

CV-SALTS Executive Committee Meeting

Tuesday, January 17, 2012 - 10:00 AM to 12:00 PM

TELECONFERENCE ONLY

Teleconference (218) 339-4600 Code: 927571#

Posted 01-07-12 - Revised 01-11-12

Meeting Objectives:

1. Program Development to mirror the policy development meetings
2. Execute business actions for CV-SALTS

AGENDA

1) Welcome and Introductions Chair

- a) Review/Approve [December 12, 2011 notes](#) – 2 min
- b) Committee Roll Call and Membership Roster

2) 2011 CV-SALTS Progress Milestones Status Updated – Daniel Cozad - 5 min

Action: Review and discuss

3) 2011 July-December 6 Month Progress Report – Daniel Cozad - 5 min

Action: Review and discuss

4) Mgt. Practice Subcomm - Effective Management Practice Evaluation - Parry Klassen – 10 min

Action: Status Update

5) Technical Project Management: Work Action Recommendation – Daniel Cozad - 10 min

Action: Discuss and approve work reduction

6) Five Year Work Plan & Strategy Framework Introduction - Daniel Cozad- 20 min

Action: Status, Introduction and & January 19 Preparation

(WORD versions of these documents are posted under the “Materials” tab on the website.)

7) Subgroup evaluating MUN Archetypes and CV Work plan – Jeanne Chilcott – 10 min

Action: Update and Discuss

8) Groundwater Resources Assoc/CV-SALTS Co-sponsored Conference June 13-14 2012 – 5 min

Action: Discuss

9) Set next meeting objectives/date – February 14th Admin Call, February 16th Policy Session

Review Schedule of Policy Discussions and other meetings - 10 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 www.cvsalinity.org

CV-SALTS Executive Committee Meeting

December 12, 2011 2:30 PM to 4:00 PM

Teleconference Only

(218) 339-4600 Code: 927571#

Attendees are listed on the Membership Roster

AGENDA

1) Welcome and Introductions Chair

- The meeting was brought to order by Vice Chair, Jeff Willett.
- a. Mike Nordstrom moved to approve, and Nigel Quinn seconded, and by general acclamation the November 15, 2011 meeting action notes were approved.
- b. Roll call was completed.

2) 2011 CV-SALTS Progress Milestones Status Updated

- Daniel Cozad reviewed current status of individual milestones. Elements in work during December-January time frame:
 - Initial draft of the 5-Year Work Plan to be covered in detail in agenda item #7.
 - Identifying needs for long-term implementation.
 - Completion of second six-month progress report for July-December for January presentation.
 - SOQ Review is scheduled for January.

3) Proposed Calendar for 2012

- The committee reviewed the annual meeting calendar for 2012.
 - Policy Sessions have been tentatively scheduled for the 2nd or 3rd Thursdays of the month.
 - Executive Committee Administrative conference calls have been tentatively scheduled for the 2nd or 3rd Tuesday of each month.
 - There are no Executive Committee meetings scheduled for July. There is no Policy Session scheduled for December. This will mean additional committee work in June and November.
 - J.P. Cativiela expressed a concern with the proposed Administrative conference call schedule and asked that the committee consider rescheduling these calls to a Monday PM, or a Friday AM slot. Daniel Cozad indicated he would solicit feedback from the group on this change.
 - Nigel Quinn moved, and Jeanne Chilcott seconded and by general acclamation the 2012 Meeting Calendar was approved pending the suggested revision to the Administrative call schedule.

4) Updates from Subgroup evaluating MUN Archetypes & CVWB Presentation-Draft Workplan for City of Willows MUN Eval.

- Jeanne Chilcott reviewed the progress of the MUN Archetypes small group.
- Group participants: Jeanne Chilcott, Debbie Webster, Tom Grovhoug, Tess Dunham, Roberta Tassej, Anne Littlejohn and Calvin Yang.
- 4 nominated archetypes were reviewed: Live Oak, Willows, Colusa and Biggs
- The group felt there was an advantage to doing 3 out of the 4:
 - Colusa, Live Oak & Willows
 - Biggs is thinking of switching from surface water discharge to land discharge and was therefore not included. More outreach will be done to find out if they are interested in participating in this process.

- The group developed an initial draft of a straw man scope and work plan and anticipates having a full recommendation to the Executive Committee on how to move forward in either January or February.
 - The small group plans to meet again in mid-January with expanded participation to include, but not limited to, other dischargers, Sacramento Valley Coalition, and a representative from the Rice Commission. Additionally, Jeanne has already contacted EPA and the State Board to set up a meeting with regulatory representatives in early January.
 - Jeanne indicated that one of the next steps needed on the archetypes is a review from a basin planning perspective by Richard Meyerhoff, probably in the February time frame.
- 5) Mgt. Practice Subcomm – Effective Management Practice Evaluation
- This item was not covered.
- 6) Technical Project Management: Work Progress and Budget Status
- Andy Safford presented the committee with a budget update as of November 25, 2011. As of November 25 the Amount Expended = \$116,000 or 57% of Authorized Budget. Work done was primarily in the following three areas.
 - a. Five-Year Work Plan
 - b. Salt and Nutrient Management Plan
 - c. Technical Advisory Committee Assistance
- 7) Five Year Work Plan and Strategy/Framework
- Daniel Cozad reviewed a general outline of the Five-Year Work Plan for the committee.
 - An overall Strategy/Framework and Five Year Work Plan will be presented at the January Policy Session.
 - Daniel also reviewed the Agricultural Water Quality Zone Mapping document. The document will be revised to include comments from Jeanne Chilcott and will be uploaded to the CV-Salts website for reference. Daniel requested that any additional comments be forwarded to him via email. The next step for this document is to back to the Technical Advisory Committee for their feedback.
- 8) Regional Forum Design Team Participation
- Ernie Taylor reviewed the Department of Water Resources forum program intended to provide information and outreach for their policies, programs and projects.
 - CV-Salts participants will be Mike Nordstrom (Jan. 17th/Tulare Lake Region) and Parry Klassen & Nigel Quinn (Jan. 18th/San Joaquin River Region).
 - Information from those meetings will be shared at the February Executive Committee Admin Meeting.
- 9) State Board Presentation 12/6/11 - link for your information only
- http://cvsalinity.org/index.php/documents/doc_download/809-state-board-annual-report-presentation-2012
- 10) Set next meeting objectives and date – January 17th Admin Call, January 19th Policy Session
- Jeanne Chilcott requested that the meeting notes be distributed to participants earlier so they may move forward on action items, or that a summary of actions notes be generated a week after each meeting.

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CV-SALTS Program Work Plan

Goals

This work plan attempts to document efforts to achieve the following goals:

1. Develop a stakeholder driven Salt and Nutrient Management Plan for a sustainable Central Valley
2. Prepare a Basin Plan Amendment that contains the policy changes needed to facilitate sustainable SNMP and provide opportunities for economic and environmental improvements
3. Identify feasible plans for funding and implementing the practices, projects, and follow-up needed to demonstrate success.

Many milestones, tasks and efforts are embodied in these goals which are grouped into the major elements shown below.

Major Program Elements

The goals above are to be achieved with the following program elements which are color coded for use throughout the document:

1. Policy Development, Planning, Outreach, Funding and Program Management ■ ■ ■ ■
2. Technical Studies/Conceptual Model ■ ■ ■ ■
3. Related and Integrated Efforts ■ ■ ■ ■
4. Implementation Planning ■ ■ ■ ■
5. Documentation for Approval ■ ■ ■ ■
6. Initial Implementation ■ ■ ■ ■
7. Monitoring and Reporting ■ ■ ■ ■

Element Development

With a program as large and diverse as CV-SALTS most participants struggle to understand the entirety of the program. Additional complications in achieving a unified vision are that all participants have differing priorities and that plans as well as participants change over its development. To date several useful elements of the program have been developed. With the development of the phased Conceptual Model and the Strategy Framework it is easier to integrate the parts to complete the CV-SALTS vision.

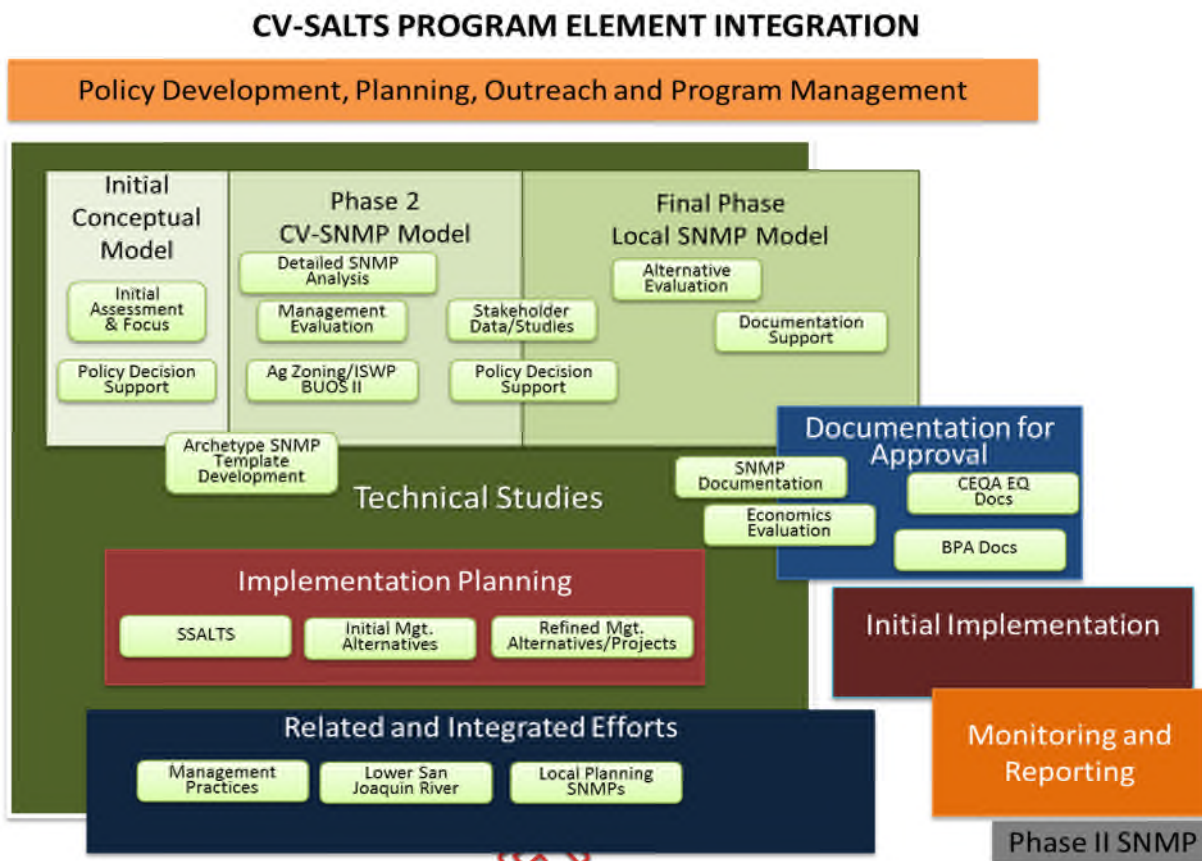
Integration of Elements

Program Development, Management and Planning and Policy Development have been ongoing and will continue to support the process and CV-SALTS decision making.

Information gathering will restart after pilot activities with the Initial Phase of the Conceptual Model ¹GIS tool and continues in refinement through Phase 2 and final phases to develop and illustrate the story of how salt and nitrate work in the Central Valley. It also serves as the tool used to develop the management strategies for the Central Valley Salt and Nutrient Management Plan (SNMP) and implementation of changes. In the final phases this tool provides alternative evaluation and supports the preparation of documentation for CEQA Documents, Basin Plan Amendment (BPA) and economics evaluations.

¹ Conceptual Model additional description is being developed with the Technical Committee the most recent version is located here [ADD LINK](#)

Implementation Planning is coordinated and occurs at the same time as the Conceptual Model initiated with Strategic Salt Accumulation and Land Transportation Storage (SSALTS²) and followed up with more refined studies developing implementation plans and tested through the Conceptual Model tools. The Major Elements and their contributing constituent parts are shown below as Attachment 1.



Schedule, Scope and Cost

A program time line is shown on the following page and in Attachment 2 for the major elements and some constituent components of these elements. This top level summary schedule depicts the timeline of the elements which have been approved or which have been discussed but not yet approved by the CV-SALTS Executive Committee. CV-SALTS is constrained by the SNMP deadline of May 2014, so the schedule is critical. Many tasks will be needed following the SNMP for the BPA and SNMP implementation. The project timeline and budget estimated have been extended to 2017 to include continued implementation projects and programs. Attachment 3 shows a more detailed critical path schedule for the elements, phases and tasks identified for the program.

The scopes of work for the CV-SALTS program tasks range from detailed documented descriptions to conceptual outlines of the work needed. The further detail is dependent on decisions made by the Executive Committee and details provided or reviewed by the CV-SALTS Committees, contractors and staff. Attachment 4 provides an outline of all tasks identified and the level of detail available for each task. This attachment identifies critical tasks and enhancement tasks which may be completed if funding, timing and cooperation is available. Attachment 5 provides a more detailed estimate of costs by element and task.

² SSALTS Strategic SALT Accumulation Land and Transportation Storage Concept Description initially reviewed by Executive Committee, complete as an initial concept scope only.

ATTACHMENT 2 Summary Program Timeline

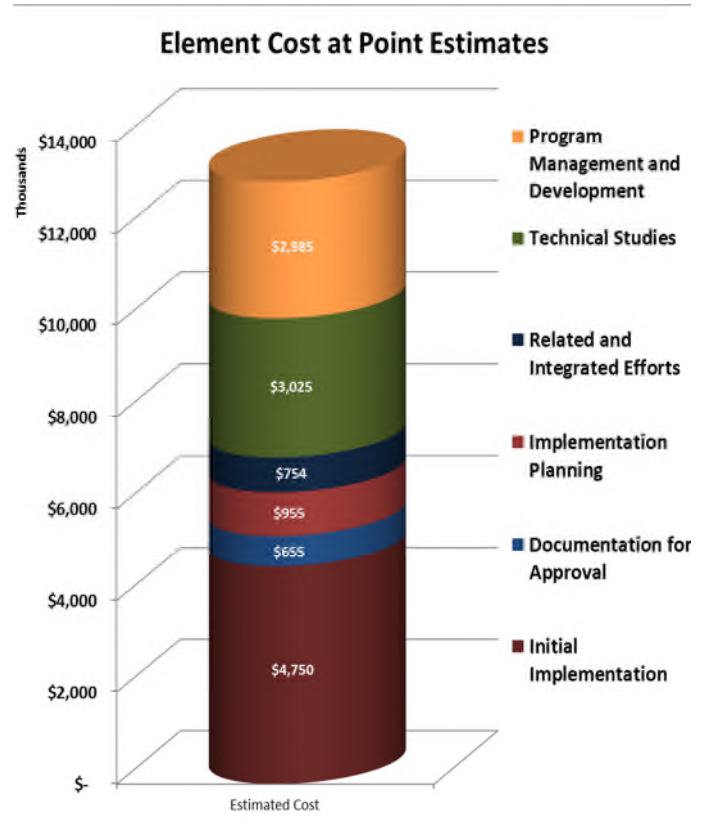
| CV-SALTS Program Element | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | + |
|--|------|------|------|------|------|------|------|---|
| Program Management | | | | | | | | |
| Funding | | | | | | | | |
| Policy Development and Planning | | | | | | | | |
| Outreach and Scoping Meetings | | ◆ | ◆ | ◆ | ◆ | | | |
| Technical Studies | | | | | | | | |
| Conceptual Model Initial, 2 and Final Phases | | | | | | | | |
| BUOS Phase II, Ag Zoning, and ISWP Review | | | | | | | | |
| Archetypes/Templates | | | | | | | | |
| Implementation, DAC, SSALTS, POI planning | | | | | | | | |
| Implementation evaluation | | | | | | | | |
| SNMP Documentation | | | | | | | | |
| Economic Review | | | | | | | | |
| Other Studies | | | | | | | | |
| Related/Integrated Efforts | | | | | | | | |
| Management Practices | | | | | | | | |
| Lower San Joaquin River | | | | | | | | |
| Implementation Planning | | | | | | | | |
| Documentation for Approval | | | | | | | | |
| CEQA Equivalent Documentation | | | | | | | | |
| BPA Documentation and Support | | | | | | | | |
| Initial Implementation | | | | | | | | |
| Management Practices | | | | | | | | |
| DAC Assistance - Nitrate | | | | | | | | |
| Projects | | | | | | | | |
| Templates | | | | | | | | |
| Local SNMP | | | | | | | | |
| Monitoring and Reporting | | | | | | | | |
| Phase II SNMP | | | | | | | | |

Cost Estimates, Funding and Contracting

The five year cost estimate, excluding major project implementation, ranges from \$9.3M to \$17.M with the likely point estimated cost \$13.1 M. The graph at right illustrates these costs at the single point likely estimated costs.

Implementation funding represents the largest funding need in the program. Most of this funding will be needed after the CV-SNMP and BMP are completed. Preliminary estimates will be made of potential funding needed for implementation; however these estimates will require significant additional information and planning to be refined. These costs do not include Monitoring and Reporting or future salt and nutrient management planning.

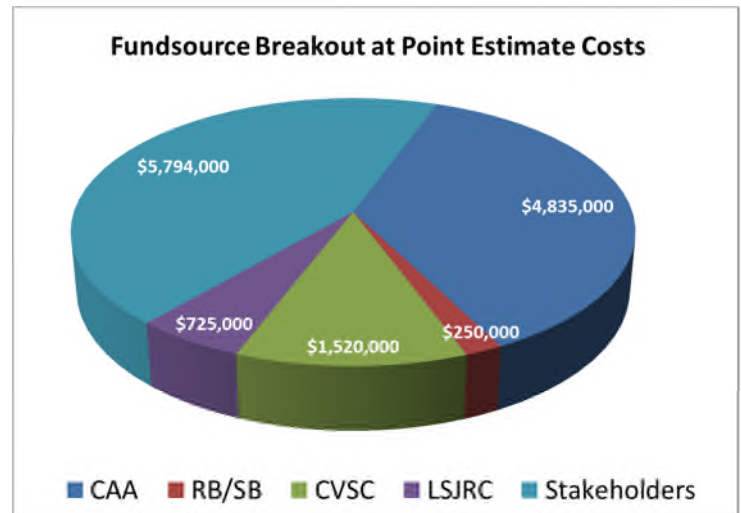
Core funding for CV-SALTS is provided by State Water Resources Control Board Cleanup and Abatement Account (CAA) and Central Valley Salinity Coalition and its members. The State Water Resources Control Board has contracted with the San Joaquin Valley



Drainage Authority for support of CV-SALTS. Current contracts total \$3.2 Million under two agreements. An additional \$1.8 million is dedicated by the State Water Resources Control Board to be contracted in 2012, if adequate progress is documented. The Salinity Coalition and its members have contributed over \$1 million in cash and contracted with various firms to provide studies and support for CV-SALTS. The Salinity Coalition has committed to continue to support CV-SALTS efforts with funding and in-kind services. Additional funding will be needed especially for implementation elements that may require additional stakeholder or grant funding. This funding may come from CV-SALTS partner agencies, Salinity Coalition members, regions and other stakeholders involved with studies as shown below.

These costs are allocated by the element funded and breakdown to approximately \$4.8M from the CAA, \$250K from State and Regional Board in-kind support and \$1.52M from CVSC and its members with \$5.8M from participating stakeholders. The graph to the right shows this breakout visually.

Additional contract capacity is needed to perform and expend these funds to achieve the schedule indicated.



Attachments

1. Program Element Integration – Draft Attached
2. Summary Program Timeline – Draft Attached
3. Critical Path Schedule – Forthcoming
4. Compiled Summary Scope– Forthcoming
5. Summary of Element Scope and Cost Ranges – Draft Attached

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CV-SALTS 5-YEAR WORKPLAN MAJOR TASK COST ESTIMATE RANGES

FUNDSOURCES AND POINT COST ESTIMATES

| Task Description | Estimated Cost by Year in 2011 Dollars (a) | | | | | 5-Year Total | Cost Assumption | Fundsources at Point Estimate | | | | | |
|--|--|--------------------------|--------------------------|--------------------------|--------------------------|------------------------------|--|-------------------------------|------------|--------------|-------|--------------|--------------|
| | 2012 | 2013 | 2014 | 2015 | 2016 | | | CAA | RB/SB | CVSC | LSJRC | Stakeholders | Total |
| Program Management and Development | | | | | | | | | | | | | |
| <ul style="list-style-type: none"> ● Coordinate meetings, oversee financial administration, and manage project tasks ● Basin Planning support ● Maintain meeting minutes, CV-SALTS website, etc. ● Technical Project Management ● Establish administrative record for Basin Plan A ● Implementation Funding Program and Outreach | \$ 200,000 to \$ 300,000 | \$ 200,000 to \$ 300,000 | \$ 200,000 to \$ 300,000 | \$ 200,000 to \$ 300,000 | \$ 200,000 to \$ 300,000 | \$ 1,000,000 to \$ 1,500,000 | | | | | | | |
| | \$ 30,000 to \$ 50,000 | \$ 30,000 to \$ 50,000 | \$ 30,000 to \$ 50,000 | | | \$ 90,000 to \$ 150,000 | Contract \$58,050 | \$ 600,000 | | \$ 600,000 | | | |
| | \$ 20,000 to \$ 40,000 | \$ 20,000 to \$ 40,000 | \$ 20,000 to \$ 40,000 | \$ 20,000 to \$ 40,000 | | \$ 80,000 to \$ 160,000 | | \$ 90,000 | | | | | |
| | \$ 100,000 to \$ 200,000 | \$ 75,000 to \$ 100,000 | \$ 100,000 to \$ 150,000 | | | \$ 275,000 to \$ 450,000 | Contract \$427,950 | \$ 80,000 | | \$ 80,000 | | | |
| | \$ 10,000 to \$ 30,000 | \$ 10,000 to \$ 30,000 | \$ 20,000 to \$ 30,000 | \$ 5,000 to \$ 10,000 | | \$ 45,000 to \$ 100,000 | | \$ 500,000 | | | | | |
| | \$ 10,000 to \$ 50,000 | \$ 100,000 to \$ 150,000 | \$ 150,000 to \$ 200,000 | \$ 250,000 to \$ 350,000 | \$ 300,000 to \$ 350,000 | \$ 810,000 to \$ 1,100,000 | Includes CVSC Lobbying etc. | \$ 100,000 | | \$ 800,000 | | | |
| | \$ 370,000 to \$ 670,000 | \$ 435,000 to \$ 670,000 | \$ 520,000 to \$ 770,000 | \$ 475,000 to \$ 700,000 | \$ 500,000 to \$ 650,000 | \$ 2,300,000 to \$ 3,460,000 | | \$ 1,270,000 | \$ 100,000 | \$ 1,480,000 | \$ - | \$ - | \$ 2,850,000 |
| POLICY DISCUSSIONS ON BENEFICIAL USES AND WQOs | | | | | | | | | | | | | |
| <ul style="list-style-type: none"> ● Examine "Incidental" MUN beneficial uses and WQOs for such use ● Policy Approach for effects of crop seasonality and economic viability, and drought on WQOs ● Review default Assumptions and parameters (e.g., leaching fractions) for salinity models etc. ● Establish guidance on determining most sensitive crop to be protected in an area | \$ 15,000 to \$ 30,000 | \$ 15,000 to \$ 30,000 | \$ 5,000 to \$ 10,000 | | | \$ 35,000 to \$ 70,000 | These are example task for costing only | \$ 70,000 | | | | | |
| | \$ 6,000 to \$ 15,000 | \$ 6,000 to \$ 15,000 | | | | \$ 12,000 to \$ 30,000 | | \$ 20,000 | | | | | |
| | \$ 6,000 to \$ 15,000 | \$ 6,000 to \$ 15,000 | | | | \$ 12,000 to \$ 30,000 | | \$ 20,000 | | | | | |
| | \$ 6,000 to \$ 20,000 | \$ 2,000 to \$ 10,000 | | | | \$ 8,000 to \$ 30,000 | | \$ 25,000 | | | | | |
| | \$ 33,000 to \$ 80,000 | \$ 29,000 to \$ 70,000 | \$ 5,000 to \$ 10,000 | | | \$ 67,000 to \$ 160,000 | | \$ 135,000 | \$ - | \$ - | \$ - | \$ - | \$ 135,000 |
| Technical Studies | | | | | | | | | | | | | |
| Initial Phase C Initial Phase Conceptual Model | | | | | | | | | | | | | |
| <ul style="list-style-type: none"> ● Establish approach to developing conceptual model with CV-SALTS TAC ● Stakeholders Outreach Coordination to study Areas ● Prepare scope of work and retain consultant ● Gather existing data and develop Model | \$ 150,000 to \$ 250,000 | | | | | \$ 150,000 to \$ 250,000 | | \$ 200,000 | | | | \$ 200,000 | |
| Phase 2 SNMP Phase 2 SNMP Conceptual Model | | | | | | | | | | | | | |
| <ul style="list-style-type: none"> ● Refine conceptual model and salt and nitrate Loads ● Assess sustainable salt and nitrate balances ● Identify potential large-scale management practices and projects for analysis ● Incorporate changes to Beneficial uses and WQOs based on archetypes ● Prepare Central Valley SNMP Assessment ● Revise and Prepare SNMP Document | \$ 50,000 to \$ 100,000 | \$ 50,000 to \$ 100,000 | | | | \$ 100,000 to \$ 200,000 | | \$ 150,000 | | | | \$ 100,000 | |
| | | \$ 50,000 to \$ 100,000 | | | | \$ 50,000 to \$ 100,000 | | \$ 100,000 | | | | \$ 100,000 | |
| | | \$ 75,000 to \$ 150,000 | | | | \$ 75,000 to \$ 150,000 | | \$ 100,000 | | | | \$ 100,000 | |
| | | \$ 25,000 to \$ 50,000 | | | | \$ 25,000 to \$ 50,000 | | \$ 50,000 | | | | \$ 50,000 | |
| | | \$ 100,000 to \$ 300,000 | | | | \$ 100,000 to \$ 300,000 | | \$ 200,000 | | | | \$ 200,000 | |
| | \$ 50,000 to \$ 100,000 | \$ 350,000 to \$ 800,000 | \$ 100,000 to \$ 200,000 | | | \$ 500,000 to \$ 1,100,000 | | \$ 600,000 | | \$ 100,000 | | \$ 700,000 | |
| Final Phase SN Final Phase SNMP Conceptual Model | | | | | | | | | | | | | |
| <ul style="list-style-type: none"> ● Incorporate Regional SNMP Information assessment and update Conceptual plan ● Conduct economic analysis of proposed implementation alternatives and benefits ● Perform Antidegradation policy analysis including Water Code §13241 factors | | \$ 20,000 to \$ 150,000 | \$ 75,000 to \$ 100,000 | | | \$ 95,000 to \$ 250,000 | | \$ 100,000 | | | | \$ 100,000 | |
| | | \$ 50,000 to \$ 150,000 | \$ 100,000 to \$ 200,000 | | | \$ 150,000 to \$ 350,000 | | \$ 200,000 | | | | \$ 200,000 | |
| | | \$ 10,000 to \$ 50,000 | \$ 10,000 to \$ 50,000 | | | \$ 20,000 to \$ 100,000 | | \$ 75,000 | | | | \$ 75,000 | |
| | \$ - to \$ - | \$ 60,000 to \$ 200,000 | \$ 110,000 to \$ 250,000 | \$ - to \$ - | \$ - to \$ - | \$ 170,000 to \$ 450,000 | | \$ 375,000 | \$ - | \$ - | \$ - | \$ - | \$ 375,000 |
| BUOS PHASE 2 + GIS and other Studies | | | | | | | | | | | | | |
| <ul style="list-style-type: none"> ● Prepare scope of work and retain consultant ● Ag Water Quality Zoning Mapping ● Inland Surface Waters Validation ● Incorporate information and data into georeferenced database ● Summarize initial salt and nitrate loads into georeferenced data | \$ 10,000 to \$ 20,000 | | | | | \$ 10,000 to \$ 20,000 | Scope Development Varies | | | | | | |
| | \$ 40,000 to \$ 75,000 | | | | | \$ 40,000 to \$ 75,000 | State Board Contract \$75,000 | | | | | | |
| | \$ 20,000 to \$ 100,000 | | | | | \$ 20,000 to \$ 100,000 | Conceptual Scope by IPM | | | | | | |
| | \$ 20,000 to \$ 40,000 | | | | | \$ 20,000 to \$ 40,000 | | | | | | | |
| | \$ 10,000 to \$ 20,000 | | | | | \$ 10,000 to \$ 20,000 | | | | | | | |
| | \$ 100,000 to \$ 255,000 | | | | | \$ 100,000 to \$ 255,000 | | \$ 150,000 | | | | \$ 150,000 | |
| GROUNDWATER BENEFICIAL USE ARCHETYPE | | | | | | | | | | | | | |
| <ul style="list-style-type: none"> ● Conduct planning activities for Tulare Lake bed archetype, including scope of work ● Perform investigation obtain additional geologic and hydrologic data, if needed ● Conduct computer groundwater model simulations, if needed ● Prepare information for CEQA documentation ● Prepare Regional Board staff report and Basin Plan amendments ● Obtain necessary approvals of Basin Plan amendments adopted by Regional Board | \$ 50,000 to \$ 90,000 | | | | | \$ 50,000 to \$ 90,000 | Costs based on Planning-Level Scopes to Establish Appropriate Beneficial Uses for Selected Archetype Water Bodies by EKI, dated 14 October 2011. | | | | | | |
| | \$ - to \$ 350,000 | | | | | \$ - to \$ 350,000 | | | | | | | |
| | \$ - to \$ 40,000 | | | | | \$ - to \$ 40,000 | Stakeholder working to provide updated costs | | | | | | |
| | \$ 15,000 to \$ 25,000 | \$ 15,000 to \$ 25,000 | | | | \$ 30,000 to \$ 50,000 | | | | | | | |
| | | \$ 40,000 to \$ 50,000 | \$ 40,000 to \$ 50,000 | | | \$ 80,000 to \$ 100,000 | Task includes peer review of Basin | | | | | | |
| | | \$ 40,000 to \$ 70,000 | \$ 40,000 to \$ 70,000 | | | \$ 40,000 to \$ 70,000 | | | | | | | |
| | \$ 65,000 to \$ 505,000 | \$ 55,000 to \$ 75,000 | \$ 80,000 to \$ 120,000 | | | \$ 200,000 to \$ 700,000 | | \$ 300,000 | | \$ 300,000 | | \$ 600,000 | |

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CV-SALTS 5-YEAR WORKPLAN MAJOR TASK COST ESTIMATE RANGES

FUNDSOURCES AND POINT COST ESTIMATES

| Task Description | Estimated Cost by Year in 2011 Dollars (a) | | | | | 5-Year Total | Cost Assumption | Fundsources at Point Estimate | | | | | |
|---|--|--------------------------|--------------------------|------|------|----------------------------|--|-------------------------------|------------|------------|------------|--------------|------------|
| | 2012 | 2013 | 2014 | 2015 | 2016 | | | CAA | RB/SB | CVSC | LSJRC | Stakeholders | Total |
| SNMP POTW RECEIVING WATER BENEFICIAL USE ARCHETYPES | | | | | | | | | | | | | |
| ● Conduct planning activities for Colusa, Willows, and Live Oak archetypes | \$ 20,000 to \$ 40,000 | | | | | \$ 20,000 to \$ 40,000 | Costs based on Planning-Level Scopes to Establish Appropriate Beneficial Uses for Selected Archetype Water Bodies prepared by EKI, dated 14 October 2011. | | | | | | |
| ● Compile and assess available water quality, hydrologic, and historical use data | \$ 70,000 to \$ 140,000 | | | | | \$ 70,000 to \$ 140,000 | | | | | | | |
| ● Conduct additional sampling and flow measurements, if needed | \$ - to \$ 480,000 | | | | | \$ - to \$ 480,000 | RWQCB working to provide Costs | | | | | | |
| ● Perform Use Attainability Analysis, if needed | \$ 60,000 to \$ 180,000 | | | | | \$ 60,000 to \$ 180,000 | | | | | | | |
| ● Prepare information for CEQA documentation | \$ 25,000 to \$ 40,000 | \$ 10,000 to \$ 25,000 | | | | \$ 35,000 to \$ 65,000 | | | | | | | |
| ● Prepare Regional Board staff report and Basin Plan amendments | | \$ 120,000 to \$ 150,000 | \$ 120,000 to \$ 150,000 | | | \$ 240,000 to \$ 300,000 | | | | | | | |
| ● Obtain necessary approvals of Basin Plan amendments adopted by Regional Board | | | \$ 120,000 to \$ 210,000 | | | \$ 120,000 to \$ 210,000 | | | | | | | |
| | \$ 175,000 to \$ 880,000 | \$ 130,000 to \$ 175,000 | \$ 240,000 to \$ 360,000 | | | \$ 545,000 to \$ 1,415,000 | | | | \$ 500,000 | \$ 500,000 | \$ 1,000,000 | |
| Related and Integrated Efforts | | | | | | | | | | | | | |
| LSJR SALT AND BORON WQOs | | | | | | | | | | | | | |
| ● Update LSJR workplan Sources of Salt and elements in Introduction chapter | \$ - to \$ 10,000 | | | | | \$ - to \$ 10,000 | Based on Draft LSJR Workplan dated 19 Oct 2011 | | | | | | |
| ● Identify existing beneficial uses | \$ 10,000 to \$ 20,000 | | | | | \$ 10,000 to \$ 20,000 | | | | \$ - | \$ 20,000 | | |
| ● Perform technical study related to WQOs for irrigation beneficial use | \$ 50,000 to \$ 100,000 | | | | | \$ 50,000 to \$ 100,000 | Costs on preliminary scope document from EKI for Committee | | | \$ 75,000 | | | |
| ● Perform technical study related to WQOs for stock watering beneficial use | \$ 29,000 to \$ 30,000 | | | | | \$ 29,000 to \$ 30,000 | Costs based on Request for Proposal (RFP) 2011-001 For Consulting Services to Conduct Water Quality Criteria Studies, prepared by the LSJR Committee, dated 6 Mar 2011 | | | \$ 29,000 | | | |
| ● Perform technical study related to WQOs for aquatic life beneficial use | \$ 50,000 to \$ 70,000 | | | | | \$ 50,000 to \$ 70,000 | | | \$ 60,000 | | | | |
| ● Compile salt and boron data for LSJR and estimate salt loads Estimated Seasonality if needed | \$ 50,000 to \$ 300,000 | | | | | \$ 50,000 to \$ 300,000 | | | \$ 250,000 | | | | |
| ● Develop program of implementation | \$ 15,000 to \$ 30,000 | \$ 15,000 to \$ 60,000 | | | | \$ 30,000 to \$ 90,000 | | | \$ 90,000 | | | | |
| ● Prepare CEQA equivalent documentation | \$ 75,000 to \$ 100,000 | \$ 75,000 to \$ 100,000 | | | | \$ 150,000 to \$ 200,000 | Task includes economic analysis, | | | \$ 150,000 | | | |
| ● Prepare Regional Board staff report and Basin Plan amendments | | \$ 50,000 to \$ 75,000 | | | | \$ 50,000 to \$ 75,000 | Task includes peer review of Basin | | | \$ 50,000 | | | |
| ● Obtain necessary approvals of Basin Plan amendments adopted by Regional Board | | | \$ 30,000 to \$ 60,000 | | | \$ 30,000 to \$ 60,000 | No costs included for Monitoring | | | \$ 30,000 | | | |
| | \$ 279,000 to \$ 660,000 | \$ 140,000 to \$ 235,000 | \$ 30,000 to \$ 60,000 | | | \$ 449,000 to \$ 955,000 | | | | \$ 725,000 | \$ 29,000 | \$ 754,000 | |
| Implementation Planning | | | | | | | | | | | | | |
| SSALTS AND IMPLEMENTATION PLANNING | | | | | | | | | | | | | |
| ● Conduct planning activities for SSALTS | \$ 10,000 to \$ 30,000 | | | | | \$ 10,000 to \$ 30,000 | Costs based on memorandum titled Strategic Salt Accumulation Land and Transportation Study (SSALTS), contained in CV-SALTS Executive Committee materials for 17 November 2011 meeting. From State Board Annual Rpt From State Board Annual Rpt | \$ 10,000 | | | | | |
| ● Identify locations where salt is accumulating | \$ 30,000 to \$ 50,000 | | | | | \$ 30,000 to \$ 50,000 | | \$ 50,000 | | | | | |
| ● Determine locations that can act as appropriate salt storage areas | \$ 80,000 to \$ 150,000 | | | | | \$ 80,000 to \$ 150,000 | | \$ 150,000 | | | | | |
| ● Coordinate SSALTS with evaluation of other management practices | | \$ 50,000 to \$ 125,000 | | | | \$ 50,000 to \$ 125,000 | | \$ 125,000 | | | | | |
| ● Develop Initial Management Alternatives | | \$ 125,000 to \$ 200,000 | | | | \$ 125,000 to \$ 200,000 | | \$ 200,000 | | | | | |
| ● Refine Management Alternatives | | \$ 50,000 to \$ 100,000 | \$ 125,000 to \$ 150,000 | | | \$ 175,000 to \$ 250,000 | | \$ 200,000 | | | | | |
| | \$ 120,000 to \$ 230,000 | \$ 225,000 to \$ 425,000 | \$ 125,000 to \$ 150,000 | | | \$ 470,000 to \$ 805,000 | | \$ 685,000 | \$ - | \$ - | \$ - | \$ 685,000 | |
| EFFECTIVE MANAGEMENT PRACTICES EVALUATION | | | | | | | | | | | | | |
| ● Conduct planning activities for management practices evaluation | \$ - to \$ 10,000 | | | | | \$ - to \$ 10,000 | Cost assumes Management Practices Committee complete planning activities with limited assistance. | \$ - | | | | | |
| ● Perform sector review of significant salt sources | \$ 5,000 to \$ 10,000 | | | | | \$ 5,000 to \$ 10,000 | | \$ 10,000 | | | | | |
| ● Conduct additional studies to assess new or developing management practices | \$ 50,000 to \$ 100,000 | | | | | \$ 50,000 to \$ 100,000 | | | | \$ 100,000 | | | |
| ● Screen management practices for inclusion in "toolbox" and assess Valley Wide Impacts | \$ 20,000 to \$ 30,000 | \$ 20,000 to \$ 30,000 | \$ 20,000 to \$ 45,000 | | | \$ 60,000 to \$ 105,000 | Task assumes 200 to 400 hour effort from technical consultant. | \$ 105,000 | | | | | |
| | \$ 75,000 to \$ 150,000 | \$ 20,000 to \$ 30,000 | \$ 20,000 to \$ 45,000 | | | \$ 115,000 to \$ 225,000 | | \$ 115,000 | \$ - | \$ - | \$ - | \$ 100,000 | \$ 215,000 |
| ECONOMICALLY-DISADVANTAGED COMMUNITIES | | | | | | | | | | | | | |
| ● Conduct planning activities to assist economically-disadvantaged communities with nitrate impaired drinking water | \$ - to \$ 10,000 | | | | | \$ - to \$ 10,000 | Task assumes CVSC members approve, initial concept IPM | | | \$ 10,000 | | | |
| ● Provide technical expertise to facilitate project design and implementation | \$ 20,000 to \$ 40,000 | | | | | \$ 20,000 to \$ 40,000 | Task assumes 100 to 200 hour effort | | | \$ 20,000 | | | |
| ● Assess regulatory incentives and impediments for possible program improvements | \$ 15,000 to \$ 30,000 | | | | | \$ 15,000 to \$ 30,000 | Task assumes 50 to 100 hour effort | | | \$ 10,000 | \$ 15,000 | | |
| | \$ 35,000 to \$ 80,000 | | | | | \$ 35,000 to \$ 80,000 | | \$ - | \$ - | \$ 40,000 | \$ - | \$ 15,000 | \$ 55,000 |

CV-SALTS – Strategy and Framework Draft Version 2

CV-SALTS is developing a comprehensive regulatory and programmatic approach to the management of salt/nitrate (S/N) in the Central Valley that is consistent with the State Recycled Water Policy. This work is being done with the Central Valley Regional Water Quality Control Board, the State Water Resources Control Board, the Central Valley Salinity Coalition and Stakeholders. The strategy to achieve this outcome is to adopt a Salt Nutrient Management Plan (SNMP) and revise the Basin Plan to facilitate implementation of the SNMP. Combined, these actions will establish:

- A revised regulatory structure (Beneficial Uses [BU] and Water Quality Objectives [WQO]) in relation to salt and nitrate management;
- Procedures to evaluate compliance with Basin Plan uses and objectives and provide the regulatory flexibility needed to make salt and nitrate management decisions at the appropriate geographic or management scale; and
- The basis for short and long-term management of salt and nitrate across the Central Valley at appropriate geographic scales.

To implement the above strategy and achieve the required outcome, CV-SALTS is executing work at three levels. These levels comprise the CV-SALTS Framework:

1. *Regulatory Planning Level* - Establishes the regulatory structure within the Basin Plan to support basin-wide S/N management;
2. *SNMP Master Plan Level* – Creates the framework and procedures for a basin-wide and regional approach to S/N management through the adoption of a SNMP;
3. *SNMP Implementation Level* – Provides the opportunity for future development of regional or site-specific S/N management plans or future modification of BUs or WQOs consistent with the adopted regulatory structure.

Spatially, the scale or size of the geographic area at which S/N management occurs decreases from the Regulatory Planning to the SNMP Implementation Level. For example, at the Regulatory Planning Level the revised Basin Plan will use large-scale Management Areas (MAs), which describe the existing large scale differences in watershed characteristics across the Central Valley. In contrast, at the SNMP Implementation Level the spatial area covered by a regional or site-specific plan depends on specific S/N management needs of the area.

Temporally, the time frame associated with establishment of the Regulatory and SNMP Planning Levels is tied to the schedule imposed by the State Recycled Water Policy, which targets the adoption of the SNMP by May 2014 and revisions to the Basin Plan to support execution of the SNMP in the following year. The time frame associated with the SNMP Implementation Level extends well beyond the May 2014 date. While it is anticipated that the 2014-adopted SNMP will include one or more completed

Regional S/N Plans (which will serve as archetypes for future Regional S/N Plans), the SNMP will include mechanisms for the development and adoption of additional Regional S/N Plans well beyond the May 2014 date.

The following sections provide additional information regarding the CV-SALTS Framework. Table 1 provides a concise summary of each level of the framework.

Level 1 – Regulatory Planning Level

Description - At this level, CV-SALTS will establish the overarching regulatory structure facilitate implementation of the SNMP. Adoption of this structure, which is expected to require modifications to the Basin Plan, will focus on four key elements:

1. Revision of AGR, MUN and GWR BUs, where needed. Revision may include adoption of sub-categories of these uses.
2. Revision of WQOs applicable to each of the established BUs, where needed. The final WQOs may be numeric or narrative. If the latter, the regulatory structure will establish the basis for translating narrative WQOs into numeric values.
3. Basis for evaluating compliance with revised Basin Plan BUs and WQOs in surface water and groundwater.
4. Identification of MAs for implementation of the regulatory structure. MAs provide a framework that acknowledges the existence of significant differences across the basin in baseline water quality (e.g., receiving waters and source waters for agriculture/municipal uses), land use, climate conditions, soil characteristics, existing infrastructure (e.g., areas with extensive agriculture vs. areas relatively undeveloped), and short and long-term S/N management needs (e.g., areas where elevated nitrate or salt are already problematic).

Expected Outcomes: Adoption of a Basin Plan Amendment (BPA) that results in a revised Basin Plan that facilitates implementation of the SNMP.

Key Tasks (Note this list is only intended to describe the high level tasks):

1. Develop revised Basin Plan regulatory structure
 - a. Beneficial uses
 - b. Water quality objectives
 - c. Implementation policies and procedures
2. Identify high level MAs
3. Develop BPA to modify Basin Plan to facilitate implementation of the SNMP, including Staff Report with supporting attachments, CEQA Analysis, Antidegradation Analysis, and 13241 Analysis

Level 2 – SNMP Master Plan Level

Description - CV-SALTS will develop the SNMP under Level 2. The SNMP will have a two-tiered structure: (a) Basin-wide requirements or “master plan” for the S/N management in the Central Valley; and (b) placeholder for incorporation of area-specific Regional S/N Plans. The SNMP will include “proofs of concept” or archetypes to provide examples of SNMP implementation. SNMP development includes the following key elements:

1. Development of the SNMP, which establishes (a) basin-wide S/N management requirements for the Central Valley consistent with the State Recycled Water Policy requirements; and (b) short and long-term strategies to address areas not currently in compliance with WQOs (e.g., elevated nitrate or salt).
2. Completion of archetypes for modifications to BUs or WQOs that demonstrate application of the regulatory structure developed at the Regulatory Planning Level.
3. Completion of archetypes for establishment of Regional S/N Plans within the tiered SNMP structure.
4. Establishment of templates or methodologies based on the completed archetypes to provide guidance for SNMP implementation.

Expected Outcomes: (a) Adoption of a SNMP that complies with the State Recycled Water Policy; (b) completion of one or more archetypes for modifying BUs or WQOs relevant to S/N management in the Basin Plan; and (c) completion of one or more Regional S/N Plans that serve as archetypes for other Regional S/N Plans.

Key Tasks (Note this list is only intended to describe the high level tasks):

1. Develop SNMP, consistent with minimum requirements of State Recycled Water Policy, including:
 - a. Water recycling and stormwater management goals/objectives
 - b. High level source identification, assimilative capacity, loading estimates, etc.
 - c. Monitoring plan
 - d. Antidegradation analysis
 - e. Implementation methods, including templates for modifying BUs or WQOs and developing Regional S/N Plans
 - f. Management activities, that when implemented, provide reasonable assurance of compliance with State Recycled Water Policy requirements
2. Complete selected BU and WQO archetypes, using the policies and procedures developed under Level 1.
3. Complete selected Regional S/N Plan archetypes, using the *Framework for Identification of Salt/Nitrate Sources* as a basis for plan development
4. Establish templates/methodologies to support long term SNMP implementation

5. Complete studies that support development of management activities or implementation strategies for inclusion in the SNMP, e.g. SSALTS
6. Develop regulatory documentation, e.g., staff report, CEQA compliance, to support SNMP adoption by the Regional Board

Level 3 – SNMP Implementation Level

Description - Level 3 represents long-term implementation of the SNMP. At Level 2, the SNMP establishes a Master Plan for S/N management in the Central Valley which serves as the default management approach, unless a more site-specific or regional approach has been adopted in a Regional S/N Plan. The Master SNMP may be periodically updated to incorporate Regional S/N Plans developed under Level 3. These regional plans establish refined or area-specific S/N management activities within defined Study Areas. To support development of these regional plans, the SNMP will include one or more Regional S/N Plans (developed under Level 2) that serve as archetypes for development of future Regional Plans.

Regional S/N Plan development will be guided by the *Framework for Salt/Nitrate Source Identification Studies*. The information developed under this framework is expected to provide the basic information needed for any Regional Plan. An important consideration in the development of regional plans is the size or configuration of the area to be covered by each plan. As noted in the above-referenced document, regional Study Areas should be small enough to be effectively managed and modeled.

Development of a Regional S/N Plan would require, at a minimum, consistency with the SNMP Master Plan and completion of the following elements:

1. Delineation of the local planning area (or Study Area);
2. Data gathering and analysis to support plan development;
3. Development of implementation measures specific to the planning area; and
4. Participation in the regulatory process to incorporate a Regional S/N Plan into the SNMP.

Development of a Regional S/N Plan could also include completion of studies to support recommendations for waterbody specific changes in BUs or WQOs that would facilitate implementation of the regional plan.

Expected Outcomes: Long-term implementation of the SNMP that may result in (1) adoption of additional regional plans to address region-specific S/N management issues; it is anticipated that approximately 20-25 plans would ultimately be adopted; and (2) additional revisions to BUs or WQOs to facilitate SNMP implementation.

Key Tasks: Level 3 tasks are variable and dependent on the regulatory and planning issues applicable to a specific self delineated Study Area. Tasks could include the development of modified BUs, establishment of site-specific WQOs, refinement of S/N management objectives in the Study Area, or some combination of these activities appropriate to the area.

| Framework Level | Primary Purpose | Expected Outcome | Spatial Dimension | Temporal Dimension | Key Tasks |
|--|--|---|---|---|---|
| Level 1 – Regulatory Planning Level | Establish the regulatory policies and Basin Plan structure to facilitate SNMP implementation | <ul style="list-style-type: none"> Revised BUs and WQOs, as needed Establishment of implementation procedures for evaluating compliance with S/N WQOs, considering differences across MAs Identification of MAs | Entire Central Valley with identified MAs - MAs recognize basic differences in watershed characteristics across Central Valley | BPA for adoption of changes to the Basin Plan to facilitate SNMP implementation by May 2015 | <ul style="list-style-type: none"> Develop revised Basin Plan regulatory structure (BUs, WQOs, implementation requirements) to facilitate SNMP implementation Identify MAs Develop BPA supporting documentation |
| Level 2 – SNMP Master Plan Level | Establish the overall basin-wide approach to salt/nitrate management and the mechanisms for establishment of regional approaches to S/N management | <ul style="list-style-type: none"> Adoption of SNMP that complies with State Water Recycled Policy Completion of archetypes of two types: BU/WQO modification; example Regional S/N Plan(s) Established templates for development of future Regional S/N Plans or studies to make additional revisions to BU/WQO | Master SNMP applicable to entire Central Valley with select Regional S/N Plans applicable to smaller areas incorporated | Board adoption of SNMP by May 2014 | <ul style="list-style-type: none"> Develop Master Plan Level SNMP with required elements Complete BU/WQO archetypes Complete Regional S/N Plan archetypes Establish templates for future efforts to modify uses or objectives or develop additional Regional S/N Plans Develop regulatory documentation to support Regional Board adoption of SNMP |
| Level 3 – SNMP Implementation Level | Establish Regional S/N plans within Central Valley consistent with basin-wide approach | <ul style="list-style-type: none"> Regional S/N Plans | Regional S/N Plans for Study Areas delineated on a per project basis; size will vary, but maximum of 20-25 plans anticipated for the Central Valley | Long-term SNMP implementation (post SNMP adoption in 2014) | <ul style="list-style-type: none"> Variable – dependent on regional needs and purpose of studies, e.g., to establish a Regional S/N Plan, to develop recommended revisions to BUs or WQOs, or some combination of activities. |

