



January 14, 2014
Project No. 12-0043

Monterey Peninsula Water Management District
5 Harris Court, Building G
Monterey, California 93942

Attention: Mr. Joe Oliver, Water Resources Manager

Subject: Proposal for Hydrogeologic and Engineering Services for Phase 1 ASR Project;
Fiscal Year 2013-2014 Program

Dear Mr. Oliver:

In accordance with your request, Pueblo Water Resources, Inc. (PWR) is pleased to submit this proposal for extension of our existing hydrogeologic and engineering services for the Monterey Peninsula Water Management District (MPWMD or District) Phase 1 Aquifer Storage and Recovery (ASR) Project (a.k.a. Water Project 1). Presented in this proposal is a detailed scope of work, estimated costs, and schedule to assist the District with various Phase 1 ASR Project-related tasks during the remaining period of Fiscal Year 2013-2014 (FY 2013-2014).

BACKGROUND

The Phase 1 ASR Project represents the initial phase of a permanent ASR project on the Monterey Peninsula, and consists of two full-scale ASR wells (ASR-1 and ASR-2) and associated facilities at the so-called Santa Margarita ASR Facility located at 1910 General Jim Moore Blvd. ASR-1 (formerly known as the SMTIW) and ASR-2 were constructed in 2001 and 2007, respectively. The Phase 1 ASR Project is designed to yield an average of 920 acre feet per year (afy) and has a combined dual-well injection/recharge rate permitted with the State Water Resources Control Board of 6.7 cubic feet per second, equivalent to approximately 3,000 gallons per minute (gpm) of recharge. Recovery of the stored water has been accomplished so far by the use of a temporary disinfection station located near the site entry. In addition to its temporary nature of construction, it also lacks the capacity to disinfect the production of both the ASR-1 and ASR-2 wells; thus stored water can only be recovered via ASR-1 at this time.

The two Santa Margarita ASR wells have been fully operational for several years now, however, portions of the Santa Margarita site facilities have not been completed due to changes in California American Water (CAW or Cal-Am) operational plans for the peninsula ASR projects and delays in obtaining additional site acreage for facilities due to the dissolution of Seaside's Redevelopment Agency and the lack of final closure of the desired land area by the Fort Ord Reuse Authority (FORA). These issues are close to resolution, and with the imminent acquisition of the additional site area, final design of the Santa Margarita site can now be



implemented. The general areas of work to be completed during FY 2013-2014 include the following:

- Acquisition of 1 acre (approximately) of land from Seaside/FORA
- Design of site improvements for the expanded site area
- Design of facility improvements associated with the site expansion
- Design/purchase/installation of CAW-compatible PLC/SCADA equipment for the facility

These final facilities and additional site area improvements will allow the facility to be compatible with CAW facilities when they are constructed.

In addition to the above-noted facilities, the District desires to install a third ASR well (ASR-5) at the Santa Margarita Facility to be located in the site expansion area in order to provide redundancy in ASR operations (injection and/or recovery) or possible future expansion of the ASR program's capacity. The District also desires to investigate the feasibility of expanding the ASR program to include additional ASR well sites.

PURPOSE AND SCOPE

Our proposed work scope will provide the following hydrogeologic and engineering services related to the District's Phase 1 ASR program during the remainder of FY 2013-2014:

- Assist the District with land acquisition and completion of the design of the remaining/expanded Santa Margarita site facilities;
- Design and prepare bid document for the ASR-5 well, and;
- Perform a reconnaissance-level feasibility investigation of expanding the ASR program at various (yet-to-be-determined) sites or areas.

Scope of Services

Task 1 – Santa Margarita Site Expansion Engineering

This task includes engineering services for the completion of the expanded Santa Margarita ASR site facilities. Specific work items in this task include the following:

Task 1.1 – Assistance / Coordination of Land Acquisition with FORA and City. PWR will prepare necessary exhibits, calculations, and supporting documents to assist the District with the land transfer process with FORA and the City. It is assumed that three meetings will also be needed to resolve transfer issues and maintain open communications with the parties.

Task 1.2 – Expanded Site Engineering. PWR will prepare appropriate engineering and design documents to allow qualified Class A general contractors to construct site improvements for the property, including the following:



- Site grading, drainage, and paving for the existing and expanded site area
- Grading / excavation for the expansion of the existing Backflush Pit
- Construction of a truck offloading station for disinfectant supply
- Site landscaping and fencing

It is assumed that three meetings will be required to process and complete the approval of the plan set with the City and FORA, including a presentation to the Seaside City Council for the landscape and site improvements.

Task 1.3 – Site Facilities Engineering. In addition to the general civil/site improvements in Task 1.2 above, PWR will prepare engineering and design documents for the construction of facilities to allow disinfection of both on-site and off-site (i.e., Seaside Middle School ASR Facility and potential future sites) ASR recovered waters. Off-site pipelines are currently stubbed out at the curb face of the site, and will need to be routed up to the existing Chemical Building to allow disinfection. The existing chem room in the building is empty and will require complete engineering design for disinfectant storage and dispensing. This plan set (which will be bid separately from the site improvement plans) will generally include the following:

- Design of CAW system piping extensions to/from GJM Blvd
- Design of the subfloor and double containment floor for the Chem Room
- Design of disinfection station piping, electrical, and instrumentation
- Instrumentation design for disinfectant system

PWR will issue a draft of the completed contract documents for District review and comment, and will incorporate District comments and provide a digital image copy (pdf) of the final contract package.

It is noted that bidding assistance and construction management services are not included in this proposal, as construction is not envisioned to occur sooner than summer 2014 and is dependent on the timing of the acquisition of expanded site area. These services are anticipated to be included in subsequent FY 2014-2015 contract work.

Task 2 – ASR-5 Well Design and Bid Document Preparation

Task 2.1 – Basis-of-Design. PWR will prepare a basis-of-design technical memorandum for ASR-5 based on the hydrogeologic conditions at the Santa Margarita site. The purpose of the memo is to establish the design features of the ASR well, and will include an evaluation of the hydrogeologic setting, a preliminary design for the well, and the materials and methods to be utilized. District staff and other interested parties (e.g., Cal-Am) will then have the opportunity to review and comment on the design. With concurrence of the District on the proposed design, preparation of the technical specifications and bid documents would follow immediately. An opinion of constructed cost will also be provided.



Task 2.2 - Technical Specifications and Bid Documents. Technical specifications for the drilling and construction of ASR-5 will be prepared. The technical specifications are intended to provide adequate detail for bidding and well construction by competent, licensed (C-57) well drilling contractors. One of the key factors in the successful completion of ASR well construction projects is efficient, delay-free field operations; therefore, the contract documents will place special emphasis on contractor qualifications, timely initiation and completion of the work.

PWR will incorporate the well design and specifications for the well into a bid package using existing standard District format. It is assumed that the District will provide PWR with the District's "boiler plate", including general conditions and special insurance requirements, for incorporation into the final contract package. The package will include similar details and content as the previous ASR wells.

PWR will issue a draft of the completed contract documents for District review and comment. PWR will incorporate District comments and provide a digital image copy (pdf) of the final contract package.

It is noted that bidding assistance and construction management services are not included in this proposal, as construction is not envisioned to occur sooner than summer 2014 and is dependent on the timing of the acquisition of expanded site area. These services are anticipated to be included in subsequent FY 2014-2015 contract work.

Task 3 – Facility PLC / SCADA Interface with CAW System

This task will include the design, purchase, and installation of CAW-compatible PLC / SCADA system similar to the equipment recently installed at the Phase 2 (SMS) ASR facility at 2111 GJM Blvd. Work for this task will be provided by Controls System West of Petaluma, California, and will maintain the already-established communications and data acquisition protocols utilized at the SMS and other CAW facilities. Specific items included in this task are as follows:

- Design of PLC / SCADA system
- Purchase and installation assistance of equipment
- Purchase of flow alarm and monitoring instrumentation for ASR 1 & 2

Task 4 – ASR Expansion Feasibility Study

This task consists of conducting a reconnaissance-level feasibility investigation of expanding the ASR program. Based on our discussions, it is our understanding that the District desires to evaluate the feasibility of additional ASR sites in the SGB and/or the Tularcitos Basin. The investigation is anticipated to consist of the following:

- Identification of potential ASR well sites
- Estimates of injection capacity at each identified potential site
- General identification of the infrastructural requirements necessary to integrate the potential sites into the existing distribution system(s)



- Provision of planning-level cost estimates to develop each potential site into an operable ASR facility.

Because the investigation is reconnaissance in nature and the number and locations of potential ASR sites have yet to be determined, the exact level of effort that may be required is unknown at this time. For budgetary purposes, therefore, we have included 140 hours of professional staff time for this task.

Services Not Included

Services which are (or may be) necessary for the completion of this project, which are not included in our proposal include the following:

- Water-quality sampling and analyses (assumed District and/or CAW provided);
- Construction of site facilities (except as noted);
- Permit fees;
- Cost of water, electricity, or other utilities;
- Any others items not specifically included in PWR's scope of services.

Estimated Fees and Schedule

Based on the scope of services presented herein, we estimate the fees for our services will be approximately \$319,815, which will be billed on a time-plus-expenses basis in accordance with our current Fee Schedule (attached). An estimated fee summary worksheet is attached summarizing the estimated man-hours and costs per task/work item. A 10 percent contingency has been noted in the attached budget summary (total with contingency is \$351,797) in the event that unforeseen project complications or constraints arise. We recommend the contingency be held for authorization by District staff upon written justification by PWR.

We understand that in order to authorize this work your Board must first approve a formal contract amendment to our existing Professional Services Agreement. We also understand implementation of individual tasks described herein are subject to advance approval from District staff as certain tasks may be contingent upon the District's reimbursement funding approval process. Based on our current workload, we believe that we can commence work within one week of your authorization and that the work will be completed by the end of the fiscal year (June 30, 2014).

We appreciate the opportunity to provide assistance to the District on this important water supply project. If you require additional information regarding this or other matters, please call us.



Sincerely,

PUEBLO WATER RESOURCES, INC.

Robert C. Marks, P.G., C.Hg
Principal Hydrogeologist

Stephen P. Tanner, P.E.
Principal Engineer

RCM:SPT

Attachments: 2014 Fee Schedule
Cost Estimation Spreadsheet

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

Professional Services for Phase 1 ASR Project

Fiscal Year 2013-2014

PWR Project No.: 12-0043



ESTIMATED FEE SUMMARY

LABOR		Principal Professional	Senior Professional	Project Professional	Staff Professional	Technician	Drafting	WP	Hours by Task	Estimated Task Cost
Hourly Fee		\$185	\$170	\$155	\$125	\$115	\$100	\$80		
Task No.	Task Description									
1.1	FORA and City planning / permit coord	75	40		25		55	12	207	\$30,260
1.2	Site Civil Engineering	105							105	\$19,425
1.3	Facilities Engineering (Elect. / Chem sys/piping)	90		135			80		305	\$45,575
2	ASR-5 Design and Specifications	18	60	-	-	-	4	10	92	\$14,730
3	ASR Expansion Feasibility Study	32	100	-	-	-	8	6	146	\$24,200
4	PLC- SCADA Unit design / const / install	16	-	-	-	-	-	6	22	\$3,440
		-	-	-	-	-	-	-	0	\$0
Hours by Labor Category:		336	200	135	25	0	147	34		
Costs by Labor Category:		\$62,160	\$34,000	\$20,925	\$3,125	\$0	\$14,700	\$2,720		
									Total Labor Hours:	877
									Total Labor Costs:	\$137,630

OTHER DIRECT COSTS (ODC's)				
Task No.	Item	Units	Unit Price	Fee
1	Vehicle	Daily	\$75	\$0
1	Travel Per Diem	Daily	\$150	\$0
3	Vehicle	Daily	\$75	\$375
3	Travel Per Diem	Daily	\$150	\$750
Subtotal ODCs:				\$1,125

OUTSIDE SERVICES				
Task No.	Item	Units	Unit Price	Fee
1.2	Structural design (chem rack & Dbl Cntmnt sys)	1	\$7,800	\$7,800
1.2	Geotech inv & engr	1	\$9,500	\$9,500
1.2	Landscape	1	\$6,600	\$6,600
1.3	Disinfection Elect & Instr Engr	1	\$36,500	\$36,500
4	PLC des / const/install	1	\$104,200	\$104,200
				\$0
Subtotal Outside Services:				\$164,600
Subtotal Outside Services w/ Markup (10%):				\$181,060

COST SUMMARY	
Labor	\$137,630
Other Direct Costs	\$1,125
Outside Services	\$181,060
Subtotal:	\$319,815
10 % Contingency	\$31,982
TOTAL ESTIMATED PROJECT COST:	\$351,797