A final Technical Memorandum will be prepared based on Executive Committee comments on the draft memorandum.

Deliverables (Task 3.8.3): The Contractor will complete the following deliverables:

- Draft and final Sampling and Analysis Plans.
- Draft and final technical memoranda that documents the findings from the groundwater trace constituent study
- Draft and final technical memoranda that documents the findings from the evaluation of treatment technologies for trace constituents of concern.

4.4 Task 4 – Develop Long-term Salt Management Strategies

Task 4 implements a stepwise technical evaluation process that considers local, sub-regional and potentially regional approaches to reduce salt loading and achieve salt sustainability in each SMR, based on recommended salt management targets developed and sustainability analyses completed in Task 3. Through this process potential non-physical and physical projects will be identified and the expected salt load reduction benefits from each project will be quantified. For each SMR, combinations of non-physical and physical projects will be developed as alternatives. These alternatives may include projects for collaborative implementation between SMRs. Following analysis of the alternatives, a preferred salt management alternative will be selected for each SMR. The final deliverables from Task 4 are SMR Implementation Plans for implementation in Phases II and III of the Salt Control Program. Task 4 will be supported by policy discussions and regulatory tasks that will support the development of alternatives and implementation of SMR Implementation Plans.[20]

Task 4.1 – Regulatory/Policy Development

To facilitate development of long-term salt management alternatives for SMRs, the following regulatory/policy-related tasks will be completed under this Workplan:

Task 4.1.1 - Policy Discussions

The CV-SALTS Executive Committee will facilitate discussions on policy issues expected to arise as during implementation of this Workplan and development of long-term salt management alternatives in SMRs. These discussions will be conducted in a timely manner to support implementation of relevant Workplan tasks. Annually, the Executive Committee will evaluate the need for discussions in policy-related areas. As needed, the Contractor will

[20] As noted earlier in this Workplan, it is recommended that the services of a single contractor (or contractor team) be procured for the development of SMR Implementation Plans for each SMR to minimize duplication of effort and to ensure consistency of work. SMR contractors will attend Executive Committee meetings and coordinate with their SMR contractor counterparts and the TPM to ensure that substantially similar technical approaches are employed during the development of alternatives and selection of a preferred alternative.

assist the Executive Committee with development of materials to support planned discussions (e.g., preparation of white papers on various topics or the compilation of data needed to facilitate decision-making). In no particular order of importance, examples of the types of policy issues where discussion may be needed or information gathered to guide the work of Contractors on other tasks include, but may not be limited to:

- Establishing appropriate overall goals for the SMRs, e.g., is it optimizing extraction well locations for salinity, removing as much mass as possible, strategically improving groundwater aquifers to protect or restore beneficial uses such as MUN and AGR (especially for salinity-sensitive crops), achieving a combination of these or other goals?
- Discussions, where needed, regarding how the salt management strategies under development in the P&O Study provide protection of IND and PRO beneficial uses given that the Basin Plans state that in addition to MUN and AGR, all groundwater in the Central Valley Region is considered suitable or potentially suitable for IND and PRO.
- Currently, first encountered groundwater is the compliance point for a discharge of salt to groundwater. For the long-term salinity management program, determine the appropriate compliance point for discharges to groundwater, e.g., Upper Zone, Production Zone, defined Shallow Zone, or retain use of first encountered groundwater. In addition, determine the appropriate method to assess compliance with salinity-related water quality objectives in groundwater.
- What is an appropriate salt management approach for groundwater basins and watersheds outside the Central Valley Floor? Should a separate salt management program be developed for these areas for Phase II, especially where groundwater quality is currently very good or degradation due to salt is not a concern?
- For areas where TDS is less than 500 milligrams/L (mg/L) and degradation is de minimis or not occurring, should a separate salt program be developed for these areas for implementation under Phase II? Or would it be appropriate to consider only periodically monitoring these areas and not including them in the development of salt management plans for implementation in Phase II?
- Should the Central Valley Region stakeholders have a fair and equitable prioritization scheme for what water is to be treated or otherwise managed: POTW effluent, industrial and food processing wastewater, produced water from oil and gas activities, agricultural drainage water, brackish or contaminated groundwater?
- Policies related to the use of product water:
  - Treated (product) water will be low in TDS (60 to 100 mg/L). It may be appropriate to develop a policy to determine how the product water will be used, i.e., how can we best match quality with use? For example, should the treated water be blended with a sidestream of untreated water to meet a target TDS protective of beneficial uses? For this scenario, not treating the entire stream of water will increase the volume of useful water and reduce costs.

- Should a policy be adopted to retain product water in the Central Valley?
- Who will be served with the product water from the treatment facility, or how will excellent quality treated water be equitably distributed among users? One option is to blend the treated product water for agricultural irrigation. A second option is to recharge the treated water via indirect potable recharge; however, this option reduces the number of times that water would be used. A third option would be to use advanced water treatment and, at some point in the near future, serve the final treated water for direct potable consumption.

- Discussions regarding how the recycling and reuse of water can be encouraged or maximized in the Central Valley Region. For example, how can we best match the quality of the water with its use?
- How should areas where salinity is higher than the secondary maximum contaminant levels but lower the sources of drinking water policy be addressed? What is the best plan for these areas? Can this water be used, knowing that in most cases, use constitutes an increase in salinity? What regulatory actions are needed to allow use in these areas?
- Discussion of post-Phase I permitting policies or strategies to support permitting under Phase II (also see Task 4.1.2) and discussions of potential need for additional Basin Plan amendments (see Task 2.5).
- Discussion of opportunities to develop partnerships and cost sharing programs, e.g., with other SMRs, to support implementation of non-physical projects (identified in Task 4.2) in Phase II that benefit overall salt reductions in the Central Valley.

Deliverables: Draft and final white papers or technical memoranda for use by the Executive Committee to support policy discussions.

Task 4.1.2 – Permitting Approaches to Support Long-term Salt Management

The Nitrate Control Program adopted into the Central Valley Basin Plans includes the use of Management Zones to facilitate the collective management of nitrate by stakeholders within discrete areas (approved by the Central Valley Board May 31, 2018 and State Water Board _____, 2019, Resolutions R5-2018-0034 and 2019-_____, respectively). The Basin Plans define a Management Zone as follows, "*A discrete and generally hydrologically contiguous area for which permitted discharger(s) participating in the management zone collectively work to meet the goals of the SNMP and for which regulatory compliance is evaluated based on the permittees collective impact, including any alternative compliance programs, on a defined portion of the aquifer. Where Management Zones cross groundwater basin or sub-basin boundaries, regulatory compliance is assessed separately for each basin or sub-basin. Management Zones must be approved by the Central Valley Water Board*." One of the key benefits of a Management Zone approach to manage pollutants is to provide the opportunity for dischargers to pool resources to solve problems. Also, because a Management Zone is defined as a hydrologically contiguous area, the opportunity to consider