

EXHIBIT A

SCOPE OF WORK FOR INTEGRATED COASTAL MONITORING AND REPORTING PLAN

Project Understanding

The California American Water Company (CalAm) is the project proponent for the slant wells to provide feedwater to a desalination plant element of the Monterey Peninsula Water Supply Project (MPWSP). The MPWSP also includes aquifer storage and recovery (ASR) and in lieu use of the resultant produced water and of highly treated wastewater from Monterey One Water.

Per a settlement agreement executed in 2012, the Agency is to develop a monitoring and reporting plan to monitor the operations and any potential effects of the MPWSP on the Salinas Valley Groundwater Basin. CalAm established a **Slant Well Special Study Monitoring Network** to meet research and special study objectives. The Monterey County Water Resources Agency (Agency) has operated a long-term, regional ambient coastal monitoring network (**Agency Ambient Monitoring Network**) used to document groundwater levels and quality at the coast since the 1950's. The CEQA review of the Slant Well project is ongoing; a draft EIR/EIS has been circulated and the public comment period has closed; a Final EIR/EIS is in production and could result in additional monitoring requirements identified in the mitigation monitoring and reporting program (MMRP). The FEIR/EIS could also result in decisions by other regulatory and permitting agencies that include specific regulatory compliance monitoring requirements in related permits. The final MMRP and permit requirements are not known at this time.

The study will investigate how the Slant Well Special Study Monitoring network can provide the basis for meeting regulatory compliance and detection objectives and be integrated into the existing MCWRA ambient coastal monitoring program. The outcome is to be a groundwater monitoring network established consistent with the Settlement agreement between the County, MCWRA and CalAm. The network design will identify the network objectives, location for additional monitoring wells (if needed), the design and construction of any such wells, constituents and parameters to measure, frequency of measurement, and a procedure for the monitoring, testing, and analysis of water from any such wells. If the EIR is certified and the MPWSP moves forward, the objectives for the existing Slant Well Special Study Monitoring Network may be adapted to meet additional compliance and detection objectives pursuant to the EIR and permitting requirements.

We will identify data gaps, evaluate alternatives, and make a recommendation for a **Slant Well Compliance Monitoring and Reporting Plan** to: 1) track the operations aspects of the slant wells, 2) *detect* any water level and quality effects from the proposed project. The alternatives to be considered for the operation and maintenance of the proposed monitoring network include Agency, Consultant, or a combination of Agency/Consultant. As such, this study is both a management and technical evaluation. There will be both short-term costs to develop the network, and long-term costs to operate and maintain the network.

This project is not intended to support full and complete review of the Agency's long-term, ambient coastal monitoring network but it is critical to put this effort in context of the overall program to understand coastal conditions and project operations.

Approach

Our approach is to design a physical monitoring network that produces scientifically credible and defensible data and analysis results which document operational effects of the proposed MPWSP slant wells, and demonstrates there are no negative impacts or harm to the Salinas Valley groundwater basin and the overlying groundwater users. The existing network and reports provide the starting point to evaluate the data gaps, potential needs to fill these gaps, and the costs for collection, analysis and reporting of the data. The study will include evaluating both short-term (start-up) needs and long-term (ongoing). We will consult with the Agency during the effort. Tasks are related to:

- Reviewing and documenting the existing project monitoring network
- Development of the monitoring objectives and questions that network is to address
- Identification of data gaps to meet objectives and answer questions
- Develop approaches to filling data gaps
- Review of analysis methods
- Design of an "idealized" network (collection, processing, analysis, reporting) to provide a basis for comparison of management and operations costs
- Evaluating the pros/cons of the management alternatives for the idealized network, including documenting constraints and opportunities (e.g.; integration with the long-term, ambient coastal monitoring network)
- Reviewing data management, exchange and reporting needs and approach
- Making a final findings, conclusions and recommendations for the Slant Well Compliance Monitoring Network

To conduct the ground-water monitoring network design, we will consider: 1) the spatial and temporal coverage of the sampling sites; 2) the competing objectives of a monitoring programs; 3) uncertainties in the complex nature of geologic, hydrologic, and other environmental factors; 4) the uncertainty about parameters (geologic, hydrologic, and environmental); 5) decisions and actions supported by the information to be generated, 6) audience reliant on the generated information, 7) the analysis, maps and figures used to communicate the data to a range of audiences, and 8) the range of management costs and the approaches and methods for network operations and maintenance.

Inputs to the analysis include: Draft and Final EIR/EIS (ESA, 2017), Test Slant Well Reports (Geoscience), Test Slant Well Long Term Pumping Monthly Monitoring Reports, Monterey Peninsula Water Supply Project Hydrogeologic Investigation (Geoscience, 2014), Hydrogeologic Investigation Work Plan (Geoscience, 2013), Hydrogeologic Investigation Borehole Technical Memorandum (HWG), Slant Well Survey (MWH, Oct 2015), the Electrical Resistivity Tomography Data (ERT) work performed by Stanford University, and other local data and GIS coverages. Inputs also include Agency comments on interim technical memorandums prepared for this purpose. We can accommodate the participation of other parties should the Agency seek to use the HWG or other experts and interested parties.

The outputs and deliverables include technical memorandum or briefings that document interim result, obtain input and feedback, and make interim decisions and key milestones, and provide the basis for subsequent development of draft report chapters. The draft **Slant Well Compliance Monitoring Report and Plan** will be prepared for Agency review and comment prior to preparing the final report. Cost include four on-site meetings; monthly conference (six) calls over anticipated 6-month project period. The 2018 rate schedule and project budget are provided below.

Task 1 Kick-off and Mobilization

The purpose of this task is to ensure that there is shared understanding between the consultant and Agency, mobilize the project; identify needed data or studies; define project communications.

- Meeting No. 1 on-site meeting with Agency
- Review scope
- Clarify study objectives, and questions to be addressed through a revised monitoring program,
- Define monitoring network objectives
- Discuss outside interests, expectations and potential project pitfalls
- Confirm the spatial extent of the investigation; elements of the MPWSP that are to be considered in the design; and how the proposed network could integrate with regional, ambient monitoring.
- Identify other participant, peer review or outreach requirements
- Document Agency staff roles, classification descriptions, staffing costs/rates
- Obtain Monterey County chemistry lab costs for comparison with commercial laboratory
- Coordinate data transfers
- Establish final interim work products, meeting schedule and peer review process expectations

Deliverable: Meeting notes documenting key discussion points, decisions, actions.

Task 2 – Review and Document Existing Monitoring Networks, Methods, and Costs

The purpose of this task is to document the current networks for purposes of comparison of methods and costs, and to identify opportunities and constraints related to short term start up and long-term maintenance and operations of the network ultimately designed.

- For both the existing Slant Well Special Study Network and the Agency Ambient Network, review and document the current approaches for:
 - Sampling/Data collection frequency
 - Analyte and laboratory methods and standards (QA/QC protocols)
 - Sample analysis/monitoring methodology and standards (QA/QC protocols)
 - Well instrumentation types
 - QA/QC protocols
 - Data processing steps
 - Data analysis

- Report, map, and graph formats
 - Monitoring well maintenance requirements and frequency
- Consult with GeoScience to document and review current Slant Well monitoring network costs; data and work flows; resources requirements for data collection, processing, analysis and reporting.
- Document Agency data and work flows; resources requirements for data collection, processing, analysis and reporting
- Preliminary analysis of opportunities and constraints to integrating monitoring networks and network objectives
- Review existing data and work flows used for the Slant Well Special Studies program and the Agency Ambient monitoring program, including work and data flows, electronic forms, reports, reporting, data access and transfers, data management, data bases applied.

Task 3- Identify Data Gaps in Existing Slant Well Special Study

The purpose of this task is to identify the data gaps that are to be filled by the network to be designed; recognized uncertainties that may be addressed by the proposed network and any that may require further special study and investigation outside of the current scope of work.

- Review the water resource monitoring requirements associated with Settlement Agreement.
 - Evaluate how monitoring results and reporting requirements are to be used
 - Document reporting requirements
- Evaluate representative nature of the current monitoring wells in terms of the formations monitored and flow regimes
- Establish final revised network objectives and plan to fill Identified data gaps, , address uncertainty and answer questions
- Meeting No. 2 with the Agency

Deliverable: Task 2 and 3 Interim Memorandum.

Task 4 Design of the Slant Well Compliance Monitoring Network

The purpose of this task is to design the idealized network and requirements for development (short term) and maintenance and operations (long term) so that the “normalized” description can be used to compare alternative management approaches to development and implementation.

- Obtain data on county rights of way, easements and public lands that may be accessible for siting monitoring wells; map potential locations
- Identify and document potential short- term start-up costs
 - Gather monitoring well specs and costs to prepare a generalized design used to estimate monitoring network and well costs (if needed)
 - Instrumentation
- Long Term operations and maintenance program
 - Sampling/Data collection frequency
 - Analyte and laboratory methods and standards (QA/QC protocols)
 - Sample analysis/monitoring methodology and standards (QA/QC protocols)

- Well instrumentation types
- QA/QC protocols
- Data processing steps
- Data analysis
- Report, map, and graph formats
- Monitoring well maintenance requirements and frequency
- Evaluate and recommend data management, exchange and reporting approaches.
- Describe technical constraints and opportunities to implement the network and integrate the programs. This includes such things and well siting limitations, need for detailed study to reduce uncertainty (e.g.; model improvements, additional geophysics, etc.)
- Evaluate phased development of monitoring wells; this could be based on observations at the existing network (e.g.; identify detection limits at wells that would serve as triggers to initiate further monitoring or actions)
- Develop preliminary recommendations
- Prepare Task 4 Interim Memorandum
- Meeting No. 3 with the Agency

Deliverable: Task 4 Interim Memorandum–

Task 5 Evaluate Implementation/Management Alternatives and Costs Comparison for Recommended Network

The purpose of this task is to compare the alternative management approaches identified in the RFP using the normalized/idealized monitoring network identified in Task 4. The pro's and con's for the three approaches will be developed to allow for comparison. Alternatives will present a range of costs. The consultant will make final recommendations to be included in the draft and final report.

- Develop and document pro's and con's for the different management approaches.
- Document the management constraints and opportunities to integrating monitoring networks and implementing the proposed network
- Develop recommendations

Task 6 Prepare Draft and Final Report

The purpose of this task is to develop a draft report by aggregating prior interim memorandums. The draft report will be presented to the agency to document the analysis and the consultant findings and receive comments. After one round of review to obtain Agency comments a final report will be prepared.

- Draft findings, conclusions and recommendations
- Compile prior interim TMs into draft report
- One round of Agency review and comment
- Meeting No. 4 with the Agency

Deliverable: Draft and Final Report

Groundwater Monitoring and Reporting Plan

BUDGET

\$62,300

Professional Service			M Feeney	M. Zidar
TASK DESCRIPTION	HOURS	FEE	\$200	\$185
Task 1 Kick-off and Mobilization	20	3,820	8	12
Task 2 Review and Document Existing Monitoring Networks, Methods, and Costs	64	12,080	16	48
Task 3 Identify Data Gaps in Existing Slant Well Special Study Network	36	6,840	12	24
Task4 Design of the Slant Well Compliance Monitoring Network	84	16,080	36	48
Task 5 Evaluate Implementation/Management Alternatives and Costs Comparison for Recommended Network	80	15,160	24	56
Task 6 Prepare Draft and Final Report	44	8,320	12	32
TOTAL (LABOR)		328 62,300	108	220
			\$ 21,600	\$ 40,700

RATE SHEET

**Martin B. Feeney, PG, CEG CHg
Consulting Hydrogeologist**

Fee Schedule 2018*Professional Services*

Principal Hydrogeologist	\$200/hour
Principal Hydrogeologist (field)	\$160/hour
Project Hydrogeologist	\$175/hour
Word Processor	\$70/hour
Illustrator/GIS	\$100/hour

Equipment

Data Logger and Transducer	\$100/day
Conductivity Meter	\$75/day
Turbidity Meter	\$75/day

Indirect Charges

Reproduction	Cost + 10%
Outside Services	Cost + 10%
Laboratory Services	Cost + 10%
Mileage (outside 100 mile radius)	\$0.56/mile