

## Draft Scope of Work to Provide Management Zone Development Support to CV-SALTS

### Background

The Central Valley Regional Water Quality Control Board (Central Valley Water Board) has adopted amendments to the Basin Plans to establish a Salt & Nitrate Control Program in the Central Valley. The Nitrate Control Program establishes two pathways for compliance. Pathway B authorizes the establishment of Management Zones. In general, a Management Zone consists of multiple permittees and other local stakeholders working collectively to first ensure safe drinking water, then to manage nitrate to create a balance within the defined management area (where reasonable and feasible), and ultimately to develop and implement a long-term plan for restoration of groundwater (where reasonable, feasible and practicable) to meet applicable water quality objectives. To establish a Management Zone, participating permittees are required to submit a series of deliverables to the Central Valley Water Board. These deliverables and their purpose include:

- *Preliminary Management Zone Proposal* – Notifies the Central Valley Water Board of the intent to establish a Management Zone within proposed geographic boundaries. The Basin Plan identifies the requirements for submittal of a proposal which must include an Early Action Plan (EAP) to address drinking water concerns where nitrate levels exceed the water quality objective.
- *Final Management Zone Proposal* – Revision of the Preliminary Management Zone Proposal based on Central Valley Water Board comments and incorporation of additional information as required by the Basin Plan.
- *Management Zone Implementation Plan* – Within six months after the Final Management Zone Proposal is accepted by the Central Valley Water Board, the Management Zone submits a Management Zone Implementation Plan consistent with Basin Plan requirements.

The primary focus of this scope of work is to assist the East San Joaquin Water Quality Coalition and Kings River Water Quality Coalition with the preparation Preliminary Management Zone Proposals for the following areas:

- East San Joaquin Water Quality Coalition: Turlock groundwater sub-basin
- Kings River Water Quality Coalition: Alta Irrigation District service area within the Kings groundwater sub-basin

This scope of work also provides two optional tasks: (1) initial work on governance-related tasks to provide limited support for preparation of the Final Management Zone Proposal; and (2) an additional meeting with stakeholders. This scope of work does not address preparation of a Management Zone Implementation Plan for either Management Zone. However, the work products are intended to provide foundational support to that future deliverable.

### Scope of Work

#### Task 1 – Identify Proposed Preliminary Boundaries of the Management Zone Area and Evaluation of Adjacent Areas

*Description:* Luhdorff and Scalmanini Consulting Engineers (LSCE) will develop the technical rationale for delineating the vertical and horizontal spatial boundaries of the proposed Management Zone. The technical rationale will be based on preliminary hydrogeologic, groundwater conditions, and administrative boundary considerations, including:

- Groundwater quality considerations, particularly nitrate concentrations

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- Land use considerations
- Hydrologic/surface water considerations
- Groundwater pumping/well depth considerations
- Hydrogeologic conceptual model considerations (i.e., depth(s) of major water-bearing units/aquifers)
- Locations of point-source and non-point source dischargers of nitrate (based on readily available information and input from the potential MZ stakeholders)
- Administrative boundaries and other programmatic considerations

This task will also identify areas within or adjacent to the proposed Management Zone that overlap with other water resources and land use and management activities

*Deliverables:* Description of proposed Management Zone boundary with supporting figure(s).

### **Task 2 – Identification of Initial Management Zone Participants**

*Description:* GEI Consultants team (GEI) will work with the project proponent and others as needed, e.g., Central Valley Water Board, to identify initial and potential participants in the Management Zone. This effort includes identification of the following: (a) permitted dischargers within the proposed boundaries of the Management Zone as defined under Task 1; (b) participants in the relevant GSA; (c) other relevant local, regional, state and federal planning agencies and public/private organizations within the area. Documentation will distinguish between entities that have agreed to participate in the Management Zone and those that have been contacted but no decision has been made regarding participation.

*Deliverables:* Summary of declared participants in the proposed Management Zone and identification of potential participants.

### **Task 3 – Initial Assessment of Groundwater Conditions and Evaluation of Other Constituents of Concern**

*Description:* LSCE will utilize existing, readily available groundwater monitoring data and CV-SALTS and local Management Zone area- related reports to make an assessment of current groundwater quality conditions in the proposed Management Zone. This will include a characterization of nitrate conditions and trends within the groundwater system underlying and adjacent to the proposed Management Zone. Existing subsurface data will be utilized, including the CV-SALTS water quality database. Additional updating of the CV-SALTS nitrate data will be performed for the proposed Management Zone only, which will include retrieval of data from publicly available databases, including but possibly not limited to, State Water Resources Control Board Division of Drinking Water; U.S. Geological Survey; Department of Water Resources; and State Water Resources Control Board's GeoTracker.

In order to identify other constituents of concern that the individual discharger/group of dischargers/Management Zone stakeholders may want to address besides nitrate, groundwater quality data for selected constituents will be assembled and assessed during this task. Constituents to consider may include naturally occurring metals, and other selected constituents. Although these other constituents are not required for the Preliminary Management Zone Proposal, it will be up to the proposed Management Zone stakeholders to determine whether it is relevant to include them.

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*Deliverables:* Initial assessment for the proposed Management Zone and evaluation of potential other constituents of concern for inclusion in the Preliminary Management Zone Proposal.

### **Task 4 – Summary of Current Treatment and Control Efforts or Management Practices**

*Description:* GEI and LSCE will review existing nitrate management programs that are currently being implemented within the proposed Management Zones. These management programs may be part of a General Order, WDR, Conditional Waiver or other regulatorily required nitrate management program. The review will identify the specific nitrate-related treatment and control efforts or management practices and summarize to the extent possible the expected water quality benefits from these existing nitrate management activities across the proposed Management Zone area. No analysis will be done with regards to what is needed with regards to nitrate management versus what is currently being done. This type of gap analysis would be part of the Management Zone Implementation Plan.

*Deliverables:* Summary of current treatment and control efforts or management practices for inclusion in the Preliminary Management Zone proposal.

### **Task 5 – Public Water Supply and Domestic Well Identification**

*Description:* LSCE will use the groundwater quality data compiled above to identify active and previously active public water supply wells with nitrate concentrations exceeding the water quality objective. A threshold below the nitrate MCL (consistent with the 2018 Basin Plan Amendment will be used to identify public supply wells that have a current or anticipated need for mitigation. An estimate of the number of affected domestic wells that may have nitrate concentrations that exceed the determined threshold will be provided for the proposed Management Zone. Domestic well owner information is not publicly available, so outreach will be needed to develop a better understanding of affected wells. These efforts will be addressed through Task 6 and development of the Management Zone Implementation Plan.

*Deliverables:* Identification of impacted public water supply wells and area with likely impacted domestic wells.

### **Task 6 – Early Action Plan Development and Outreach**

*Description:* An EAP will be developed for each proposed Management Zone consistent with the following Basin Plan requirements for development of an EAP:

- i. A process to identify affected residents and the outreach utilized to ensure that impacted groundwater users are informed of and given the opportunity to participate in the development of proposed solutions;
- ii. a process for coordinating with others that are not dischargers to address drinking water issues, which must include consideration of coordinating with affected communities, domestic well users and their representatives, the State Water Board's Division of Drinking Water, Local Planning Departments, Local County Health Officials, Sustainable Groundwater Management Agencies and others as appropriate; and
- iii. specific actions and schedule to address the immediate drinking water needs of affected residents within the Management Zone that do not have interim replacement water; and
- iv. the funding mechanism to implement the EAP.

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To address requirements (i) and (ii) and considering the findings from Task 5, GEI will work with the project proponents to develop and implement a process to identify and inform affected residents of the EAP and coordinate with other potentially interested parties within the proposed Management Zone boundaries. The goal of this effort is to make sure that the affected residents are given the opportunity to participate in the development of the EAP.

To develop EAP requirement (iii), i.e., specific actions and schedule to address immediate drinking water needs, GEI will use the findings from Task 5 and other available information to develop a comprehensive understanding of the extent of the nitrate impacts to drinking water within the proposed Management Zones. To the extent possible, this effort will include a preliminary assessment of potential sources of nitrate within the planning area (including, e.g., land use, past and present, permitted discharges, location/density of septic systems, etc.). The findings from this evaluation will be used to characterize the nitrate problem as it relates to drinking water, provide information to inform Management Zone stakeholders regarding the nature and extent of the problem, identify preliminary recommendations for temporary and permanent solutions, and identify potential partners to implement the EAP.

Recommendations for solutions to impacted drinking water may include bottled water or point-of-use (POU) treatment systems as a temporary solution while permanent mitigation is developed and implemented. Permanent solutions may include water system consolidation, replacing wells that have inadequate sanitary seals with better constructed wells, or wellhead treatment systems. Depending on the extent of the impacts and funding availability, the EAP may propose a phased approach such as POU treatment for short-term mitigation until the long-term solution(s) can be implemented. Alternatives and solutions will be evaluated based on cost of implementation and potential funding sources; short and long-term viability; and acceptance with the applicable regulatory agencies and community representatives. GEI will work with the project proponents to develop a funding mechanism(s) for implementation of the EAP (EAP element (iv) above).

GEI will prepare draft EAPs that documents the outreach/coordination process, outreach materials and the efforts completed during EAP development process to provide opportunity for participation in the development of proposed solutions. The draft EAP will include a schedule and milestones for completion of specific actions to mitigate impacted drinking water within the proposed Management Zone. The EAP will include the planned funding mechanism(s) to implement the actions specified in the EAP. The draft EAP will be provided to the Management Zone stakeholders for review and comment. In coordination with the review of the draft EAP by the Management stakeholders, the project proponent will provide an opportunity for review of the draft EAP by affected residents and other potentially interested parties as summarized in EAP element (ii) above.

*Deliverables:* Draft and Final EAP for inclusion in the Preliminary Management Zone Proposal

### **Task 7 – Management Zone Stakeholder Meetings**

*Description:* During the development of the Preliminary Management Zone Proposal, two meetings will be held with dischargers located within the Management Zone boundaries and other potential Management Zone participants. The purpose of these meetings is to (a) increase interest in being included in the proposal as a declared participant in the Management Zone; and (b) share information being developed to support the proposal (e.g., initial groundwater assessment findings and EAP); and (c) provide a forum for exchange of information. The two planned meetings include (a) initial kickoff

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meeting in December 2018; and (b) interim meeting to discuss key draft deliverables. An optional third meeting may be scheduled near the end of the project to discuss the draft Preliminary Management Zone Proposal (see optional Task 12)

Risk Sciences will facilitate these meetings on behalf of the Management Zone proponents. LSC&E and GEI staff will participate to discuss project deliverables. The kickoff meetings are planned for December 12 in Modesto and December 13 in the Alta Irrigation District area. These kickoff meetings will be coordinated with other CV-SALTS outreach activities in these areas on the same day. The interim meeting will be scheduled in collaboration with the project proponents. The Management Zone proponent will handle all meeting logistics, including identifying a meeting location and sending out notification of the meeting. The project consultants will be responsible for facilitating the meeting and leading the discussion of project deliverables.

*Deliverables:* Kickoff and interim project meetings with declared and potential Management Zone participants within each proposed Management Zone area; presentation materials.

### **Task 8 – Project Reporting and Presentations**

*Description:* LSCE and the GEI will deliver Interim and Final Presentations on the Preliminary Management Zone Proposal to the CV-SALTS Executive Committee; provide status checks; provide regular communication on project status to the Management Zone proponents. In addition, if requested, the project team will prepare project-related materials for presentation to the State Water Board to support the adoption of the Basin Plan amendment.

*Deliverables:* Presentation materials; participation in up to two Executive Committee meetings to present project-related information.

### **Task 9 – Preliminary Management Zone Proposal Preparation**

*Description:* GEI and LSCE will work collaboratively to prepare draft and final Preliminary Management Proposals for each proposed Management Zone area. GEI will be responsible for the overall document, which will include the description of the Management Zone area (with proposed boundaries), information on Management Zone participants, initial assessment of groundwater conditions, water supply well identifications, summary of existing treatment and control efforts or management practices, outreach efforts completed, EAP, and the timeline for preparation of future Management Zone deliverables as defined by the Basin Plan amendment, including:

- Identifying additional participants;
- Further defining boundary areas;
- Developing proposed governance and funding structure for administration of the Management Zone;
- Additional evaluation of groundwater conditions across the management zone boundary area, if necessary; and,
- Preparing and submitting a Final Management Zone Proposal and a Management Zone Implementation Plan.

GEI and LSCE will address comments received on the draft Preliminary Management Proposal prior to submitting a final proposal.

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*Deliverables:* Draft/Final Preliminary Management Zone Proposals for each Management Zone project.

### **Task 10 – Preparation of Management Zone Templates**

*Description:* GEI will lead the development of a template for future Management Zone proposals. This template will be developed based on the respective contributions by GEI and LSCE to the preparation of the Preliminary Management Zone Proposals for both project areas. The template will include, as needed, procedures and lessons learned during the development of the proposals completed under Task 9.

*Deliverables:* Template(s) for the preparation of Preliminary Management Zone Proposals

### **Optional Tasks**

#### **Task 11 – Preliminary Governance Structure Development**

*Description:* The Preliminary Management Zone Proposal requires that a timeline be provided for the development of a governance and funding structure for the administration of the Management Zone. This governance/funding structure is to be submitted as part of the Final Management Zone Proposal. If implemented, this task will support completion of preliminary work to address this element of the Final Management Zone Proposal.

Activities that would be included in this task include: (a) develop a preliminary organizational framework for the administration of the Management Zone, including recommendations where appropriate for where entities may have specific roles and responsibilities; (b) recommend agreements for development to facilitate implementation of Management Zone activities and potential cost share approaches; and (c) provide a draft approach for resolving disputes among participating discharges.

*Deliverables:* Preliminary governance structure documentation.

#### **Task 12 – Additional Management Zone Stakeholder Meeting**

*Description:* Task 7 includes a kickoff and interim meeting with stakeholders within each proposed Management Zone. This task provides additional scope and funds for a third meeting. This proposed meeting would be to discuss the draft Preliminary Management Zone Proposal. Risk Sciences will facilitate these meetings on behalf of the Management Zone proponents. LSC&E and GEI staff will participate to discuss the draft proposal. The Management Zone proponent will handle all meeting logistics, including identifying a meeting location and sending out notification of the meeting.

*Deliverables:* Attend project meeting in each proposed Management Zone; presentation material.

**Table 1** provides a summary of the relationship between the Basin Plan amendment requirements for development of Preliminary Management Zone Proposal and the primary tasks in this proposal.

### **Project Schedule**

**Table 2** summarizes the proposed schedule for development of the final Preliminary Management Zone Proposals for the Turlock groundwater sub-basin and Alta Irrigation District areas. A schedule for the optional tasks will be developed as requested. Schedule assumes a Notice to Proceed by December 10, 2018.

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**Table 1. Relationship Between Project Tasks and Basin Plan Requirements**

| Basin Plan Requirement  | Task  | Consultant Lead (s) |
|---|---|---------------------|
| i. Proposed preliminary boundaries of the Management Zone area  | Task 1 – Identify Proposed Preliminary Boundaries of the Management Zone Area and Evaluate Adjacent Areas | LSCE                |
| ii. Identification of Initial Participants/Dischargers;   | Task 2 – Identification of Initial Management Zone Participants and Coordination with Similar Efforts     | GEI                 |
| iii. Identification of other dischargers and stakeholders in the management zone area that the initiating group is in contact with regarding participation in the management zone   | Task 2 – Identification of Initial Management Zone Participants and Coordination with Similar Efforts     | GEI                 |
| iv. Initial assessment of groundwater conditions based on readily available existing data and information.  | Task 3 - Initial Assessment of Groundwater Conditions and Evaluation of Other Constituents of Concern     | LSCE                |
| v. Identification/summary of current treatment and control efforts, or management practices   | Task 4 – Summary of Current Treatment and Control Efforts or Management Practices                         | GEI & LSCE          |
| vi. Initial identification of public water supplies or domestic wells within the Management Zone area with nitrate concentrations exceeding the water quality objective;  | Task 5 – Public Water Supply and Domestic Well Identification   | LSCE                |
| vii. An Early Action Plan (see below) to address drinking water needs for those that rely on public water supply or domestic wells with nitrate levels exceeding the water quality objective  | Task 6 – Early Action Plan Development  | GEI                 |
| viii. Documentation of process utilized to identify affected residents and the outreach utilized to ensure that they are given the opportunity to participate in development of an Early Action Plan;   | Task 6 – Early Action Plan Development  | GEI                 |
| ix. Identification of areas within or adjacent to the Management Zone that overlap with other management areas/activities   | Task 1 – Identify Proposed Preliminary Boundaries of the Management Zone Area and Evaluate Adjacent Areas | LSCE                |
| x. Any constituents of concern that the individual discharger/group of dischargers intend to address besides nitrate (not required but is an option available)  | Task 3 - Initial Assessment of Groundwater Conditions and Evaluation of Other Constituents of Concern     | LSCE                |
| xi. Proposed timeline for (a) Identifying additional participants; (b) further defining boundary areas; (c) developing proposed governance and funding structure for administration of the Management Zone; (d) additional evaluation of groundwater conditions across the management zone boundary area, if necessary; and, (e) Preparing and submitting a Final Management Zone Proposal and a Management Zone Implementation Plan. | Task 10 –Preliminary Management Zone Proposal   | GEI & LSE           |

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**Table 2. Proposed Schedule**

| Task/Activity   | Complete by   |
|---|---|
| Task 1 – Identify Proposed Preliminary Boundaries of the Management Zone Area and Evaluate Adjacent Areas | January 11, 2019  |
| Task 2 – Identification of Initial Management Zone Participants and Coordination with Similar Efforts     | January 11, 2019  |
| Task 3 - Initial Assessment of Groundwater Conditions and Evaluation of Other Constituents of Concern     | February 1, 2019  |
| Task 4 – Summary of Current Treatment and Control Efforts or Management Practices                         | February 1, 2019  |
| Task 5 – Public Water Supply and Domestic Well Identification   | February 1, 2019  |
| Task 6 – Early Action Plan Development  | <ul style="list-style-type: none"> <li>• Outreach to Affected Residents – March 1</li> <li>• Draft Plan – March 22, 2019</li> <li>• Final Plan – May 10, 2019</li> </ul>  |
| Task 7 – Management Zone Stakeholder Meetings   | <ul style="list-style-type: none"> <li>• Kickoff Meetings – December 12-13, 2018</li> <li>• Interim Meeting – April 5, 2019</li> </ul>  |
| Task 8 – Project Reporting & Presentations  | <ul style="list-style-type: none"> <li>• State Water Board: If requested</li> <li>• Executive Committee (Interim Report): April 18, 2019</li> <li>• Executive Committee (Draft Preliminary Management Zone Proposal): May 23, 2019</li> </ul> |
| Task 9 – Preliminary Management Zone Proposal Preparation   | <ul style="list-style-type: none"> <li>• Draft Proposal: May 17, 2019</li> <li>• Final Proposal: June 28, 2019</li> </ul>   |
| Task 10 – Preparation of Templates  | June 28, 2019   |



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