

CV-SALTS Executive Committee Meeting

September 20, 2012 9:00 AM to 3:00 PM

Sacramento Regional Sanitation District Offices – Sunset Maple Room
10060 Goethe Rd, Sacramento 95827

Teleconference (218) 339-4600 Code: 927571#

Posted 09.10.12 – Revised 09.17.12

Meeting Objectives:

- Affirm, Revise or Reject Draft Recommendations for Proposed SNMP Implementation Policies
- Identify Technical Support Tasks Needed to Prepare SNMP and Related Basin Plan Amendment

AGENDA

1) Welcome and Introductions - Chair

- a) Committee Roll Call and [Membership Roster](#) -5 min.
- b) Review/Approve Executive [Committee Meeting Notes for August 23, 2012](#) – 5 min.
- c) Identify Expected Outcomes & Priorities for September 20, 2012 Session – 5 min.

2) Policy Discussion: Review Draft Recommendations

- a) Consensus Recommendations - Tim Moore - 1 hour
- b) Non-consensus Issues - Tim Moore - 1 hour

11:30 am to 1:00 pm - Lunch on your own

3) Continue Policy Discussion re: Draft Recommendations

- c) Non-consensus Issues (continued) – Tim Moore - 90 min.
- d) Focus of Executive Committee Discussions in October and November of 2012

4) Status Update on Technical Studies/Projects

- a) Technical Committee Requests for Review
 - Review/Approve revision to [Table 1 of ICM Workplan](#)
- b) Authorization or Direction from Executive Committee.
 - Richard Meyerhoff & Nigel Quinn - 15 min.

5) Future Items

- a) [Review Calendar](#) - Administrative Call dates and times (Oct. 12th & Nov. 2nd) 5 min.
- b) Confirm date & topic for next Executive Committee Policy Discussion (October 18th) 5 min.

CV-SALTS meetings are held in compliance with the Bagley-Keene Open Meeting Act set forth in Government Code sections 11120-11132 (§ 11121(d)). The public is entitled to have access to the records of the body which are posted at <http://www.cvsalinity.org>

One or more Central Valley Regional Water Quality Board members may attend.

CV-SALTS Committee Rosters

Executive Committee Membership			CV-SALTS Executive Committee Meetings During 2012																
Voters	Category/Stakeholder Group	Name	17-Jan	19-Jan	10-Feb	16-Feb	9-Mar	5-Apr	6-Apr	19-Apr	11-May	24-May	8-Jun	16-Jul	19-Jul	10-Aug	23-Aug	10-Sep	20-Sep
Leadership Partners																			
1	Central Valley Water Board	Pamela Creedon	✓	✓	✓	✓		✓		✓		✓		✓		✓		✓	
Alt	Central Valley Water Board	Jeanne Chilcott	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
2	State Water Resources Control Bd.	Darrin Polhemus		✓		✓		✓		✓					✓		✓		✓
3	Department of Water Resources	Jose Faria																	
Alt	Department of Water Resources	Ernie Taylor		✓			✓	✓	✓	✓	✓	✓	✓	✓	✓		✓		
4	US Bureau of Reclamation	Jobaid Kabir									✓	✓			✓				
5	Environmental Justice	TBD																	
6	Environmental Water Quality	TBD																	
CV Salinity Coalition																			
1	CASA	Bobbi Larson																	
2	County of San Joaquin	Mel Lytle																	
Alt	County of San Joaquin	Brandon Nakagawa																	
3	CVCWA	Debbie Webster	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	
4	City of Fresno	Steve Hogg																	
5	CA League of Food Processors	Trudi Hughes	✓					✓											
Alt	CA League of Food Processors	Rob Neenan				✓				✓		✓					✓		
6	Wine Institute	Tim Schmelzer			✓	✓				✓									✓
Alt	Wine Institute	Chris Savage					✓												
7	City of Tracy	Steve Bailey																	
8	Sacramento Regional CSD	Linda Dorn	✓	✓		✓				✓		✓			✓		✓		
9	San Joaquin River Group	Dennis Westcot		✓	✓	✓	✓	✓		✓	✓	✓		✓	✓		✓	✓	
10	City of Modesto	Gary DeJesus																	
11	California Rice Commission	Tim Johnson	✓	✓	✓					✓	✓						✓		
12	City of Manteca	Phil Govea																	
13	Tulare Lake Drainage/Storage District	Mike Nordstrom		✓		✓	✓	✓			✓	✓	✓		✓		✓		
14	Stockton East Water District	Karna Harrigfeld		✓		✓	✓	✓	✓		✓	✓	✓	✓		✓			✓
15	Western Plant Health Association	Renee Pinel						✓											
16	City of Vacaville	Royce Cunningham		✓		✓	✓	✓		✓	✓	✓	✓	✓					
Comm. Chairs/Co-chairs																			
1	Chair Executive Committee	Parry Klassen	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2	Vice Chair Executive Committee	Jeff Willett	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
*	Technical Advisory Committee	Roger Reynolds	✓	✓				✓	✓	✓			✓	✓		✓		✓	
3	Technical Advisory Committee	Nigel Quinn, LBL	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
4	Public Education and Outreach	Joe DiGiorgio	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5	Economic and Social Cost Committee	David Cory	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5	Lower San Joaquin River Committee	Dennis Westcot		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

* = Already votes as Leadership or Coalition member

Participants also identified for 09/10:

- Andy Safford, EKI
- Karen Ashby, LWA
- Tom Grovhoug, LWA
- Michael Steiger, EKI
- Jim Martin, CVRWQCB
- Richard Meyerhoff, CDM
- Vicki Kretsinger, Luhdorff & Scalmanini
- Pam Buford, CVRWQCB

Past Participants:

- | | | |
|--------------------------------------|-------------------------------|--|
| Tom Griffith, Envirotech | Stephen McCord, LWA | Cindy Paulson, CUWA |
| John Herrick | Erica DeHollan, LA C | Geoff Anderson, DWR |
| Katy Walsh | Andy Malone, Wildermuth Env. | Dan Odenweller, RWQCB |
| Mark Gowdy, SWRCB, Water Rights | Chad Dibble, CDFG | Danny Merkely, California Farm Bureau |
| Betty Yee, RWQCB | David Miller, GEI Consultants | Emily Alejandrino/Jim Martin, CVRWQCB |
| Rik Rasmussen, SWRCB | Jamil Ibrahim, MWH Global | Emily Robidart Rooney, Ag Council |
| Mark Felton, Culligan Water and PWQA | Jay Simi, CVRWQCB | Gail Cismowski, CVRWQCB |
| Adam Maskal, Provost & Pritchard | Jodi Pontureri, SWRCB | Jenny Skrel, Ironhouse Sanitary District |
| Jim Strandberg, EKI | Mark Larsen, Kaweah Delta WCD | Erick Althorp SSIWQC |
| Karen Ashby, LWA | Lou Dambrosio, TWG | Mark Dorman, Rainsoft Water PWQA |
| Claus Suverkropp, LWA | Stan Dean, SRCSD | Rick Staggs, City of Fresno |
| Paul Sousa, Cares/WUD | Melanie Thomson, CUWA | Robert Chrobak and Stuart Childs Kennedy/Jenks |
| Paula Hansen, Antea Group | Gene Lee, Reclamation | Ron Crites, Brown and Caldwell |
| Penny Carlo, Carollo Engineers | Mike Johnson | Jennifer Clary, CWA |
| Tony Pirondini, City of Vacaville | Paul Martin, WUD | Laurel Firestone, CWC |

CV-SALTS Executive Committee Meeting - Summary Action Notes

For August 23, 2012 9:00 AM to 2:30 PM

Attendees are listed on the Membership Roster

Meeting Objectives for August 23rd:

- Review key findings from CDM Smith White Paper re: Salinity Effects on AGR Uses.
- Develop scientific/technical basis for updating the narrative translator for EC in AGR waters.

AGENDA

1) Welcome and Introductions

- Chair Parry Klassen brought the meeting to order, and roll call was completed.
- Jeanne Chilcott moved to approve, and Nigel Quinn seconded, and by general acclamation the July 19th action notes were approved.

2) Key Findings from CDM-Smith White Paper re: Salinity Effects on AGR-Related Uses of Water

- Richard Meyerhoff reviewed the Salinity Effects on AGR-Related Uses of Water for the committee. The Technical Advisory Committee had reviewed the paper at the August 21st meeting.

3) Policy Discussion to Establish Appropriate Salinity Objectives for AGR Uses

- The committee spent the morning session discussing items 1, 7 & 8 of the Strawman Principles for Policy Discussion.
 - The session began with a recommendation from Dennis Westcot for the committee to consider two different approaches: one for groundwater and one for surface water.
 - After review of the AGR white paper, the committee discussed moving forward with the narrative objective approach.
 - A discussion on the Yolo Bypass prompted both Jeanne Chilcott, and Pamela Creedon, to remind the committee that there were pending items that were awaiting policy recommendations from CV-SALTS in order to move forward.
 - In discussion of item 7, committee members agreed that it was not appropriate to use 100% protection as a default. Alternatively: 95% of crops/100% of the time, or 100% of crops/95% of time.
 - Tim Moore recommended the committee look at the language adopted in the San Diego basin plan that defines “commercial agriculture.”
 - The committee discussed “reasonable protection” and “economic reasonableness” in their review of item 8.
 - Recommended by Darrin Polhemus: *The Conquest of Bread: 150 Years of Agribusiness in California*, by Richard Walker.

4) Continue Policy Discussion to Establish Appropriate Salinity Objectives for AGR Uses

- The afternoon discussion session concentrated on items 4, 5, 3, 9 & 6 of the Strawman Principles for Policy Discussion.
 - Tim Moore advised the committee he would draft a strawman proposal for the next meeting based on something like the 95/100-100/95 concept discussed in the meeting.
 - In discussion of item 4, it was agreed that it is appropriate to assume active management. Tim will add a phrase such as, “except for water qualities already beyond these,” to #4. Additionally the group was not comfortable with the table headings under #5, new descriptors will be used.
 - In a discussion of the “most sensitive use,” Darrin Polhemus and Pamela Creedon advised the committee that if they were going to adopt 95/100 they needed to build in flexibility by setting a periodic review requirement.

- Tim will provide committee members with a copy of the EPA's "Advanced Notice of Proposed Rule Making – 1998."
 - Pamela Creedon also asked the committee to consider, when setting up the criteria for the interpretation of the narrative objective, that in the process a community is not unduly penalized. Additionally, the current basin plan refers to "natural background," but there is no definition; part of this process should consider defining: natural, ambient, background.
- 5) Initial Conceptual Model (ICM) Workplan
- Per Richard Meyerhoff the final ICM document will be out on August 29th. Key review period will be from August 29th to September 10th. A joint conference call with both the Technical Advisory Committee, and the Executive Committee, will be held on September 10th to review and approve the ICM.
 - This special meeting has been called to approve the ICM as soon as possible in an effort to keep the project on schedule, as approval of the ICM triggers subsequent contracting tasks.
 - A special project committee to oversee the ICM and GIS work, and approve interim work projects, is also being proposed.
 - The next project for review from TAC will be the SSALTS workplan.
- 6) Status Update on Technical Studies/Projects
- There were no status updates/directives from either the TAC or the Executive Committee.
- 7) Future Items
- A special joint TAC/Executive Committee call will be held on September 10th from 10-12. If all critical items can be covered on 9/10, there will not be an Administrative call on 9/14.
 - After a brief discussion, it was decided to leave the September 20th date for the next Policy Session unchanged.

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Test Consensus Recommendations of the Executive Committee

Based on previous discussions by the Executive Committee, from May thru August of 2012, the following keystone "principles" may enable a more practical and beneficial approach to developing and implementing a Salt and Nitrate Management Plan for the Central Valley Region. This is a limited subset of a much broader range of potential changes that may also merit consideration. These principles are intended to test whether the Collaborative Process is can generate consensus recommendations for any of the most critical concerns.

- 1)** Regulatory management decisions should focus on the permit conditions needed to protect existing and probable beneficial uses in the actual "zone-of-influence" of a given discharge. Primary responsibility for gathering and analyzing the data required to define the zone-of-influence and potential effects rests with the waste discharger. Projected impacts must be evaluated for at least 10 years following the term of any discharge permit or waiver and must be updated prior to extending any permit or waiver. Exception: waste discharges that comply with all applicable water quality objectives at the confluence with first encountered groundwater need not submit a detailed fate and transport analysis for the larger zone of influence.

- 2)** The numeric water quality objectives based on the secondary MCLs should be deleted from the Basin Plan. These constituents should be regulated using other provisions of the Basin Plan that prohibit nuisance and restrict water quality degradation. The secondary MCLs should continue to serve as guidelines for interpreting these narrative objectives.

- 3)** The MUN beneficial use is reasonably protected provided electrical conductivity levels remain at or below 1,600 uS/cm (approx. 1,000 mg/L TDS). Where actual conductivity is better than these levels, the state antidegradation policy will apply to preserve this higher water quality. Where existing water quality is worse than these levels, and a given waste discharge would actually improve existing quality, such discharges should be permitted even if EC levels in the discharge are higher than 1,600 uS/cm.

- 4) The AGR beneficial use will continue to be protected from excess salinity using the existing narrative objectives in the Basin Plan. In general, given modern agricultural management practices, the AGR beneficial use is reasonably protected when electrical conductivity levels remain at or below 1,600 uS/cm provided that best practical control technology (BPCT) is still required to minimize salinity concentrations in permitted waste discharges. Where EC levels in the receiving water are already less than 1,600 uS/cm, the Regional Board will impose permit conditions to preserve existing water quality consistent with the state's antidegradation policy. The Regional Board may authorize higher or lower salinity concentrations for some waste discharges based on site-specific factors including, but not limited to: soil conditions, general climate conditions, specific drought conditions, dominant cropping patterns, existing water supply and access to alternative supplies, irrigation methods and timing in the areas affected by these discharges (e.g. zone-of-influence). In general, the narrative objective should be interpreted to ensure that salinity levels will protect 95% of the probable expected yield for 95% of the probable commercial crops in 95% of all years. However, EC levels greater than 3,000 uS/cm should be deemed to "impair" the AGR use.
- 5) "Offsets" may be used (and should be encouraged) as an alternate procedure to demonstrate compliance provided all of the following conditions are met:
- a) The proposed offset would provide a net improvement in water quality greater than that achieved by prohibiting the permitted discharge entirely.
 - b) The proposed offset would provide greater protection to actual existing beneficial uses (especially in economically disadvantaged communities with existing water quality impairments) than would requiring compliance with water quality objectives at the point where wastes are discharged.
 - c) The waste discharge continues to meet existing to apply best management practices (BMP) and to provide best practical control technology (BPCT) where required.
 - d) There is no economically, technically or environmentally feasible alternative available to assure more direct compliance with the applicable water quality objective.

LWA Team Deliverables Summary and Schedule

The deliverables summary and schedule presented below in **Table 1** summarizes the activities and deliverables described in this Workplan and identifies which Tasks will be completing work to answer the specific conceptual model questions as identified in the CV-SALTS Questions Matrix for Conceptual Models with Performance Standards^{1,2} (**Attachment F**). This project schedule has been developed to meet the needs for work products and timing that were described in the RFQ as well as to position CV-SALTS so that the Phase 2 draft CV-SNMP Master Plan can be developed by May 2014. However, this requires compression of a great deal of analysis and consultation into a short duration. Such a schedule naturally constrains the time available for the LWA Team to develop, revise, and finalize analyses and work products, as well as time available for crucial consultation and review with CV-SALTS committees and stakeholders. Adherence to the proposed schedule will require that work product development and review timelines be met. Per the discussion in Task 1.1, the LWA Team strongly recommends that a Project Committee (PC) be established and granted the authority to provide oversight and review for this work effort to streamline the review periods and meet the aggressive schedules. The detailed schedule, which includes a breakdown by sub-tasks and tasks, is included as **Attachment A**.

¹ Attachment 2 of the Conceptual Model Summary, Version 4, March 15, 2012.

² The ICM RFQ was developed, in part, to answer the specific conceptual model questions. The ICM tasks were linked within the RFQ to the conceptual model questions that were being answered as a result of the work being completed.

Table 1. Deliverables Summary and Schedule

Task No.	Task Description	Deliverable	Schedule of Deliverables^{3,4,5,6}	Questions Addressed^{7,8}
1	Project Management Plan - Management & Coordination Activities			
1.1	Coordination Meetings			
	- LWA Team Calls	- Bi-monthly conference calls	Ongoing	N/A
	- Project Management Calls	- Bi-monthly conference calls	Ongoing	N/A
	- Project Committee Calls	- Monthly conference calls - Meeting summaries	Ongoing	N/A
	- ICM and GIS Kickoff Meeting	- Meeting with Project Committee - Meeting summary	Week of Sep 10 th or 17 th	N/A
	- ICM Workshop (Tasks 3-5 – Presentation and Discussion)	- Workshop - Meeting summary	Week of Nov 12 th or 26 th	N/A
1.2	GIS/Data Management Protocols	- Participate in development of CV-SALTS GIS/database policies and procedures <i>As part of Task 3 & 4 of the GIS Workplan:</i> - Manage data requests - Develop a geodatabase - Establish online access - Adhere to GIS standards - Populate metadata	As Needed Ongoing	N/A

³ Per the discussion in Task 1.1, the LWA Team strongly recommends that a Project Committee be established to provide oversight and review for this work effort to streamline the review periods and meet the aggressive schedules.

⁴ Formal approvals of the documents are assumed to be ten (10) days after the “Final to PC”.

⁵ EC = Executive Committee approves the deliverable; PC = Project Committee approves the deliverable

⁶ ‘Ongoing’ indicates that the task will be implemented throughout the duration of the project (September 2012-May 2013)

⁷ See Attachment F of this Workplan, *CV-SALTS Questions Matrix for Conceptual Models with Performance Standards (Revised)*

⁸ N/A – There was no corresponding conceptual model question posed for this Task.

Task No.	Task Description	Deliverable	Schedule of Deliverables ^{3,4,5,6}	Questions Addressed ^{7,8}
1.3	As Needed Support	<ul style="list-style-type: none"> - Provide general support and information for CV-SALTS projects - Document requests and prepare scopes of work as needed 	Ongoing	N/A
1.4	Data Management	<ul style="list-style-type: none"> - Coordination with GIS project - Management of files and data 	Ongoing	N/A
1.5	Monthly Progress Reports	<ul style="list-style-type: none"> - Invoice - Monthly progress/budget report - Updated master schedule 	Ongoing (no later than 15 th each month)	N/A
2	Develop ICM Workplan			
	ICM Workplan	<ul style="list-style-type: none"> - Draft Workplan - Final Workplan 	<ul style="list-style-type: none"> - Draft – 8/22/12 - Cmts to Team – 8/27/12 - Final to EC – 8/29/12 - Approval – 9/10/12 (EC) 	N/A
3	Data Development			
3.1	Review CV-SALTS Geodatabase and Mapping Activities	<ul style="list-style-type: none"> - Documentation of database framework [Included in Task 3.4 Report] 	See Task 3.4	N/A
3.2	Identify, Compile, and Document Data Sources Required for Project	<ul style="list-style-type: none"> - Draft Data Source List - Final Data Source List 	<ul style="list-style-type: none"> - Draft to PC – 9/19/12 - Cmts to Team – 9/28/12 - Final to PC – 10/3/12 - Approval – 10/12/12 (PC) 	N/A
		<ul style="list-style-type: none"> - Compilation of QC'd data into database framework (Task 1.2) 	Ongoing	N/A
		<ul style="list-style-type: none"> - Documentation of data refinements needed [Included in Task 3.4 Report] 	See Task 3.4	N/A
		Address Data Gaps	As needed and as budget allows	N/A
3.3	Identify and Report on Data Gaps	<ul style="list-style-type: none"> - Documentation of non-critical data gaps with recommendations - Draft Memorandum 	<ul style="list-style-type: none"> - Draft to PC – 11/19/12 - Cmts to Team – 11/28/12 - Final to PC – 12/3/12 	N/A

Task No.	Task Description	Deliverable	Schedule of Deliverables ^{3,4,5,6}	Questions Addressed ^{7,8}
		- Final Memorandum	- Approval – 12/14/12 (PC)	
3.4	Data Summary per Initial Analysis Zone	Documentation of Task 3 work effort (overall and by IAZ) - Draft Data Summary Report - Final Data Summary Report	- Draft to PC – 12/3/12 - Cmts to Team – 12/10/12 - Final to PC – 12/17/12 - Approval – 12/21/12 (PC)	Q11 – What are the existing major data gaps for this level of analysis? Q19 – Is data of the appropriate timescale (monthly, annual, or other) available?
4	Establish Initial Analysis Zones			
4.1	Draft Initial Analysis Zone Alternatives	- Identify alternatives for delineating management zones for Phase 2 CV-SNMP and local planning efforts [Included in Task 4.4 Memo]	See Task 4.4	N/A
4.2	Evaluate Methods for Future Management Zone Delineation	- Evaluate data needs, data availability, and future zone delineation [Included in Task 4.4 Memo]		
4.3	Stakeholder Outreach	- IAZ outreach at ICM workshop (Task 1.1) - Meeting summary [Included in Task 4.4 Memo]		
4.4	ICM IAZs and Recommendations for Phase 2	Documentation of Task 4 work effort - Draft Analysis Zones Memorandum - Final Analysis Zones Memorandum	- Draft to PC – 10/26/12 - Cmts to Team – 11/15/12 - Final to PC – 11/9/12 - Approval – 11/19/12 (EC)	N/A
5	Establish Methods for Salt and Nitrate Water Quality Analyses			
5.1	Determine Methods to Estimate Ambient Groundwater Quality	- Assess available salt and nitrate data - Planned methods for determining ambient groundwater quality for each IAZ [Included in Task 5.3 Memo]	See Task 5.3	N/A
5.2	Develop Data/Decision Matrix	- Prepare matrix to summarize		N/A

Task No.	Task Description	Deliverable	Schedule of Deliverables ^{3,4,5,6}	Questions Addressed ^{7,8}
		distribution, completeness, and/or limitations of data available for IAZ mixing model - Recommend assessment criteria to identify hotspots and high priority areas/subregion [Included in Task 5.3 Memo]		
5.3	Establish Water, Salt, and Nitrate Balance Calculation Methods	Identify methodology for calculating water, salt, and nitrate balances for surface and groundwater for each IAZ as well as methods for Task 7. - Draft Memorandum - Final Memorandum	- Draft to PC – 11/14/12 - Cmts to Team – 11/21/12 - Final to PC – 11/28/12 - Approval – 12/10/12 (PC)	Q20 – What salt load calculation methods are appropriate at each phase and why? Q35 – Identify the assumptions used in the model. Q36 – Discuss how conservative nitrogen was assumed to be. Q37 – Discuss how CVHM was used to help with calculation of loads. Q38 – Describe the level of accuracy, completeness, and confidence in the results. Q39 – Describe how the study is consistent with prior pilot and source study work
6	Complete High-Level Salt and Nitrate Analyses for Central Valley⁹			
6.1	Salt and Nitrate Source and	Apply methods from Task 5	See Task 8	Q8 - What is the water, salt, and

⁹ The “Central Valley” for purposes of the ICM focuses on the model area for the Central Valley Hydrologic Model (CVHM). Surface water flows from outside the model boundary will be incorporated to the extent these flows have been included in the CVHM model. The CVHM includes 41 surface water inflow locations.

Task No.	Task Description	Deliverable	Schedule of Deliverables ^{3,4,5,6}	Questions Addressed ^{7,8}
	Transport	<ul style="list-style-type: none"> - Determine ambient water quality - Develop budgets on IAZ scale and conduct 20 year simulation - Assess salt and nitrate trends - Determine overall rate of salt and nitrate movement <p style="text-align: center; color: blue;">[Included in Task 8 Report]</p>		<p>nitrate transport pattern within the Central Valley and what are the rates of transport?</p> <p>Q9 - What are the major sources of water, salt, and nitrate into the Central Valley; and where and at what rate do they enter the Central Valley?</p> <p>Q10 - Where, how, and at what rate do water, salt, and nitrate leave the Central Valley?</p>
6.2	Initial Analysis Zone Analysis	<p>Apply methods from Task 5</p> <ul style="list-style-type: none"> - Evaluate salt and nitrate concentrations in surface and groundwater for 22 IAZs for simulation period <p style="text-align: center; color: blue;">[Included in Task 8 Report]</p>		<p>Q1 - Which areas/regions/subareas (initial analysis zones) are achieving water/salt/nitrate <u>balance</u>? Including surface water, vadose zone¹⁰, shallow and deep groundwater¹¹.</p> <p>Q4 - Which areas/regions/subareas (initial analysis zones) are <u>accumulating</u> water/salt/nitrate; and what are the rates of accumulation?</p> <p>Q5 – For areas/regions/subareas (management zones) accumulating water, salt, nitrate, what is the estimated water, salt, nitrate volume/load that will accumulate over the next (20) years?</p> <p>Q6 - Which</p>

¹⁰ This will be addressed, to the extent feasible, as a part of future CV-SNMP and/or local SNMP efforts

¹¹ This will be addressed as a part of Task 7

Task No.	Task Description	Deliverable	Schedule of Deliverables ^{3,4,5,6}	Questions Addressed ^{7,8}
				<p>areas/regions/subareas (initial analysis zones) are <u>depleting</u> water/salt/nitrate; and what are the rates of depletion, and where is it going?</p> <p>Q7 - For areas/regions/subareas (management zones) depleting water, salt, nitrate, what is the estimated water, salt, nitrate volume/load that will accumulate over the next (20) years?</p> <p>Q18 – What is the rate of change for concentrations in groundwater and vadose zones¹²?</p>
6.3	Preliminary Salt and Nitrate Assessment	<ul style="list-style-type: none"> - Summarize salt and nitrate hot spots on the IAZ scale - Develop salt and nitrate assessment criteria - Identify preliminary ranking and prioritization of IAZs <p style="text-align: center;">[Included in Task 8 Report]</p>		<p>Q2 - What are the <u>high priority</u> (salt, nitrate, or regulatory) areas/regions/subareas (initial analysis zones)?</p> <p>Q3 - Where are the known <u>impaired areas</u> (natural and anthropogenic) and/or hotspots?</p>
6.4	Analysis	<p>Documentation of the Task 6 work effort will be incorporated into the Task 8 report.</p> <p style="text-align: center;">[Included in Task 8 Report]</p>		<p>Summary of findings regarding Q1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 18 (see above)</p> <p>Q12 - What are the primary drivers of salts and nitrate accumulation?</p> <p>Q13 – How do the primary drivers of accumulation of salt and nitrate result in different management</p>

¹² This will be addressed, to the extent feasible, as a part of the future CV-SNMP and/or local SNMP efforts

Task No.	Task Description	Deliverable	Schedule of Deliverables ^{3,4,5,6}	Questions Addressed ^{7,8}
				practices? Q21 – What initial analysis areas may require a higher level of regulatory oversight and why?
7	Salt and Nitrate Analyses in Selected Subareas of the Central Valley			
7.1	Establish Geographical Boundaries	- Establish the boundaries for the sub-areas as the Merced/ Stanislaus and Kings Subbasin [Included in Task 7.6 Memo]	See Task 7.6	N/A
7.2	Characterize Key Subareas	- The subareas will be characterized using a number of parameters from the GIS database and groundwater flow model documentation [Included in Task 7.6 Memo]		Q11 – What are the existing major data gaps for this level of analysis? Q19 – Is data of the appropriate timescale (monthly, annual, or other) available?
7.3	Identify Major Sources and Sinks of Salt and Nitrate	- Identify major sources and sinks of salt and nitrate in each subarea - Comparison of results to Task 6.2 [Included in Task 7.6 Memo]		Q1 - Which areas/regions/subareas (initial analysis zones) are achieving water/salt/nitrate <u>balance</u> ? Including surface water, vadose zone ¹³ , shallow and deep groundwater. Q4 - Which areas/regions/subareas (initial analysis zones) are <u>accumulating</u> water/salt/nitrate; and what are the rates of accumulation? Q6 - Which areas/regions/subareas (initial analysis zones) are <u>depleting</u>

¹³ This will be addressed, to the extent feasible, as a part of future CV-SNMP and/or local SNMP efforts

Task No.	Task Description	Deliverable	Schedule of Deliverables ^{3,4,5,6}	Questions Addressed ^{7,8}
				water/salt/nitrate; and what are the rates of depletion, and where is it going? Q18 – What is the rate of change for concentrations in groundwater and vadose zones ¹⁴ ?
7.4	Identify Zones of High, Low, and Moderate Groundwater Quality	- Categorize/map zones where groundwater is high quality, low quality, or moderate quality within the subareas [Included in Task 7.6 Memo]		Q3 - Where are the known <u>impaired areas</u> (natural and anthropogenic) and/or hotspots?
7.5	Establish and Quantify Transport Patterns	- Using a new model code, analyze the transport patterns - Evaluate the trends and transport of salt and nitrate for each prototype [Included in Task 7.6 Memo]		Q14 – Does seasonal variability impact salt and nitrate concentration/loading/transport? ¹⁵ Q15(a) – How does water year type and variability impact salt concentrations/loading/transport? ¹⁶ Q16 – What is the assimilative capacity of each management zone? ¹⁷
7.6	Subarea Analysis Memo	Documentation of Task 7 work effort - Draft Memorandum - Final Memorandum	- Draft to PC – 4/11/13 - Cmts to Team – 4/19/13 - Final to PC – 4/29/13	Summary of findings regarding Q1, 3, 4, 6, 11, 14, 15(a), 16, 18, 19 (see above) ¹⁸

¹⁴ This will be addressed, to the extent feasible, as a part of the future CV-SNMP and/or local SNMP efforts

¹⁵ Seasonality and water year type will be considered on a conceptual level, by identifying qualitatively any trends or patterns on an IAZ-scale.

¹⁶ Seasonality and water year type will be considered on a conceptual level, by identifying qualitatively any trends or patterns on an IAZ-scale.

¹⁷ The concept of assimilative capacity will be preliminarily assessed in the ICM and further examined in the Phase 2 CV-SNMP.

¹⁸ Note that Q15(b) and Q17 will not be addressed as part of the scope of the ICM; these questions will be addressed later in Phase 2 & 3 and/or local SNMP efforts.

Task No.	Task Description	Deliverable	Schedule of Deliverables ^{3,4,5,6}	Questions Addressed ^{7,8}
			- Approval – 5/10/13 (EC)	More detailed spatial analyses and results will be developed with the prototype models.
8	Prepare Initial Conceptual Model Report			
	ICM Report	Documentation of ICM work effort & recommendations for Phase 2 and 3 of the CV-SNMP - Draft Report - Final Report	- Draft to PC – 2/21/13 - Cmts to Team – 3/5/13 - Final to PC – 3/15/13 - Approval – 3/29/13 (EC)	Summary of findings regarding Q1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 18, 19, 20, 21, and 35-39 ¹⁹ . (see above)

¹⁹ Q40 will be addressed, to the extent feasible, as a part of the future CV-SNMP and/or local SNMP efforts

CV-SALTS Meeting Calendar

2012

1 January

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

2 February

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29			

3 March

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

4 April

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

5 May

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

6 June

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

7 July

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

8 August

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

9 September

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

10 October

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

11 November

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

12 December

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Notes

2nd or 3rd Thursdays

Dark Green Exec Comm Policy

2nd or 3rd Tuesdays

Lt. Green Hatch Exec Comm Admin

First Monday except conflicts

Yellow Salty 5

Light Red conflicts

✗ Dates Recommended Dark