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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 Monterey County Water Resources Agency (Agency) is to develop a monitoring and reporting plan (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 (Special Study)** to meet research and special study objectives. The Agency has operated a long-term, regional ambient coastal monitoring network (**Ambient 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 has been released. 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 settlement agreement compliance and detection objectives and be integrated into the existing MCWRA ambient coastal monitoring program. The outcome is to be an Integrated Coastal Monitoring and Reporting Program (Program) established consistent with the Settlement agreement between the County, MCWRA and CalAm. The plan design will the identify the network objectives, location for additional monitoring wells (if needed), 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 implementation strategies, and make a recommendation for an Integrated Coastal Monitoring and Reporting Plan (Plan) to: 1) track the operations aspects of the slant wells, 2) *detect* any water level and quality effects from the proposed project. The implementation strategies to be considered for the operation and maintenance of the proposed Plan include Agency, Consultant, or a combination of Agency/Consultant. As such, this is 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 Program.

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

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The original scope of work was to focus on shallow, 180-foot and 180-foot equivalent (FTE) and the 400-foot aquifer, and that the area of impact determined from the modeling would be the study area. Since that time, the MPWSP FEIR was released and included monitoring the Deep aquifers and area of the North Marina Groundwater Model be included in the design. The scope is also amended to include further review of data management needs and approaches for transfer, exchange, access, and reporting; getting data from CalAm contractors and others (e.g.; MCWD, CWD); Agency review and response on interim draft materials, and additional meeting time.

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. The existing Ambient Network and Special Study 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 Plan will include evaluating both short-term (start-up) needs and long-term (ongoing). We will consult with the Agency during this effort. Tasks are related to:

- Reviewing and documenting the existing Special Study and Ambient Network
- Development of the monitoring objectives and questions the Plan 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 the 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 Agency's Ambient Network)
- Reviewing data management, exchange and reporting needs and approach
- Making a final findings, conclusions and recommendations for the Integrated Coastal Monitoring and Reporting Plan
- Engagement with stakeholders

To conduct the Integrated Coastal Monitoring and Reporting Plan design, we will consider: 1) the spatial and temporal coverage of the sampling sites; 2) the 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 to be 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 Program 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, the Agency's Ambient Network, 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 Integrated Coastal Monitoring and Reporting 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 Client Coordination and Project Management

Task 1.1 The purpose of the kick-off meeting 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

Task 1.2 Ongoing Coordination

This is to include up to three additional on-site meeting to obtain data, coordinate with data providers, and the Agency; and weekly conference calls (6) during the network evaluation to be scheduled with and by the Agency project manager. This also includes project management, invoicing and incidental client communications.

Deliverable: Consultant will provide meeting notes documenting key discussion points, decisions, and 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, calibration, maintenance procedures and frequency
    - 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 objectives, costs; data and work flows; resources requirements for data collection, processing, analysis and reporting.
- Consult with other entities monitoring the aquifers including Marina Coast Water District, Castroville Community Water District and others identified during the investigation.
- Document and review Agency's Programs, objectives, costs, 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 and Uncertainties

The purpose of this task is to identify the data gaps that are to be filled by the Plan to be designed; list uncertainties that may be addressed by the proposed Plan and any that may require further special study and investigation outside of the current scope of work; and define how the revised network can be integrated to the Agency Ambient Network

- Review and document areas of uncertainty in technical and analytical data
    - Consult with Geoscience/HWG members regarding existing monitoring and data gaps and uncertainty
    - Consult with modelers (Geoscience, HydroFocus) to discuss/identify data gaps and uncertainty encountered

  - Review model results with attention to errors between observed and simulated conditions to document uncertainties that could be addressed through additional monitoring or other special studies
  - Consult with the Agency regarding existing monitoring and data gaps and uncertainty
- Review the Agency's monitoring responsibilities associated with the Settlement Agreement
- EIR MMRP and other project requirements
  - Review MPWSP FEIR, including comments and responses to define requirements and expectations of interested parties
  - Consult with environmental consultant regarding any other anticipated permit requirements
  - Evaluate how monitoring results and reporting requirements could be used to trigger subsequent actions and satisfy MMRP requirements, if needed
  - Document reporting requirements
- Evaluate representative nature of the current monitoring wells in terms of the formations monitored and flow regimes
- Establish final revised Program objectives and plan to fill identified data gaps, meet compliance requirements, address uncertainty and answer questions
- Prepare draft version of Interim Memorandum I
- Meeting No. 2 – on-site with the Agency to discuss findings and review deliverable – Task 2 and 3 Interim Memorandum. Agency to review and comments on Interim Memorandum.

Deliverable: *Task 2 and 3 final version of Interim Memorandum I.*

Task 4 Coastal Monitoring and Reporting Program Design

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. The area for the final recommendations includes the Pressure Deep Aquifers and the area included in the North Marina Groundwater Model.

- 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 – spec-out costs for an automated reporting system for GWL & Conductivity as a comparison to cost of a field person collecting the measurements
- 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
  - Data transfer from various partners
- 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.)
- Develop preliminary recommendations
- Hold a public outreach meeting that will present the goals of the Plan and receive comments.

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 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
- Prepare Task 4 and 5 Interim Memorandum
- Meeting No. 3 with the Agency

Deliverable: *Task 4 and 5 final version of Interim Memorandum II.*

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 Agency review to obtain comments a final report will be prepared.

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

Deliverable: Draft and Final Integrated Coastal Monitoring and Reporting Plan

County of Monterey

Integrated Coastal Monitoring and Reporting Plan

BUDGET **$88,790**

Professional Service					M Feeney	M. Zidar
TASK DESCRIPTION		HOURS	FEE		$200	$185
Task 1	Kick-off and Mobilization	80	**15,370**		38	42
Task 2	Review and Document Existing Monitoring Networks, Methods, and Costs	78	**14,760**		22	56
Task 3	Identify Data Gaps and Uncertainties	56	**10,660**		20	36
Task4	Coastal Monitoring and Reporting Program Design	100	**19,160**		44	56
Task 5	Evaluate Implementation/Management Alternatives and Costs Comparison for Recommended Network	96	**18,240**		32	64
Task 6	Prepare Draft and Final Report	44	**8,320**		16	40
	TOTAL (LABOR)	**466**	**88,790**		**172**	**294**
					$ 34,400	**$ 54,390**

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	$185/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