

Memo



To: CV-SALTS Executive Committee
From: Richard Meyerhoff, GEI Consultants
Date: June 17, 2020
Re: Response to Central Valley Water Board Comments Regarding Developing Salinity Targets in Prioritization and Optimization (P&O Study) Workplan

The purpose of this memorandum is to provide a response to the Central Valley Water Board's original March 27 comment regarding salinity targets and protection of the most sensitive beneficial use and additional questions that arose during discussion with the Board regarding the comment and intended outcomes of Task 3.2 of the Final Draft P&O Study Workplan (Establishment of Appropriate Numeric Salt Management Targets). Following is a restatement of the original comment, associated questions and the proposed responses based on discussions with Board staff.

Original Comment - Salinity Targets and Most Sensitive Beneficial Use. Task 3 and 4 involve development and consideration of salinity targets. The discussion in these sections are generally centered around AGR and MUN consideration. This is most likely going to capture the most sensitive beneficial use in most Salt Management Regions (SMR). However, there should be an initial consideration of the most sensitive beneficial use within the differing SMRs. In the Delta, for example, AGR would most likely not be the most sensitive, it could be habitat. The document should be broadened to clearly indicate that most sensitive beneficial use should be considered.

Additional Questions – During discussions regarding the original comment above, questions arose regarding what the final outcome of Task 3.2 would be, i.e., would it result in recommended salinity targets only for selected archetype areas or would it result in salinity targets for all of the Central Valley. The latter is needed to effectively develop salt management plans for the Central Valley.

Responses

- Consideration of the Most Sensitive Beneficial Use within Planning Areas (Original Comment) – CV-SALTS conducted a review of salt requirements to protect various uses (e.g., stock watering and aquatic life) early in the development of the Salt and Nitrate Management Plan. Similarly, an evaluation of the most sensitive use was completed as part of the Lower San Joaquin River Basin Plan amendment. Much of this work was completed in the 2012-2014 time frame. *It is recommended that the P&O Study include a small task to review this previous work and update the findings as needed. It is recommended that this task be included in Task 3.2 as an initial subtask.*
- Clarification of Task 3.2 Outcomes - Attached is an abridged version of Task 3.2 to provide a quick overview of the workflow of the subtasks and associated deliverables. The expected outcomes include:
 1. Recommended AGR targets in selected areas (archetypes) (identified in Task 3.2.1) based on a detailed analysis (Tasks 3.2.2-3.2.6);
 2. Recommended default AGR targets for the entire Central Valley based on an extrapolation of the methodology applied in the archetype areas (Task 3.2.7); and
 3. Process to refine those targets on a local/regional basis, if desired by local stakeholders (Task 3.2.8).

Outcomes 1 and 3 are clear in the Workplan and do not need revision. While Outcome 2 is stated in the Workplan, the text could be more clear regarding the expected outcome of the subtask. *It is recommended that the Task 3.2 text be revised where needed to provide this clarity.*

Task 3.2 – Establishment of Appropriate Numeric Salt Management Targets (Abridged Version – See Final Draft P&O Study Workplan for Details)

3.2.1 – Identify Archetype Study Areas - Identify candidate archetype study areas for detailed analysis (e.g., areas which are: arid, primarily irrigated with groundwater, have different sensitive crop types, cover areas outside the valley floor, are representative of large areas within the Central Valley).

Deliverable: Draft and final technical memoranda identifying proposed candidate archetype study areas.

3.2.2 – Identify Salt Sensitive Crops in Selected Study Areas - Using best available cropping information, rank crop acreage and determine common salt sensitive crops in selected study areas.

3.2.3 – Identify Irrigation Supply Sources and Sources Serving Other Beneficial Uses - Identify irrigation supply sources (surface waters and groundwater) to common salt sensitive crops grown within the study areas and identify sources of water serving other beneficial uses within the study areas.

3.2.4 – Determine Relationship Between Salinity and Crop Yields - Determine relationships between irrigation supply salinity and crop yields for the salt sensitive crops.

3.2.5 – Evaluate Salt Management Scenarios - Determine a wide range of management scenarios that could be employed to impact the existing water quality baseline and use the selected modeling tools to identify a range of attainable future water quality conditions.

3.2.6 – Develop Range of Potential Target EC Values - Develop a range of potential target EC values for (a) normal water years; and (b) drought/extended dry period conditions. Informed by the range of attainable water quality conditions developed in Task 3.2.5, select different target salinity values with appropriate averaging periods for (a) normal and (b) drought/extended dry years for the study areas.

Deliverables (Tasks 3.2.2 through 3.2.6): Draft and final technical memoranda for each archetype study area describing the methods, results and conclusions of the analysis performed to determine recommended target salinity values.

3.2.7 – Develop Process to Establish Target Salinity Values - Develop a process using methodologies derived in the archetype studies to establish target salinity values for appropriate regional areas within the remainder of the Central Valley Region to protect AGR and other beneficial use of water. Use the resulting process to establish regional salinity targets throughout the Central Valley Region for normal and drought/extended dry period conditions.

Deliverable: Draft and final technical memoranda describing process, results and conclusions of analysis to set regional salinity targets protective of AGR use in the remainder of the Central Valley Region.

3.2.8 – Develop Process to Refine Salinity Targets in Other Areas of the Central Valley - Develop and document a process that allows for site-specific refinement of regional salinity targets developed in Task 3.2.7, based on consideration of more refined regional data analysis, region-specific modeling outputs, and enhanced stakeholder engagement.

Deliverable: Draft and final technical memoranda describing process for site-specific refinement of regional salinity targets.