

**Reimbursement Agreement
Paso Robles Groundwater Basin
Salt and Nutrient Management Plan**

This agreement (“Agreement”), made this ____ day of _____ 2012, is by and among the City of Atascadero, Templeton Community Services District, City of Paso Robles, San Miguel Community Services District, Camp Roberts (California National Guard), Heritage Ranch Community Services District, the San Luis Obispo County Flood Control and Water Conservation District (“SLO District” or “SLOCFC&WCD”) and the County of San Luis Obispo (County), (individually referred to herein as a “Party,” and collectively as “Parties”).

WHEREAS, in May 2009, State Water Resources Control Board adopted a Recycled Water Policy that requires all local water and wastewater entities to prepare salt and nutrient management plans for their respective groundwater basins by May 2014. The Recycled Water Policy states:

“...local water and wastewater entities, together with local salt/nutrient contributing stakeholders, will fund locally driven and controlled, collaborative processes open to all stakeholders, that will prepare salt and nutrient management plans for each basin/sub-basin in California...”; and

WHEREAS, the Parties provide or contribute to water and/or wastewater service in the Paso Robles Groundwater Basin (the “Basin”). It is in the interest of all Parties to protect the quality of the Paso Robles Groundwater Basin; and

WHEREAS, the 2002 Paso Robles Groundwater Basin Study identified six areas of the Basin where salt or nitrate concentrations are trending upward; and

WHEREAS, most of the Parties have previously collaborated on efforts to better manage groundwater and deliver water from the Nacimiento Water Project; and

WHEREAS, the Paso Robles Groundwater Basin and its tributaries is an appropriate area for the planning of salt and nutrient management through a Paso Robles Groundwater Basin Salt and Nutrient Management Plan (hereinafter “Plan”); and

WHEREAS, the staff of the Parties have agreed that the City of Paso Robles is the appropriate agency to manage the project and procure the services of a Professional Engineering Consultant (“Consultant”) to assist with development of the Plan, with input and assistance from all Parties; and

WHEREAS, the cost of such consulting services necessary to develop a Plan that meets Recycled Water Policy requirements is estimated to be \$173,491; and

WHEREAS, on March 9, 2012, the SLO District applied for a Proposition 84 Round 2 Integrated Regional Water Management Planning Grant (Planning Grant) that included a request for a \$100,000 allocation of the grant to offset the cost of the Plan.

NOW, THEREFORE, it is hereby mutually agreed by the Parties as follows:

1. All Parties hereby approve the Consultant, the Consultant's scope of work and the amount of the Consultant's contract as included in Attachment "A".
2. The City of Paso Robles will execute a contract with the selected Consultant for Plan development ("Contract"). The City of Paso Robles will require that the contract with Consultant provide that each Party, its officials, officers, directors, employees, agents and volunteers be named as an additional insured on Consultant's general liability insurance policy and as an indemnitee. The general liability insurance shall be primary with respect to the additional insureds.
3. The City of Paso Robles shall provide all Parties with the opportunity to review and comment on any drafts of the Plan developed by Consultant.
4. Consultant shall submit invoices to the City of Paso Robles for work completed and the City of Paso Robles will pay the Consultant according to the terms of the Contract. The City of Paso Robles will bill each of the Parties for their proportionate share of each Consultant invoice. The Parties agree to reimburse the City of Paso Robles for the Consultant's properly invoiced amounts according to the following proportionate shares:

Party	Proportionate Share without Planning Grant	Dollar Share without Planning Grant	Dollar Share with Planning Grant
County Service Area 7A (Oak Shores)	0.26%	\$451	\$191
SLOFC&WCD	13.53%	\$23,474	\$9,944
City of Atascadero	28.88%	\$50,106	\$21,225
Templeton CSD	4.88%	\$8,465	\$3,586
City of Paso Robles	48.06%	\$83,373	\$35,317
San Miguel CSD	2.21%	\$3,827	\$1,621
Heritage Ranch CSD	1.50%	\$2,595	\$1,099
Camp Roberts	0.69%	\$1,199	\$508
Planning Grant			\$100,000
Total	100%	\$ 173,491	\$173,491

5. Planning Grant funding is contingent upon (a) the State Department of Water Resources (DWR) awarding \$100,000 for funding the Plan pursuant to the SLO District's Planning Grant application; (b) DWR entering into a Grant Agreement with

the District; and (c) the SLO District entering into a Funding Agreement with the City of Paso Robles regarding said Planning Grant.

6. Each Party shall pay each invoice from the City of Paso Robles within 30 calendar days of receipt. Since the administration and disbursement of any Planning Grant funding shall be governed by a separate Funding Agreement between the SLO District and the City of Paso Robles, the disbursement of any such Planning Grant funds will be contingent upon the City of Paso Robles's compliance with the terms of said Funding Agreement.
7. The proposed Plan developed by the Consultant shall not be binding on any Party unless it has been approved by that Party's governing body.
8. Each Party understands that a full effort has been made to develop a thorough scope of work (incorporated herein as Attachment "A"). However, should it be necessary to expand or reduce the scope of work, because of Central Coast Water Board demands or other relevant technical reasons, then two thirds of the Parties must agree to the increase of scope of work, cost and proportionate shares of reimbursement of costs to the City of Paso Robles in writing before a change order is executed with the Consultant.
9. Each Party may individually contract with the Consultant for consulting work that is specific to its jurisdiction or outside the agreed upon scope of work. Any additional costs shall be the sole responsibility of the contracting Party.
10. This Agreement shall not be changed or modified except upon written consent of the Parties.
11. This Agreement is intended by the Parties as a final expression of their understanding with respect to the matters contained herein and is a complete and exclusive statement of the terms and conditions thereof.
12. Each Party represents that each such Party executing this Agreement on behalf of a legal entity warrants that he or she holds the position indicated beneath his or her signature and that he or she has been duly authorized by said legal entity to execute this Agreement on its behalf.
13. This Agreement may be executed in counterparts, each of which shall constitute an original, but all of which shall constitute one and the same agreement.
14. This Agreement shall become effective on the last date set forth below.

County of San Luis Obispo

By: _____ Date: _____

San Luis Obispo County Flood Control and Water Conservation
District

By: _____ Date: _____

Wade McKinney
City Manager
City of Atascadero

By: _____ Date: _____

Jeffrey W. Hodge
General Manager
Templeton Community Services District

By: _____ Date: _____

James L. App
City Manager
City of Paso Robles

By: _____ Date: _____

Rene Salas
General Manager
San Miguel Community Services District

By: _____ Date: _____

John D'Ornellas
General Manager
Heritage Ranch Community Services District

By: _____ Date: _____

Colonel Barbara A. Nuismer
Garrison Commander
Camp Roberts

By: _____ Date: _____

ATTEST:

Caryn Jackson
Deputy City Clerk, City of Paso Robles

By: _____ Date: _____
Deputy City Clerk

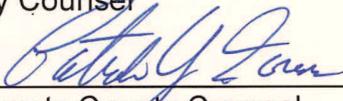
APPROVED AS TO FORM AND LEGAL EFFECT:

Iris Yang
City Attorney, City of Paso Robles

By: _____ Date: _____
City Attorney

APPROVED AS TO FORM AND LEGAL EFFECT:

WARREN R. JENSEN
County Counsel

By: 
Deputy County Counsel

Date: 9/11/12

Scope of Work – Salt & Nutrient Management Plan for Paso Robles Groundwater Basin

The following is RMC’s proposed Scope of Services for preparing a Salt and Nutrient Management Plan (SNMP) for the Paso Robles Groundwater Basin. This Scope of Work follows the scope provided by the City under Attachment 1 in the RFP. Any proposed modifications to the scope are identified within the individual task descriptions.

Task 1. Facilitate a Collective Process

The RFP identifies seven Primary Stakeholders for the SNMP collaborative process:

- County of San Luis Obispo
- City of Atascadero
- Templeton Community Services District (CSD)
- City of Paso Robles
- San Miguel CSD
- Camp Roberts
- Heritage Ranch CSD

We understand that this task also includes outreach to Secondary Stakeholders and participation in four meetings to acquire information, provide updates on the SNMP, and obtain input on deliverables. We anticipate that these Secondary Stakeholders will include the Central Coast RWQCB, the Upper Salinas-Las Tablas Resources Conservation District, and agricultural interests, such as the Paso Robles Wine Country Alliance, the Central Coast Vineyard Team, the San Luis Obispo County Farm Bureau and the Central Coast Agricultural Network.

Stakeholder involvement in the SNMP process is one of the key elements that Regional Board staff has been directed to use by the SWRCB to evaluate and promote basin management as they monitor progress and ultimately review/approve the SNMP. Not only is this important to ensuring a thorough collection of data, but also to promote transparency and inclusiveness. Our proven approach to a successful stakeholder outreach effort involves the following:

- **Coordinate with / leverage GWMP meetings** - The active GWMP process includes regular meetings, most notably the monthly meetings of the Blue Ribbon Steering Committee. The Steering Committee already involves five of the seven Primary Stakeholders (all except Camp Roberts and Heritage Ranch CSD), and coordinating the Steering Committee and SNMP meetings makes sense. We understand that the Steering Committee meetings already are two hours long—so adding a SNMP meeting results in a long afternoon—but schedule disruptions and travel time and expenses

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would be minimized. Moreover, the GWMP and SNMP are closely linked, so time spent updating each effort can be minimized. We also recommend incorporating SNMP outreach into WRAC and IRWMP meetings. Our SNMP experience shows that this approach works well. For example, our team is currently setting up SNMP meetings elsewhere (Santa Barbara, Coachella Valley, San Diego, Antelope Valley, Central and West Coast Basins, and Pajaro River Watershed) with successful incorporation of SNMP stakeholders in IRWM stakeholder meetings.

- **Use existing websites and our ftp site to share information** - We recommend using existing websites for announcements and information sharing. We recognize that the City of Paso Robles and County already have active websites that are recognized “go-to” sites for local groundwater management. We can provide materials and updates that are ready for easy upload. We will also set up a secure ftp site (such as a SharePoint site) to expedite the exchange of data and information. Our team currently manages and/or contributes to a number of stakeholder outreach websites as part of our SWMP and IRWM efforts statewide.

Proposed Stakeholder and Public Meeting Topics

Meeting Topics
Meeting 1: Introductions/stakeholder list, objectives, approach, scope, schedule, data needs
Meeting 2: Basin characteristics, salt/nutrient sources, draft Sections 2 and 3
Meeting 3: Salt/nutrient evaluation, implementation measures, draft Sections 4 and 5
Meeting 4: Existing monitoring summary, SNMP monitoring recommendations, draft Sections 6 & 7

- **Utilize online “webinar” approach when applicable** - We will use online meetings, when feasible, to make it easier and more cost-effective for stakeholders and other team members to participate in discussions.
- **Identify Secondary Stakeholders at the onset** - Given that we plan only four stakeholder meetings, we recommend identifying appropriate secondary stakeholder representatives immediately on approval of the project. We will build on the stakeholder outreach of the Paso Robles Basin GWMP, which has already established a Steering Committee with representatives from agriculture, vineyard/wine industry, cattlemen and rural residents among others. We will work with Primary Stakeholders to identify appropriate representatives of Secondary Stakeholders. Mindful of the links between the GWMP and SNMP, and the fact that SNMP outreach will be designed to be convenient and streamlined (not too much additional burden), the Steering Committee membership and other GWMP stakeholders are a good place for a fast start to identifying appropriate secondary stakeholders.

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- **Stakeholder Outreach and Meetings** - We will schedule up to four stakeholder meetings to assist with the preparation of the SNMP. We will work with the Primary Stakeholders and the RWQCB staff representative to establish the location, date and time/duration, and purpose of each meeting. We understand that meetings will be held in the North County, for example, at Paso Robles City Hall or Templeton CSD offices. We will also work with the Primary Stakeholders to establish (and maintain) a stakeholder contact list. We recommend inviting Secondary Stakeholder participation immediately (mostly by email), and notifying them of the kickoff meeting. Subsequently, we will email notices directly to stakeholders about upcoming meetings and deliverables or will coordinate with City of Paso Robles staff to distribute such notices. We will provide the meeting agenda, presentation materials, attendees list, and meeting notes. We will also provide materials and notices for upload to existing websites. A list of proposed meetings and topics is provided below. For the purposes of budgeting, we have assumed that these stakeholder meetings will be held in coordination with (before or after) the GWMP Blue Ribbon Steering Committee meetings.

Task 1 Deliverables:

- Stakeholders list
- Meeting announcements, agenda, presentations, minutes for up to four meetings
- Lists of meeting participants
- Technical Memorandum summarizing the results of task implementation and providing the necessary content for Section 1 of the SNMP (electronic format only)

Task 2. Establish Basin Characteristics

The purpose of Task 2 is to provide the necessary background data at appropriate spatial and temporal scales required to perform the following required data analyses:

- Identify the sources of salts and nutrients in the Basin;
- Estimate the spatial distribution of current salt and nutrient loading rates in the Basin;
- Perform a trends analysis of historical salt and nutrient concentration levels throughout the Basin;
- Assess the fate and transport of the salts and nutrients in the Basin; and
- Perform the required assimilative capacity analysis.

Task 2 will consist of the collection and organization of data to quantitatively characterize the Basin hydrology, hydrogeology, climate, land use, water quality, and water use and identify the water quality objectives for the Basin from the Central Coast Basin Plan. Additionally, Task 2 will include the development of an associated Geographic Information Systems (GIS) database in which the collected data will be organized.

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A significant amount of data characterizing the Basin hydrology and hydrogeology will be obtained from the 16 studies listed in the RFP, San Luis Obispo County's files and the recent Water Master Plan, as well as directly from Fugro's and Todd's in-house databases and libraries. We have assumed that we will receive the data from the City (and other stakeholders) electronically as a compiled source of data.

As required to fill data gaps, additional data will also be collected from appropriate state and local agencies to supplement and update the afore-described relevant databases. These data may include:

- Recent historical measurements of precipitation at gauging stations
- Recent historical measurements of temperature, evaporation, and evapotranspiration from local CIMIS (California Irrigation Management Information Systems) stations
- Recent groundwater levels collected from the County monitoring well network
- Recent groundwater quality data
- Recent land use and crop survey maps

Water use and current and projected future land use data will also be collected from the following agencies to ensure a complete and up-to-date database:

- County of San Luis Obispo
- City of Atascadero (not a water provider, but responsible for wastewater collection and disposal)
- Atascadero Mutual Water Company
- Templeton Community Services District
- City of Paso Robles
- San Miguel Community Services District
- Camp Roberts (California National Guard)
- Heritage Ranch Community Services District

These data will include the locations of production wells and sites used for disposing treated wastewater effluent, current and projected future groundwater pumping rates, current and projected future discharges of treated wastewater effluent at the identified sites, and current measurements of salt and nutrient constituents in the discharged treated wastewater effluent at the disposal sites. Groundwater and surface water quality data will also be collected from the SWRCB Geotracker GAMA (Groundwater Ambient Monitoring and Assessment) Groundwater Information System and from USGS groundwater and surface water quality databases. Additional historical water quality data are readily available to use from water quality analyses performed as part of the *Paso Robles Groundwater Basin Study* (Fugro, 2002) and will be obtained from files documented in an interim report entitled *Interim Report, Task 4 – Water Quality, Paso Robles Groundwater Basin Study* (Fugro, 2001).

Estimation of salt and nutrient loading rates from various sources and performance of the assimilative capacity analysis will both require inputs of groundwater recharge and discharge components from the *Paso Robles Basin Study Phase 1* (Fugro and Cleath 2002) numerical model and other studies.

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Additionally, completion of the loading analyses will require an understanding of existing and historical groundwater quality and distributions in the basin, particularly for salinity and mineral constituents and nitrogen data. These data will be obtained by reviewing the aforementioned studies and through contact with agencies or groups engaged in ongoing data collection. Analysis of the data will include understanding the relative importance of agriculture to the local economy and the role of groundwater in that relationship. Geographic and depth-dependent distribution of concentrations will be obtained, as available, and assessed for salinity and nutrient parameters of interest. A GIS-based map will be developed that depicts groundwater quality, concentration contours, depth-to-water, groundwater flow directions, and key hydrogeologic features that may affect constituent transport.

Data collected under Task 2 of this study will be organized in a GIS project database that will include layers for the following features:

- Watershed and groundwater basin boundaries
- Basin sub-areas and sub-basins
- Land use (e.g., agricultural, urban, native vegetation)
- Pervious and impervious areas
- Irrigated and non-irrigated areas
- Parcel information
- Wastewater discharge areas
- Groundwater recharge areas
- Groundwater quality (for key constituents of concern)
- Monitoring and production well locations
- Locations of water quality measurements
- Surface hydrology and precipitation gauging stations

Additionally, these data will be used to provide the content for Section 2 of the Plan and to support the aforementioned data analyses required for the Plan. The GIS database developed for this study will be compatible with the County GIS database and will be provided to the County and other Primary Stakeholders.

Task 2 Deliverables:

- Technical Memorandum summarizing the results of the task analyses and providing the necessary content for Section 2 of the SNMP (electronic format only)

Task 3. Identify Existing and Foreseeable Salt and Nutrient Sources

This task will involve identifying and quantifying salinity and nutrient loads to the Basin for the constituents of concern. This subtask includes the following four major work items:

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Subtask 3.1 Identify Salinity and Nutrient Constituents of Concern. Salts and nutrients can be measured and evaluated using any number of indicator parameters. In Subtask 3.1, we will identify recommended salinity and nutrient parameters to be addressed within the Plan, focusing on identifying constituents of concern relative to attainment of groundwater basin objectives and surface water quality standards as related to beneficial use for the Basin and the Salinas River. The recommended list of constituents of concern will be developed on the basis of data collected and evaluated in Task 2, consultation with Regional Board staff, and discussions with the Primary and Secondary Stakeholders. Constituents of concern will include TDS, nitrate-nitrogen, and may include one or more individual ions such as chlorine, sulfates, or sodium if such constituents are determined to be of concern.

Subtask 3.2 Identify Salinity and Nutrient Sources. Under Subtask 3.2, we will identify land use characteristics and identify known point sources, non-point sources, and their locations. The land use GIS layers developed by the County as part of the Master Water Plan will form the basis for this analysis. For the portion of the basin in Monterey County, crop acreage and land use spreadsheets prepared by Todd Engineers in 2006 for Monterey County Pumping Update will be used, along with any updates available from the Monterey Agricultural Commissioner's Office (ACO). The type of water used for outdoor irrigation for each parcel, both currently and in the projected future, shall be defined using available information regarding groundwater basin spatial characteristics. Other (future) water sources and their places of use (including their use in groundwater basin augmentation) shall be identified based on information gathered with appropriate water suppliers, irrigators and stakeholders.

Subtask 3.3 Quantify Salinity and Nutrient Source Loads. The Paso Robles Groundwater Basin's salinity and nutrient sources will be quantified in terms of volume, concentration, and/or mass loads based on available information. This analysis will utilize the existing water balance, developed for the basin's existing groundwater model in preparing mass load estimates for the basin as a whole, as well as for individual groundwater sub-areas.

Subtask 3.4 Confirm Salinity and Nutrient Source Load Assessment Tools. RMC proposes to use its Salt and Nutrient Analysis Platform (SNAP) to bring together and conduct the source loading analyses for the groundwater basin and sub-areas. The SNAP tool is a GIS-based tool that will utilize all data in a GIS format to perform loading analyses for the basin. As input to the SNAP analysis effort, we will identify and rank salinity and nutrient loads to each groundwater sub-area to assess existing conditions, projected conditions, and to identify the salinity and nutrient load sources that appear to be most important in influencing groundwater quality. This scope assumes that loading assessments using the SNAP will include an initial analyses, a review by the City and the Primary Stakeholders, and a final analyses, which may be used in the future as input to the updated groundwater model.

Following review of the initial result, the analysis can be refined, if necessary, at a future date using the updated Paso Robles Groundwater Basin model once that project has been completed. The GIS input and outputs from the SNAP will be sent to the City for retention until such a time that the updated groundwater model can be utilized with the loading data.

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Task 3 Deliverables:

- Salt and nutrient source location and loads map
- A Technical Memorandum summarizing the mass loading estimates, and preliminary salinity and nutrient source load assessments (electronic format only)

Task 4. Salt and Nutrient Evaluation

As noted in the RFP, Templeton Community Services District, the City of Paso Robles and the City of Atascadero have already conducted analyses of the fate and transport of salt and nutrient discharges from their treated wastewater discharges to the Paso Robles Groundwater Basin; therefore, these studies will be used approximate the behavior of discharges from the smaller agencies and other loading sources in the basin. The RFP also indicates that this task should include the following:

1. Description of conceptual model
2. Estimate of water balance of basin
3. Estimate of salt & nutrient balance for existing and future land use
4. Summary of fate and transport studies prepared by Templeton CSD, and cities of Paso Robles & Atascadero
5. Assimilative Capacity analysis
6. Anti Degradation analysis

This task will therefore address these six items.

Our evaluation of assimilative capacity, loading, and fate and transport analyses will provide insight into how the groundwater system currently works with regard to water quality parameters and how the basin water quality characteristics may change over time. Our approach will use existing water quality goals as guidelines to identify problems and develop appropriate mitigations while utilizing tools and approaches suitable to meet the requirements of the Salt and Nutrient Management Plan for the Paso Robles Groundwater Basin.

Subtask 4.1 Conceptual Model. As described in Tasks 2 and 3, the first three items listed above will be analyzed as part of those scopes of work. Therefore, this subtask will consist of the preparation of a written conceptual model of the groundwater basin, describing the physical, hydraulic and water quality conditions of the groundwater basin (and its sub-areas) and summarizing water supplies and demands for the basin, including projections of future use. This analysis will utilize the work products prepared in the earlier tasks in addition to existing studies and plans —such as the Paso Robles Basin GWMP— that are readily available for this analysis.

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Subtask 4.2 Fate & Transport Study Summarization. As requested in the RFP, a summary of the fate and transport studies prepared for Templeton Community Services District, the City of Paso Robles and the City of Atascadero will be prepared in this subtask.

Several analytical approaches could be used to assess fate and transport of salt and nutrients. Based on our initial consideration of available data and the probable level of detail needed for this basin, we recommend a quantitative mass balance approach. A mass balance model of TDS, and possibly other water quality parameters, would account for basin storage volumes and ambient concentrations, along with volumetric rates of groundwater inflow and outflow in conjunction with source and sink concentrations. The model would estimate future concentrations of salts and nutrients, with and without future recycled water use, either for the entire basin or groundwater sub-areas. The quantitative mass balance would be developed using groundwater volumetric inflows and outflows based on estimated or metered flow rates, and rates simulated with the existing Paso Robles Groundwater Basin Phase 1 Study and Phase II model, coupled with TDS and other constituent concentrations for all key basin sources and sinks identified in Task 3.2.

Subtask 4.3 Assimilative Capacity Analysis. Assimilative capacity represents a comparison of existing water quality concentrations to the limits set in the Central Coast RWQCB’s Water Quality Control Plan (Basin Plan). Water quality better than the Basin Plan limits is an indicator of available assimilative capacity, while water quality constituent levels above the Basin Plan limits indicate that load reduction measures may be necessary (or that Basin Plan objectives may need to be changed). In this subtask, we will compare water quality at representative locations within the basin to the limits set in the Basin Plan. This approach will facilitate future updates to the analysis as well as allow reviewers to monitor specific areas of concern within the basin. Other more rigorous approaches, such as the statistical method proposed for the Santa Ana Watershed, are not believed to be necessary for the Paso Robles Groundwater basin.

Constituent	Objective	
	Municipal Use	Agricultural Use
Bacteria	<2.2 MPN/100 mL	
Organic and Inorganic Chemical Constituents		
pH	6.5 – 8.3	6.5 – 8.4
TDS	500 mg/L	10,000 mg/L (for livestock watering)
EC	250 mmhos/cm	0.75 – 3.0 mmhos/cm
Boron		0.5 – 2 mg/L
Chloride	250 mg/L	106 mg/L
Nitrate (as NO3)	45 mg/L	5 – 30 mg/L
NO3 + NO2 (as N)	10 mg/L	

Source: Central Coast Basin (Region 3) Water Quality Control Plan (CC RWQCB, 2011)

Loading analysis is an extension of the work performed for Subtasks 3.3 and 3.4. Based on the water quality information gathered and the spatial location of the identified sources, loads from coincident

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sources will be calculated and summed to develop an estimate of loading. Salt and nutrient loading is sensitive to several factors beyond those previously identified, including the amount of rainfall and recharge, and salt and nutrient absorption capabilities of the ground cover and land use. RMC will create a salt and nutrient loading model to account for these factors and will develop a loading estimate for an average year. This GIS-based model will allow for different land use simulations, if needed, and consistent application of the factors that impact loading. This subtask assumes that only one future land use simulation will be developed for this project.

Subtask 4.4 Anti-Degradation Analysis. The Recycled Water Policy states that Salt and Nutrient Management Plans must include “an anti-degradation analysis demonstrating that the projects included within the plan will, collectively, satisfy the requirements of Resolution No. 68-16.” Resolution No. 68-16 requires that water quality must be maintained to meet current and future beneficial uses and that activities must meet discharge requirements to maintain water quality standards.

The anti-degradation analysis to be prepared for the Paso Robles Groundwater Basin will incorporate and build on efforts performed for previous tasks including:

- Identification of the current and future quality of receiving waters
- Identification of the sources and sinks of salts and nutrients
- Identification of the goals and objectives for recycled water use and storm water recharge

Work in this subtask will estimate the impact that would result from the Task 5 goals and will determine if the goals will result in degradation of groundwater quality. If so, the goals will be examined to ensure that they meet Resolution No. 68-16. This includes confirmation that:

- The water quality reduction is consistent with the maximum benefit of the people of California
- The water quality reduction will not unreasonably affect present and anticipated beneficial use of such water
- The water quality reduction will not result in water quality less than that prescribed in the policies
- Implemented projects are using the best practicable treatment technologies

This work will include utilization of the fate and transport analysis completed earlier in conjunction with spreadsheet analyses of basin salt and nutrient loading along with basic economic cost-benefit analysis. These analyses will provide the necessary information to answer the questions posed by Resolution No. 68-16. If the beneficial uses or water quality objectives for the Paso Robles Groundwater Basin or ground sub-areas are determined to be inappropriate given environmental conditions, we will recommend discussions with the Regional Board staff about possible Basin Plan modifications that will make the Salt and Nutrient plan more successful. Analysis by an economist is assumed not to be required for the level of detail required for the SNMP.

Task 4 Deliverables:

- Technical Memoranda summarizing the results of each of the four subtasks described above

Task 5. Implementation Measures, Goals & Objectives

This task will include identifying the principal goals and objectives to be achieved by the salinity and nutrient management planning process, in addition to the implementation measures necessary to achieve those goals and objectives.

Subtask 5.1 Identify Management Goals. In Subtask 5.1, RMC will identify the preferred goals and objectives of the Primary and Secondary Stakeholders that the Paso Robles Groundwater Basin SNMP will aim to achieve. This process will identify specific goals and objectives for water recycling, and for recharge of stormwater and imported sources of water into the groundwater basin, and will correlate with the basin management objectives for the groundwater basin as set forth in the Paso Robles Basin Regional Groundwater Management Plan, and the goals and objectives set forth in the San Luis Obispo County IRWMP. It is imperative that the goals and objectives of this SNMP do not conflict with those of other plans, if at all possible, and instead presents a comprehensive picture of regional groundwater management.

Additionally, during this subtask, the targeted goals and objectives of other basin stakeholders will also be considered. During solicitation and incorporate of these goals and objectives, processes for obtaining stakeholder input and resolving potential conflicts will be developed and vetted with the City and Primary Stakeholders prior to implementation.

Subtask 5.2 Identify Available Management Strategies. In addition to identifying the basin management goals and objectives, we will identify available salinity and nutrient management strategies for the groundwater basin. These may include but are not limited to, strategies such as:

- wastewater salinity & nutrient source control;
- public education;
- source load reduction;
- source water salinity control;
- salt export;
- groundwater recharge;
- groundwater management;
- institutional arrangements;
- land use regulation;
- landscape conservation; and
- stormwater/runoff management.

RMC will coordinate with the Primary Stakeholders to develop a preliminary list of alternative management strategies that are feasible for implementation in the Basin, and to obtain stakeholder input on the preliminary list.

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Subtask 5.3 Assess Load Reduction and Water Quality Improvement. In coordination with City and the Primary Stakeholders, RMC will screen the preliminary list of alternative management strategies, and assess the load reduction and/or water quality improvement potential for the more viable strategies using the assessment modeling tools developed under Task 3. RMC will coordinate with City staff and the Primary and Secondary Stakeholders to (1) identify scenarios recommended for use in assessing alternate management strategies, and (2) identify load conditions to be assessed in each scenario.

While no groundwater transport modeling will be conducted under this scope of work, our proposed scope of work will set the scene for possible future transport modeling using the future updated groundwater model, should the Primary Stakeholders choose to update the SNMP in the near future. Specifically, we recognize that, in a future study, the City and its partners may choose to perform groundwater transport model runs using the updated groundwater model with the loading scenarios developed herein to assess the water quality implications of the alternative management strategies.

Subtask 5.4 Evaluate Alternative Management Strategies. Under Subtask 5.4, RMC will use feedback on the preliminary alternative management strategies developed under Subtask 5.2 to evaluate and compare the most feasible basin management strategies on the basis of factors such as: anticipated water quality improvements; local water supply development potential, including increasing the use of recycled waters or enhanced development of groundwater supplies; regulatory compliance; sustainability; costs; funding considerations; ability to implement; and environmental impacts. After this evaluation is complete, a preferred strategy will be selected for implementation using stakeholder feedback (refer to Task 1) and a pre-defined decision process.

Subtask 5.5 Assess Basin Plan Modification Needs. RMC will document the efforts described in all previous tasks/subtasks, and coordinate with City staff and the Primary Stakeholders to identify recommended Basin Plan modifications (including recommended modification of groundwater quality objectives and/or modification of Basin Plan implementation policies) that are consistent with implementing the preferred salinity and nutrient management strategies. We will also coordinate with the basin's Primary and Secondary Stakeholders, along with Regional Board staff, to determine an appropriate approach and information needs for a Basin Plan amendment. On the basis of input received from Regional Board staff, we will coordinate the basin's stakeholders to prepare a summary outlining a strategy to achieve the recommended Basin Plan amendment(s).

Subtask 5.6 Assess CEQA/NEPA Compliance. Under this additional subtask, RMC will assess how the recommended strategy conforms to California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) requirements. Specifically, this assessment will identify if implementation of the recommended strategy will be subject to review under CEQA or NEPA and what level of environmental documentation will be required. If the recommended strategy would be subject to review, work will be completed to identify the appropriate governing body (lead agency) and conduct an initial, high-level environmental assessment to define the scope and strategy for any necessary CEQA/NEPA compliance. If selected by the City, we can also provide optional support in preparation of supporting Environmental Documentation for the SNMP. This optional work has not been scoped nor budgeted in this proposal, but we can prepare such documentation if so requested.

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Task 5 Deliverables:

- Salinity and nutrient management plan goals
- Ranked alternative management strategies
- Decision methodology for selecting the preferred strategy
- Recommended Basin Plan amendment strategy summary
- Assessment of any required CEQA/NEPA documentation (as necessary)
- A Technical Memorandum summarizing the analysis performed in this task, providing the required content for Plan Section 5

Task 6. Monitoring Program and Databases

Task 6 will result in the preparation of a Groundwater Monitoring Program for implementation to assess achievement of the Basin-wide goals and objectives for salt and nutrient management. In general, the ultimate purposes of the Basin-wide monitoring program are to:

- Monitor salt and nutrient loading rates at the locations where they occur;
- Characterize and monitor the spatial distribution of salts and nutrients in the Basin over time;
- Assess whether Basin Plan water quality objectives are being met; and
- Use results of the monitoring and analysis for local and regional planning in the Basin.

In this task, we will evaluate existing water quality monitoring programs in the Basin to assess whether they collectively achieve the objectives of the Plan. These plans will include San Luis Obispo County's ongoing groundwater level monitoring, in addition to those being implemented by both Primary and Secondary Stakeholders. If necessary, modifications to those existing monitoring programs or augmentation of the overall network of programs will be recommended to achieve the SNMP's objectives. These modifications may include changes to the constituents to be monitored, the monitoring frequency and/or the monitoring locations (including recommended additions and/or deletions to the monitoring networks). Additionally, depending on the availability of wells for the monitoring program, additional monitoring locations may be recommended. The goal of this analysis will be identify an optimal groundwater monitoring network and program that will meet all basin monitoring needs, including those of the new SNMP, CASGEM, and other regional and local monitoring requirements. It is assumed herein that the monitoring programs will be given to us in electronic formats (such as GIS files, WORD, EXCEL or other similar documents) to facilitate the consolidation and revisions required to prepare a comprehensive monitoring program.

The ultimate recommended groundwater monitoring program will be documented in a Technical Memorandum entitled "Draft Groundwater Monitoring Program". Existing water level and quality monitoring programs to be evaluated will include those of the following agencies:

- County of San Luis Obispo
- City of Atascadero

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- Atascadero Mutual Water Company
- Templeton Community Services District
- City of Paso Robles
- San Miguel Community Services District
- Camp Roberts (California National Guard);
- Heritage Ranch Community Services District

The evaluation of each agency's monitoring program will include identification of the specific water quality constituents monitored, the schedule/frequency of monitoring, staff positions responsible for monitoring, database management methods used, and a description of data dissemination and reporting procedures. As acknowledged from the RFP, the preferred monitoring program to be recommended in the Plan will hopefully be found to consist of only the existing network of individual agency monitoring programs and will not require any significant additional costs or modifications to those programs to achieve the objectives of the Plan.

Development of the SNMP Monitoring Program will likely focus initially on the County's groundwater level monitoring program, already in place, and on the recommended network that was developed for the Paso Robles Basin Regional Groundwater Management Plan. These networks will form the foundation, with modifications, of a monitoring program appropriate to the Salt Nutrient Management Plan.

In general, monitoring programs include several common elements, consistent with the objectives of the SNMP. The appropriateness of the existing monitoring programs will be assessed according to whether they contain these elements and whether they also provide water quality data at sufficient spatial and temporal scales to facilitate future assessments of salt and nutrient source loading and future trends analyses.

It should be noted that the Paso Robles Groundwater Basin Management Plan (GEI, 2010) included a map that displayed both the existing groundwater elevation monitoring network for the Paso Robles Groundwater Basin and locations of new wells recommended in the management plan to provide more complete spatial coverage of groundwater elevation monitoring. If the evaluation of the network of existing groundwater quality monitoring programs finds that the spatial coverage provided by the existing programs is inadequate to meet the objectives of the SNMP, then this map of the groundwater elevation monitoring wells may be used as a basis to recommend additional groundwater quality monitoring sites for the monitoring program developed for the Plan.

Task 6 will also involve an examination of the State Water Resources Control Board's Science Advisory (Blue Ribbon) Panel's Spring 2010 report on monitoring of chemicals of emerging concern (CECs). We will qualitatively evaluate whether monitoring CECs is necessary in the Basin as no agencies are currently utilizing recycled water in the groundwater basin.

In coordination with Task 2, existing state and federal water quality databases (e.g., Geotracker GAMA) will be evaluated, and an appropriate database management method will be adopted in the SNMP to ensure that the organization and storage of future monitoring data is compatible with State databases

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and that the data are properly received by the State once the monitoring program in the SNMP is implemented. In addition, the program will also identify the stakeholders responsible for conducting the groundwater sampling, submitting the samples to qualified analytical laboratories for testing, organizing the subsequent laboratory test results into the groundwater quality database, and reporting the water quality results to Water Board staff at least once every three years.

This task assumes that a draft Groundwater Monitoring Program will be developed and documented for review and consideration by the City and the Primary Stakeholders. Upon receipt of comments, this monitoring program will be revised and finalized as a stand-alone document.

This task includes a cost estimate to implement the recommended monitoring program.

Task 6 Deliverables:

- Draft and Final Groundwater Monitoring Program
- A Technical Memorandum summarizing the analyses performed in this task, providing the required content for Plan Sections 6 and 7

Task 7. Prepare Salt and Nutrient Management Plan

RMC will prepare the Paso Robles Groundwater Basin SNMP, writing a document that summarizes the analyses and conclusions of the work conducted under Tasks 1 through 6. The document will be an executive summary style, with references to the appendices which will consist of the memoranda developed in Tasks 1 through 6. This SNMP preparation format will be cost-effective and will streamline the plan development schedule.

One recommended change that we propose to the draft outline for the Paso Robles Groundwater Basin SNMP, as contained in the RFP, would be the inclusion of a SNMP audit. In this section of the SNMP, RMC will establish the framework and schedule for periodically updating the Plan and identifying the responsible agency(ies) for implementing periodic effectiveness assessments using the performance measures identified in Section 5 of the proposed outline.

After completing the draft SNMP, RMC will submit the draft document to the City and its partners for review and comment. RMC will then revise the draft document and resubmit the final document to the City.

Task 7 Deliverables:

- Draft and Final SNMP (electronic format only).

Task 8. Quality Assurance and Quality Control

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A comprehensive QA/QC program is essential to successfully developing a Salt and Nutrient Management Plan and, as importantly, position the plan and the associated program for a successful future implementation. To this end, the QA/QC program will address two key components of the program: Technical Quality and Stakeholder Satisfaction. The QA/QC program developed and implemented by our team will help ensure that the overall Salt and Nutrient Management program documented in the associated Paso Robles Groundwater Basin SNMP is efficient and cost-effective, meets the required schedule milestones, produces high quality work products and meets stakeholder expectations.

We have teamed with Todd Engineers to provide the necessary independent technical review of the SNMP. Iris Priestaf will lead our team's QA/QC program implementation to ensure that the completed SNMP meets the expectations of the stakeholders and the requirements of the Recycled Water Policy. Under Iris' oversight, our internal quality control team RMC will work with the City and its partners to ensure that our work products meet all necessary standards. Specifically, we will:

- Review all deliverables to ensure they are objective, accurate, concise, and complete.
- Confirm the Project objectives and requirements have been met and/or managed through the Project delivery.
- Confirm the work has been completed consistent with the standards of professional care.

In doing so, RMC will coordinate the distribution of documents for external QA/QC review, with all responses will be sent to the RMC team. Additionally, RMC may coordinate with individual City staff, and Primary and Secondary Stakeholders during the QA/QC review process to expedite review and commenting.

Task 8 Deliverables:

- Quality Assurance and Quality Control records and documentation

Task 9. Project Management

RMC recognizes that communication and coordination between project team members, the City, and the Primary Stakeholders are key factors in successful project completion. Dave Richardson, RMC's project manager, will lead the project team and understands the importance of delivering a complete Salt and Nutrient Management Plan in a cost-effective and timely manner that reflects the City's goals and long-term groundwater management objectives. To achieve this, the following key activities will be implemented:

- **Initial Kickoff Meeting.** RMC will conduct an initial kickoff meeting with the City to confirm the project scope, schedule, and expectations, in addition to establishing project goals and objectives. Project communications will be discussed, and key decision points will be identified.
- **Schedule and Budget Tracking.** RMC understands that the City has a specific schedule it wishes to meet and is committed to upholding the proposed schedule. To make sure the schedule is

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met, RMC will maintain a project schedule and conduct budget tracking, and will provide monthly reports to the City summarizing activities, schedule and budget status, and documenting any issues and decisions that need to be addressed. Additionally, schedule and budget status updates will be included as part of the weekly team meetings.

- **Regular Communications.** RMC believes that regular communication is critical to ensuring smooth project implementation. During plan development, we will schedule regular status conference calls with the City and key stakeholders to ensure constant and accurate communication and plan completion.

In addition to these fundamental and critical project management tasks, RMC will support the City in its efforts to involve the public and other stakeholders. This task also includes general project team management and administrative activities required for the smooth implementation of any engineering project. RMC will prepare monthly progress reports and invoicing for the City, track the schedule, and budget to ensure the project is completed in a timely fashion, and work with the City to complete all tasks in an efficient and effective manner.

Task 9 Deliverables:

- Kick-off Meeting agenda, meeting materials and meeting minutes
- Monthly invoices and progress reports (including budget and schedule updates)



**City of Paso Robles
Salt and Nutrient Management Plan for the Paso Robles Groundwater Basin**

Tasks	Labor								Total Hours	Total Labor Costs (1)	Outside Services			ODCs		Total Fee		
	Glenn Hermanson	Dave Richardson	Jim Blanke	Chris Van Lienden	Leslie Dumas	Christy Kennedy	Graphics	Admin.			Iris Priestaf	Paul Sorenson	Nels Ruud	Subtotal	Sub Consultant Total Cost (2)		ODCs	Total ODCs (3)
	PIC	PM	PE	PE	PE	QA/QC	Graphics and Support Team	Todd Engineers			Fugro	Fugro						
	\$265	\$265	\$200	\$175	\$220	\$200	\$125	\$195			\$215	\$140						
Task 1: Facilitate a Collective Process																		
Facilitate a collaborative process		32		32					64	\$14,080	\$6,240			\$6,240	\$6,864	\$750	\$825	\$21,769
Subtotal Task 1:	0	32	0	32	0	0	0	0	64	\$14,080	\$6,240	\$0	\$0	\$6,240	\$6,864	\$750	\$825	\$21,769
Task 2: Establish Basin Characteristics																		
Establish basin characteristics			12						12	\$2,400		\$4,300	\$16,800	\$21,100	\$23,210		\$0	\$25,610
Subtotal Task 2:	0	0	12	0	0	0	0	0	12	\$2,400	\$0	\$4,300	\$16,800	\$21,100	\$23,210	\$0	\$0	\$25,610
Task 3: Identify Existing and Foreseeable Salt and Nutrient Source																		
3.1 Identify Salt and Nutrient Constituents of Concern		2		2	1				5	\$1,100		\$215		\$215	\$237		\$0	\$1,337
3.2 Identify Salinity and Nutrient Sources		2		12	6				20	\$3,950		\$215		\$215	\$237		\$0	\$4,187
3.3 Quantify Salinity and Nutrient Source Loads		2		20	6				28	\$5,350				\$0	\$0		\$0	\$5,350
3.4 Confirm Salinity and Nutrient Source Load Assessment Tools		1			1				2	\$485				\$0	\$0		\$0	\$485
Subtotal Task 3:	0	7	0	34	14	0	0	0	55	\$10,885	\$0	\$430	\$0	\$430	\$474	\$0	\$0	\$11,359
Task 4: Salt and Nutrient Evaluator																		
4.1 Conceptual Model			8		2				10	\$2,040		\$430		\$430	\$473		\$0	\$2,513
4.2 Fate & Transport Study Summarization			24		2				26	\$5,240				\$0	\$0		\$0	\$5,240
4.3 Assimilative Capacity Analysis			12		18				30	\$6,360				\$0	\$0		\$0	\$6,360
4.4 Anti-Degradation Analysis			80		24				104	\$21,280				\$0	\$0		\$0	\$21,280
Subtotal Task 4:	0	0	124	0	46	0	0	0	170	\$34,920	\$0	\$430	\$0	\$430	\$473	\$0	\$0	\$35,393
Task 5: Implementation Measures, Goals and Objective:																		
5.1 Identify Management Goals		2	4		2				8	\$1,770		\$280		\$280	\$308		\$0	\$2,078
5.2 Identify Available Management Strategies		2	4	8	2				16	\$3,170		\$280		\$280	\$308		\$0	\$3,478
5.3 Assess Load Reduction and Water Quality Improvement			4	8					12	\$2,200				\$0	\$0		\$0	\$2,200
5.4 Evaluate Alternative Management Strategies		2	8	4					14	\$2,830		\$280		\$280	\$308		\$0	\$3,138
5.5 Assess Basin Plan Modification Needs		2	8						10	\$2,130		\$280		\$280	\$308		\$0	\$2,438
5.6 Assess CEQA/NEPA Compliance					4				4	\$880				\$0	\$0		\$0	\$880
Subtotal Task 5:	0	8	28	20	8	0	0	0	64	\$12,980	\$0	\$1,120	\$0	\$1,120	\$1,232	\$0	\$0	\$14,212
Task 6: Monitoring Program and Databases																		
Prepare Monitoring Program			12						12	\$2,400		\$3,010	\$11,200	\$14,210	\$15,631	\$250	\$275	\$18,306
Subtotal Task 6:	0	0	12	0	0	0	0	0	12	\$2,400	\$0	\$3,010	\$11,200	\$14,210	\$15,631	\$250	\$275	\$18,306
Task 7: Prepare Salt and Nutrient Management Plan																		
Prepare SNMP		6	24	32	16		8	2	88	\$16,700				\$0	\$0		\$0	\$16,700
Subtotal Task 7:	0	6	24	32	16	0	8	2	88	\$16,700	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$16,700
Task 8: Quality Assurance and Quality Control																		
QA/QC						24			24	\$4,800	\$7,800			\$7,800	\$8,580		\$0	\$13,380
Subtotal Task 8:	0	0	0	0	0	24	0	0	24	\$4,800	\$7,800	\$0	\$0	\$7,800	\$8,580	\$0	\$0	\$13,380
Task 9: Project Management																		
Kick-off Meeting		8	4	12					24	\$5,020	\$780			\$780	\$858	\$120	\$132	\$6,010
Project Communications		12		12					24	\$5,280				\$0	\$0		\$0	\$5,280
Invoicing and Progress Reporting				24				12	36	\$5,340				\$0	\$0	\$120	\$132	\$5,472
Subtotal Task 9:	0	20	4	48	0	0	0	12	84	\$15,640	\$780	\$0	\$0	\$780	\$858	\$240	\$264	\$16,762
TOTAL	0	73	204	166	84	24	8	14	573	\$114,805	\$14,820	\$9,290	\$28,000	\$52,110	\$57,322	\$1,240	\$1,364	\$173,491

1. The individual hourly rates include salary, overhead and profit.
 2. Subconsultants will be billed at actual cost plus 10%.
 3. Other direct costs (ODCs) such as reproduction, delivery, mileage (rates will be those allowed by current IRS guidelines), and travel expenses, will be billed at actual cost plus 10%.
 4. RMC reserves the right to adjust its hourly rate structure and ODC markup at the beginning of the calendar year for all ongoing contracts.