Facilitation
- Aquatic life salinity criteria review
- Update GIS database and beneficial use maps
- Phase I source and fate conceptual model
- AGR salinity objectives by management zone

Services in Progress

CAA Funded Projects

- SSALTS: evaluation of salt management options
- Case studies to ground truth policy and implementation options
 - MUN in Ag dominated POTW receiving waters
 - MUN in Tulare Lake Bed perched groundwater
 - Lower SJR salinity and boron water quality objectives/implementation
 - Early implementation for DAC safe drinking water

Stakeholder Current and Future Contributions

Description*	2008-2014
CVSC Supported Total (To Date \$1,098,145)	<u>\$1,575,588</u>
--Program support	\$603,433
--Pilot salt source/fate studies	\$494,712
--Contributions for projects and support	\$477,433
Stakeholder Supported Total (To Date \$7,790,717)	<u>\$9,467,321</u>
--Treatment Alternative Studies	\$4,959,592
--Direct Basin Planning Support	\$877,744
--Gathering Water Quality Information	\$3,629,985
Total:	\$11,042,909

***Details for specific projects in Tables 2 and 4 of the staff report**

Treatment Alternative

Tulare Lake Drainage District Spray Fields

- 120-acres
- \$4,262,606



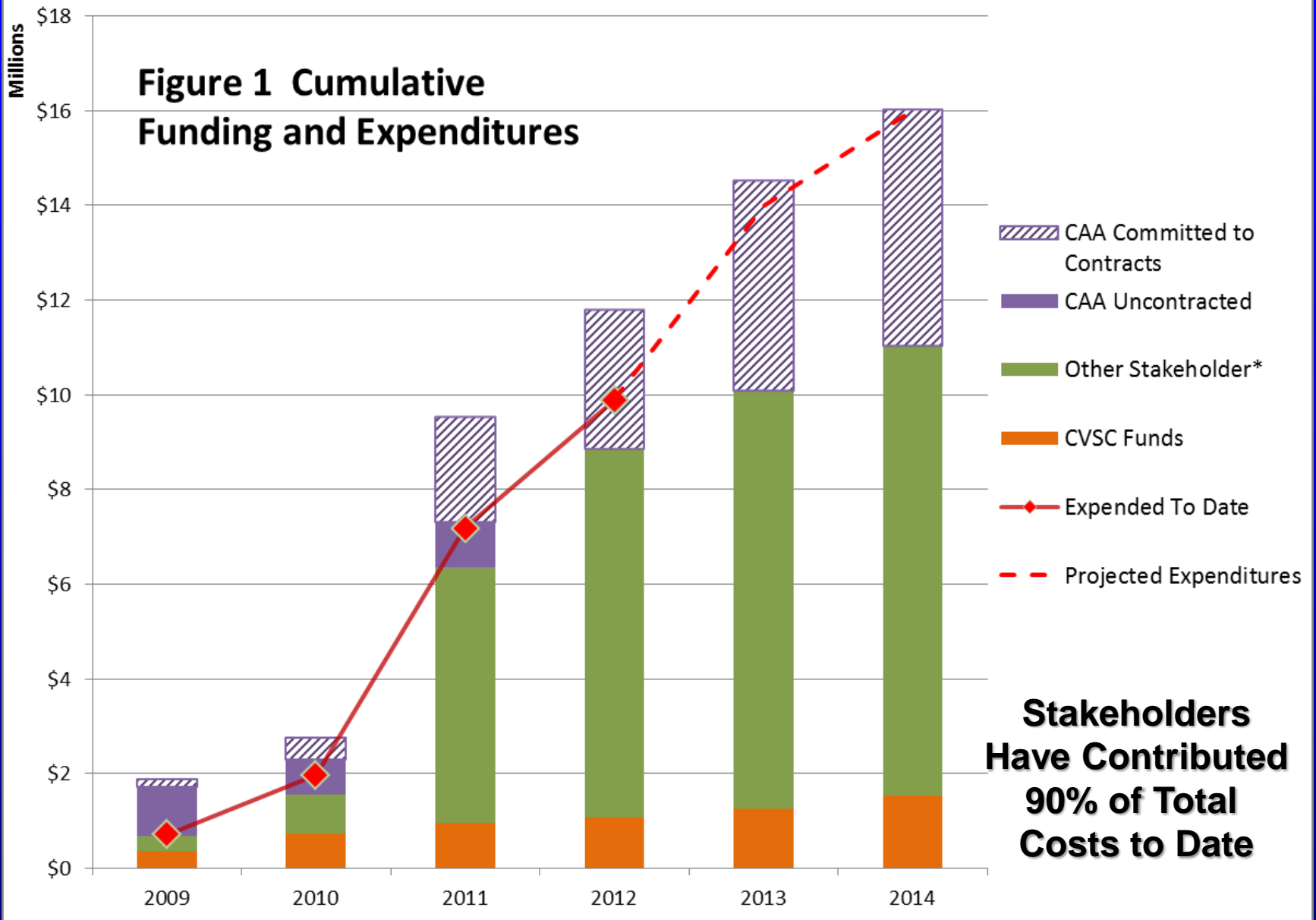
- Full scale trial project
- Enhanced evaporation over ponded water
- Close spaced small micron nozzles

Examples Basin Planning Support

- Tulare and MUN Archetype cost share
- Variance BPA with CVCWA
- Direct CV-SALTS Support

Example Water Quality Info

- City of Vacaville
- USBR Westside SJR
- Dairy Representative Monitoring



Stakeholder In-Kind

- Coordination, oversight and cost share of CAA funded services
- Framework for future salt source studies
- Screening mechanism to create MP “toolbox”
- Co-sponsor/participants in GRA Salinity and Nitrate Conference (June 2012)
- Technical recommendations for use of modeling tools to develop site specific AGR salinity objectives
- Policy discussions/recommendations

Sampling of Other Activities

Permit Required (>\$7-million)

- Treatment feasibility analyses
- Receiving water studies
- Salinity minimization plans
- Public education/outreach

Implementation Activities (>\$42-million)

- Containment
- Reuse
- Source Reduction
- Cost Share
- Evaluation

Accomplishments and Studies

David Cory
Chair Central Valley Salinity
Coalition

CV-SALTS Accomplishments 2012

- Updated Strategy, Framework and Workplan
- Initiated technical work to support:
 - Policy discussions
 - Beneficial Use and Water Quality Objective review
 - Implementation planning

Stakeholders Provide Direct Oversight

**CV-SALTS
Starting Point**

Identify Water Bodies



Designate Beneficial Uses



Establish Water Quality
Objectives

Surface Water
Ground Water

MUN
AGR

Salinity
Nitrate

**Recycled
Water Policy**

Implementation
Requirements



Monitoring and
Assessment

Point Sources
Non-Point Sources

Discharges
Receiving Waters



Strategy and Framework

Revise Regulatory Structure

- Beneficial Uses; Water Quality Objectives; Policies

Develop Policies and Procedures to:

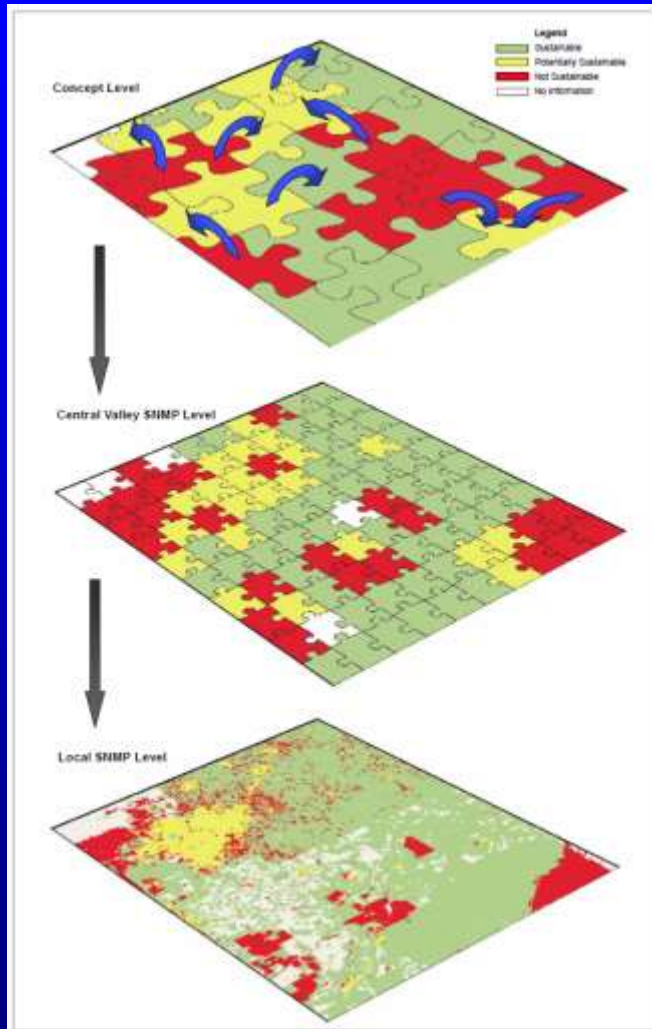
- Evaluate Compliance
- Provide Regulatory Flexibility

Provide basis for short and long-term management of salts and nitrate at appropriate geographic scales

Conceptual Model (Technical Approach)



Supports



Policy



Central Valley SNMP
(Management Zones)



Area Specific

(SNMPs; archetypes; prototypes)

Policy Discussions

Fundamental Areas

- Appropriate application and level of protection for MUN and AGR
 - Ag dominated water bodies
 - Groundwater zones

Implementation Areas

- Including conservation and recycling
- Utilizing assimilative capacity
- Consideration of drought conditions
- Improving impaired areas using offsets

CONSIDERATIONS FOR SALT & NITRATE MANAGEMENT

USE	OBJECTIVE	POLICY DISCUSSIONS
MUN	Salinity	1) Application of Secondary MCLs as numeric WQOs
		2) Point-of-Compliance Policy
		3) Application of MUN use (surface and groundwater)
	Nitrate	1) Affirm WQO = 10 mg/L Nitrate-N
		2) Establish Zone-of-Influence Evaluation Process
		3) Alternate Compliance Options: Offsets
AGR	Salinity	1) Translators for Narrative Objective
		2) Multi-Factor Flowchart for Reasonable Protection
		3) Ag Zoning Map (dependence and salt-sensitivity)
	Nitrate	Agriculture is not the most sensitive use and is unlikely to drive more stringent water quality standards for nitrate.

2012/2013 Stakeholder Policy Discussions

Archetype Studies

(Beneficial Uses and Water Quality Objectives)

- Ag Dominated Water Bodies (Sac Valley)
 - Appropriate MUN Beneficial Use application
- Groundwater (Tulare Lake Bed Basin)
 - Appropriate MUN beneficial uses
- Zone Studies (Central Valley wide)
 - Develop management zones and template for narrative regional AGR interpretation
- Lower San Joaquin River
 - Appropriate beneficial uses/water quality objectives surface water

Ag Dominated Surface Water Bodies

- 4 POTWs in Sac Valley
- 400 square miles
- MUN applied via DW Policy
- Evaluates appropriate MUN application and level of protection



Groundwater

- Portion unconfined aquifer Tulare Lake Bed
- MUN applied via DW Policy
- Evaluates appropriate MUN application and level of protection

Prototype Studies (Implementation Alternatives)

- Lower San Joaquin River
 - Implementation alternatives for meeting WQOs and salt balance
- Disadvantaged Communities
 - Address nitrate contaminated GW basins
- SSALTS:
 - Salt management implementation alternatives
 - Evaluated at different scales in all three basins

Schedule, Benefits and Outcomes

Parry Klassen

Chair, CV-SALTS Executive
Committee

Figure 2 Sumnerized CV-SALTS Worplan Schedule

<i>Revised 11/1/12</i>	<i>Draft SNMP To Regional Board →</i>				<i>Final SNMP → BMA →</i>			
CV-SALTS Program Element	2011	2012	2013	2014	2015	2016	2017	+
Program Management								
Funding								
Policy Development and Planning								
Outreach and Scoping ❖ = Meetings			❖	❖	❖			
Technical Studies								
Conceptual Model (Initial Phase)						Final SNMP		
Phase II (SNMP)								
Final Phase								
Beneficial Use and Objective GIS Mapping (BUOS I)								
BUOS II--update with additional GIS layers								
Ag Water Quality Zoning Map								
Criteria Evaluations (AGR, MUN, Aquatic Life)								
Other Technical Studies and Documents								
Archetypes/Case Studies								
Groundwater MUN (Tulare)								
Surface Water MUN (Sac Valley POTWs)								
Related/Integrated Efforts								
Management Practice Development								
Lower San Joaquin River Salt and Boron Objectives								
Implementation Planning								
Implementation Prototype Documentation								
SSALTS								
Effective Management Practice Evaluation								
SNMP Documentation								
Monitoring & Reporting Plan Development								
Economic Review								
Documentation for Approval								
CEQA Equivalent Documentation								
BPA Documentation Process Support								
Initial Implementation								
Management Practice Implementation								
DAC Assistance - Nitrate								
Salt and Nitrate Control Project Implementation								
Archetype Template Implementation								
Local SNMP Implementation								
Monitoring and Reporting								
Phase II SNMP								

Key Benefits

- Stakeholder Driven
- Policy Recommendations
- Templates (Archetypes/Prototypes)
- A Plan within a Plan

Outcomes

- Updated Central Valley Basin Plans
- Compliance with Recycled Water Policy
- Concerns Addressed:
 - Salt
 - Nitrate
 - Impacted Areas in the Valley
- Ability to fold in area specific updates

CV-SALTS is making progress

Questions?

Part 2

Consideration of a Resolution to Release Final \$1.8-million of CAA Funding Allocated to the Project

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Work Ongoing in 2013 under existing \$2 M Funding

Tasks to be funded in part with final \$1.8 M Request

Tasks Continued and/or Funded in Part with Remaining \$1.8M

From Summerized CV-SALTS Workplan Schedule

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Anticipated Contract Obligations Resolution #2010-0042

Description	To Date	FY12/13	FY13/14	Total
Original \$2-million	\$1,311,309	\$688,691	0	\$2M
Remaining \$1.8-million	0	\$937,000	\$863,000	\$1.8M
Annual Total:	\$1,311,309	\$1,625,691	\$863,000	\$3.8M
Running Total:	\$1,311,309	\$2,937,000	\$3,800,000	\$3.8M
% of \$3.8-mil:	35%	77%	100%	

Draft Resolution

- Releases remaining \$1.8-million to project
- Requires annual progress reports
- Disencumbers remaining funds if sufficient progress not demonstrated
- Reverts unexpended funds to CAA on June 1, 2014, unless extension authorized

Staff Recommendation

Approve Resolution releasing remaining \$1.8-million of CAA funding originally authorized under Resolution #2010-0042, to support the CV-SALTS initiative.

Extra Slides



Central Valley

Area = 60,000 mi²

Pop. = 6.5 million

Santa Ana

Area = 2,800 mi²

Pop. = 6 million

Budget * = \$3.3 M

Timeline = 9 Years

** Not including monitoring
and non-BPA Costs*