

SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: December 8, 2016

RFS NO. 2017-01

(To be filled in by WATERMASTER)

TO: Jonathan Lear

FROM: Robert Jaques

Monterey Peninsula Water Management District
PROFESSIONAL

WATERMASTER

Services Needed and Purpose:

Perform certain Tasks contained within the Watermaster's Monitoring and Management Plan for 2017 (See detailed Scope of Work in Attachment 1).

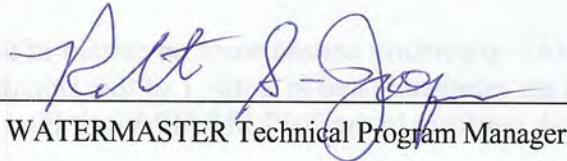
Completion Date: The work of this RFS No. 2017-01 shall be completed in accordance with the schedule contained in Attachment 2.

Method of Compensation: Time and Expense Payment Method (As defined in Section V of Agreement.)

Total Price Authorized by this RFS: \$ 53,454.00 (See Attachment 3 for a Breakdown of this Total Price. Cost is authorized only when evidenced by signature below.)

Total Price may not be exceeded without prior written authorization by WATERMASTER in accordance with Section V. COMPENSATION.

Requested by:


WATERMASTER Technical Program Manager

Date: 12/7/16

Agreed to by:


PROFESSIONAL

Date: 12/5/16

ATTACHMENT 1

Detailed Scope of Work for RFS No. 2017-01

Background:

The Watermaster Board approved the Budget for the 2017 Management and Monitoring Program Work Plan (hereinafter referred to as the “2017 M&MP Work Plan”) at its meeting of October 5, 2016. The work and cost authorized by this RFS No. 2017-01 is slightly revised from the work and cost originally described under Task I.2.b.3 of the 2017 M&MP Work Plan when it was approved by the Board. The revisions consist of (1) deleting the water quality sampling at the Sentinel Wells (that work is now being performed by another contractor) and (2) performing one additional verification sampling event at the Ord Terrace Shallow Well.

Performing the verification water quality sampling of the Ord Terrace Shallow Well is being recommended in the 2016 Seawater Intrusion Analysis Report (SIAR), prepared by HydroMetrics. This results from the finding, as discussed in the SIAR, that increasing chloride levels have been observed at this well, although other geochemical evidence suggests this may not be incipient seawater intrusion.

The first step listed in the Watermaster’s Seawater Intrusion Response Plan (SIRP) is to resample, as soon as possible, any well which is found to have water quality that may be indicative of seawater intrusion. Therefore, in accordance with the SIRP resampling of the Ord Terrace Shallow Well has been included in the scope and cost of this RFS. The net cost impact of these two revisions is a reduction of \$4,175 from the amount that was budgeted for this work in the M&MP Operations Budget for 2017 that was approved by the Watermaster Board in October 2016.

This RFS No. 2017-01 authorizes PROFESSIONAL to perform certain work on certain of the Tasks described in the 2017 M&MP Work Plan. The Task numbers listed in Table 1 of this Detailed Scope of Work for RFS No. 2017-01 correspond to the Task numbers in the 2017 M&MP Work Plan.

Table 1

M&MP TASK NO.	TASK DESCRIPTION	WORK TO BE PERFORMED
I. 2. a.1	Conduct ongoing data entry/ database maintenance	<p>PROFESSIONAL will perform water production, water level, and water quality data entry into WATERMASTER’s database, and data editing as necessary, and will provide appropriate quality control and quality assurance for this data. Upon request from WATERMASTER, PROFESSIONAL will also enter other data into the database, such as updated information pertaining to well records. WATERMASTER will provide PROFESSIONAL with water production data.</p> <p>PROFESSIONAL will review the water production data provided by WATERMASTER for quality assurance and quality control purposes, and will notify WATERMASTER of any discrepancies PROFESSIONAL observes in this data. WATERMASTER will followup as appropriate with the water producers to resolve any such discrepancies. PROFESSIONAL will also host and maintain the Watermaster’s Database. Any changes to WATERMASTER’s database will be authorized under a separate agreement for performing such work for WATERMASTER. That agreement will either be with PROFESSIONAL or with another consultant.</p> <p>PROFESSIONAL will prepare quarterly water production, water level, and water quality tabulations in Excel format and will provide those tabulations to another WATERMASTER Consultant who will post them to the WATERMASTER’s website, so it will be accessible to the public and other interested parties.</p>
I. 2. b. 2	Collect Monthly Water Levels	<p>The monitoring wells from which water level data is to be collected by PROFESSIONAL are listed under the heading “MONITORING TO BE PERFORMED BY PROFESSIONAL” in the column titled “Level” in Table 2. PROFESSIONAL will visit each of the indicated wells at the frequencies shown in Table 2 in order to obtain the water level data. At these visits PROFESSIONAL will measure and record water levels by either taking manual water levels using an electric sounder, or by dataloggers. Dataloggers which have been installed on the four Coastal Sentinel, the four ASR monitoring, and the inland (BLM site) monitoring wells will be used to measure the levels at those wells.</p> <p>This Task budget amount includes the purchase and installation of four new and/or replacement dataloggers at a price of \$680, plus \$50 for installation parts, for each datalogger.</p> <p>All of the other wells will be manually measured.</p>

M&MP TASK NO.	TASK DESCRIPTION	WORK TO BE PERFORMED
I. 2. b. 3	Collect Quarterly Water Quality Samples	<p>The monitoring wells from which water quality data is to be collected by PROFESSIONAL are listed under the heading “MONITORING TO BE PERFORMED BY PROFESSIONAL” in the column titled “Quality” in Table 2. PROFESSIONAL will visit each of the indicated wells at the frequencies shown in Table 2 in order to obtain the water quality samples, and will perform water quality analyses on these samples. The water quality constituents that will be measured in these analyses are: Specific Conductance (micromhos/cm), Total Alkalinity (as CaCO₃), Bicarbonate (as HCO₃.), pH, Chloride, Sulfate, Ammonia Nitrogen (as NH₃), Nitrate Nitrogen (as NO₃), Total Organic Carbon, Calcium, Sodium, Magnesium, Potassium, Iron, Manganese, Orthophosphate, Total Dissolved Solids, Hardness (as CaCO₃), Boron, Bromide, and Fluoride. For the following wells listed in Table 2, Barium and Iodide will also be measured quarterly: MSC Shallow, MSC Deep, PCA-W Shallow, PCA-W Deep, MPWMD #FO-09 Shallow, and MPWMD #FO-09 Deep. The data may either come from water quality samples that are collected by the airlift method, by the positive displacement method during induction logging of these wells and/or other data gathering techniques, or combinations of these methods, at the discretion of PROFESSIONAL, and will be submitted to a State-certified analytical laboratory for analysis.</p> <p>Under this Task in 2013 retrofitting to use the low-flow purge approach for getting water quality samples was completed on all of the wells that are sampled. This sampling equipment sits in the water column and may periodically need to be replaced or repaired. Accordingly, an allowance to perform maintenance on previously installed equipment has been included in this Task. Also, in the event a sampling pump is found to be no longer adequate due to declining groundwater levels, an allowance of \$2,000 to purchase a replacement sampling pump has been included in this Task.</p> <p>Performing one additional water quality verification sampling at the Ord Terrace Shallow Monitoring Well has been included under this Task, as recommended in the 2016 SIAR.</p>

M&MP TASK NO.	TASK DESCRIPTION	WORK TO BE PERFORMED
I. 2. b. 6	Reports	<p>PROFESSIONAL will prepare and submit reports to WATERMASTER according to the following schedule.</p> <ol style="list-style-type: none"> 1. PROFESSIONAL will review the water quality and water level data at the end of each quarter of the Water Year and will provide to WATERMASTER tabularized data summaries of the WQ/WL data twice per year, once for the Q1 and Q2 period and once for the Q3 and Q4 period, so this data can be posted to WATERMASTER’s website. These two reports will be accompanied by brief cover letters describing any missing data or data collection irregularities that are encountered during the reporting periods. No reporting on a quarterly basis is required. However, PROFESSIONAL will promptly notify WATERMASTER in writing if PROFESSIONAL identifies any missing data or data collection irregularities that were encountered during the quarterly reporting periods. 2. PROFESSIONAL will prepare one annual report summarizing the water quality and water level data for the Water Year, and containing tables of this data for the complete Water Year. The report will include a brief cover letter describing any missing data or data collection irregularities that were encountered during the reporting period, and any recommendations for changes to be made to the data collection program.
I.2.b.7	CASGEM Data Submittal	<p>PROFESSIONAL will compile and submit data on the Watermaster’s “Voluntary Wells” into the State’s CASGEM groundwater management database. The term “Voluntary Well” refers to a well that is not currently having its data reported into the CASGEM system, but for which the Watermaster obtains data. This will be done in the format and on the schedule required by the Department of Water Resources under the Sustainable Groundwater Management Act.</p>
I.4.c	Review Seawater Intrusion Analyses	<p>WATERMASTER will have another consultant perform analyses and prepare mapping and other documents pertaining to seawater intrusion detection. PROFESSIONAL may participate in meetings with that consultant during the course of its work, and may provide review comments and recommendations to WATERMASTER regarding this work as it is being carried out by that consultant.</p>

Table 2. Monitoring Wells

WELL NAME AND SUBAREA LOCATION ⁽⁸⁾	MONITORING NETWORK ⁽¹⁾		MONITORING REQUIRED BY DECISION ⁽²⁾		MONITORING CURRENTLY BEING PERFORMED BY PROFESSIONAL NOT SUBJECT TO THIS RFS ⁽³⁾		MONITORING TO BE PERFORMED BY PROFESSIONAL UNDER THIS RFS ⁽⁴⁾			
	Professional's	Watermaster's	Level (Monthly)	Quality (Annually)	Level		Level			
					Frequency	Quarterly	Monthly	Quarterly	Annually	Quarterly
Northern Coastal Subarea (and vicinity)										
MSC-Shallow		X					X			X
MSC-Deep		X					X			X
PCA-W Shallow		X						X		X
PCA-W Deep		X						X		X
PCA-E (Multiple) Shallow	X				X					X
PCA-E (Multiple) Deep	X				X					X
Ord Grove Test-Shallow/Deep	X				X					
Paralta Test-Shallow/Deep	X				X					
Ord Terrace-Shallow ⁽¹¹⁾	X				X					X
Ord Terrace-Deep	X				X					X
MPWMD #FO-09-Shallow	X				X					X
MPWMD #FO-09-Deep	X				X					X
MPWMD #FO-10-Shallow		X					X			X
MPWMD #FO-10-Deep		X					X			X
Fort Ord Monitor MW-B-23-180-Dune/Aromas		X					X			X
CDM MW-1-Dune/Aromas		X					X			X
CDM MW-2-Dune/Aromas		X					X			X
CAW Del Monte Observation-Shallow		X								X
SBWM MW-1-Deep (Purisima) ⁽⁶⁾		X						X		
SBWM MW-2-Deep (Purisima) ⁽⁶⁾		X						X		
SBWM MW-3-Deep (Purisima) ⁽⁶⁾		X						X		
SBWM MW-4-Deep (Purisima/Santa Margarita) ⁽⁶⁾		X						X		
Northern Inland Subarea (and vicinity)										
MPWMD #FO-01-Shallow	X								X	
MPWMD #FO-01-Deep	X								X	
MPWMD #FO-07-Shallow	X								X	
MPWMD #FO-07-Deep	X								X	
MPWMD #FO-08-Shallow	X								X	
MPWMD #FO-08-Deep	X								X	
MPWMD #FO-11-Shallow	X								X	
MPWMD #FO-11-Deep	X								X	
SBWM MW-5-Shallow (Paso Robles) ⁽⁶⁾		X						X		X
SBWM MW-5-Deep (Santa Margarita) ⁽⁶⁾		X						X		X

Table 2 (Continued)

Southern Coastal Subarea (and vicinity)																					
Flumas '90 Test-Deep													X								
K-Mart-Dune/Aromas													X								
CDM MW-3-Dune/Aromas													X								
CDM MW-4-Dune/Aromas													X								
MW-BW-08A-Dune/Aromas													X								
MW-BW-09-180-Shallow													X								
Shea													X								
Laguna Seca Subarea (and vicinity)																					
MPWMD #FO-03-Shallow													X								
MPWMD #FO-03-Deep													X								
MPWMD #FO-04-Shallow (E)													X								
MPWMD #FO-04-Deep (W)													X								
MPWMD #FO-05-Shallow													X								
MPWMD #FO-05-Deep													X								
MPWMD #FO-06-Shallow													X								
MPWMD #FO-06-Deep													X								
Justin Court (RR M2S)-Shallow													X								
LS Pistol Range (Mo Co TH-1)-Deep													X								
York Rd-West (Mo Co MW-1 D)-Deep													X								
Seca Place (Mo Co MW-2)-Deep													X								
Robley Shallow (North) (Mo Co MW-3S)-Shallow													X								
Robley Deep (South) (Mo Co MW-3D)-Deep													X								
LS No. 1 Subdivision-Deep													X								
Blue Larks-pur-East-End-Believed to be Deep													X								
York School-Shallow													X								
Laguna Seca Driving Range (SCS-Deep)-Shallow													X								
Laguna Seca County Park #2-Shallow													X								
CAW Granite Construction-Deep													X								
CAW Ryan Ranch (RR) #7-Deep													X								
Laguna Seca Golf New #12-Deep ⁽⁹⁾													X								
Pasadera Main Gate-Deep													X								
No. of Wells in Each Network⁽⁹⁾													30	4	0	8	24	14	10	20	6

Notes:

- (1) The wells within the Professional's Monitoring Well Network are the wells that PROFESSIONAL monitors as part of PROFESSIONAL's own monitoring program. The wells within the Watermaster's Monitoring Well Network are the wells to be monitored under this RFS.
- (2) Monitoring required by the Decision is the monitoring described in the Monitoring and Management Program which was incorporated by reference in the Decision of the Court dated February 9, 2007.
- (3) Monitoring currently being performed by PROFESSIONAL not subject to this RFS is monitoring work PROFESSIONAL is performing under other monitoring programs. This monitoring is not a part of this RFS.
- (4) Monitoring to be performed by PROFESSIONAL is the monitoring to be performed under this RFS.
- (5) The Watermaster's Monitoring Well Network includes the wells recommended in the Enhanced Monitoring Well Network report prepared by PROFESSIONAL, dated October 23, 2007, plus the 4 new Sentinel Wells installed in 2007 and the BLM well installed in 2011.
- (6) The Seaside Basin Watermaster (SBWM) wells are all equipped with dataloggers that obtain measurements at least daily, but will be manually sounded for water level on a quarterly basis for calibration purposes.
- (7) Not used.
- (8) Shallow=Paso Robles; Deep=Santa Margarita or Purisima.
- (9) This well is so close to the Laguna Seca Old No. 12 well that no water level monitoring is necessary.
- (10) CAW East Fence Shallow well can no longer be sampled and was therefore dropped from this list.
- (11) The Ord Terrace Shallow well will be verification-sampled early in WY 2017 as recommended by the 2016 SIAR.

ATTACHMENT 2 SCHEDULE

MPWMD RFS No. 2017-01 Work Schedule

ID	Task Name	2017												2018									
		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1	1.2.a DATABASE MANAGEMENT																						
2	1.2.a.1 Conduct Ongoing Data Entry/Database Maintenance																						
3	1.2.b DATA COLLECTION PROGRAM																						
4	1.2.b.2 Collect Monthly Water Levels (MPWMD)																						
5	1.2.b.3 Collect Quarterly Water Quality Samples (MPWMD)																						
6	1.2.b.6 Reports (from MPWMD)																						
7	Water Level and Water Quality Data Summaries for 1st & 2nd Quarters																						
8	Water Level and Water Quality Data Summaries for 2nd & 3rd Quarters																						
9	Annual Water Production, Water Level, and Water Quality Report for 2017																						
10	Watermaster Prepares Report Regarding Long-Term Trends in Water Levels in Monitoring Wells																						
11	1.2.b.7 CASGEM Data Submittal																						
12	1.4.c MPWMD Provides Assistance in Seawater Intrusion Detection																						

ATTACHMENT 3 SUMMARY OF ESTIMATED COSTS

M&M/TASK NO.	LABOR HOURS		HOURLY RATE	SUPPLIES AND MATERIALS		TOTAL
	BREAKDOWN	TOTAL		BREAKDOWN	TOTAL	
I. 2. a. 1	12 mo. @ 8 hrs/mo.	96	\$112	Other services needed to host and maintain Watermaster's Database, estimate \$300 for the year.	\$300	\$11,052
I. 2. b. 2.	12 mo. @ 4 hrs/mo.	48	\$89	2 replacement dataloggers @ \$680, plus \$100 for installation parts; purchase and install one new datalogger on Well PCA West @ \$680 plus \$50 for parts; purchase one datalogger @ \$680 plus \$50 in parts to keep in inventory as a spare if needed.	\$2,920	\$7,192
I. 2. b. 3.	Quarterly WQ wells (Table 2): MPWMD Coastal wells (6 wells - shallow and deep aquifers @ 3 sites: MSC, PCA-W, FO-09), plus one additional verification WQ sample at Ord Terrace Shallow Well. Labor: 4 events @ 16 hrs/event Annual WQ wells (Table 2): 1 event @ 28 hrs/event = 28 hrs	64	\$89	Fuel: 4 events @ \$10/site x 3 sites = \$120; Lab costs: 4 events @ \$225/well x 7 wells = \$6,300; plus one verification sample lab cost = \$225.	\$6,645	\$12,341
I. 2. b. 3.	WM Sentinel and Northern Inland wells: download/store dataloggers, 4 events @ 2 hrs/event Compile data: 4 events @ 24 hours/event	8	\$89	BLM site: Eductor setup (use MPWMD portable unit): \$0 x 1 site = \$0; Airlift equip.: \$100 x 1 site x 1 event = \$100; Fuel: \$20 x 1 site x 1 event = \$20. Lab cost (annual WQ wells): \$175 x 15 wells x 1 event = \$2,625; maintenance on previously installed sample collection equipment = \$1,000. One-time cost, if necessary for replacing a well sampling pump if the existing pump is found to be inadequate due to dropping groundwater levels = \$2,000.	\$5,745	\$8,237
I. 2. b. 6	Data summaries and 1-annual report	24	\$112		\$0	\$2,688
I.2.b.7	CASGEM Data Submittal for Watermaster's Voluntary Wells	16	\$112		\$0	\$1,792
I. 4. c	Provide SWI supplemental data and review.	8	\$112		\$0	\$896
TOTAL ESTIMATED COST =					\$53,454	

Notes:

1. Vehicle mileage is included in the labor costs above.
2. Regardless of the use of the term "Estimated Cost" in this RFS, if the work of this RFS is to be compensated for using Lump Sum Payment method, it is understood and agreed to by PROFESSIONAL that the Total Price listed on page A-1 of this RFS is binding and limiting as defined in Section V of the Agreement.