

SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: January 1, 2016

RFS NO. 2016-01

(To be filled in by WATERMASTER)

TO: Joe Oliver

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 2015 (See detailed Scope of Work in Attachment 1).

Completion Date: The work of this RFS No. 2016-01 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: \$ 82,150.00 (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:  Date: 12/12/15
WATERMASTER Technical Program Manager

Authorized by:  Date: 12/14/15
WATERMASTER Chief Executive Officer

Agreed to by:  Date: 12-10-15
PROFESSIONAL

ATTACHMENT 1

Detailed Scope of Work for RFS No. 2016-01

Background:

The Watermaster Board approved the Budget for the 2016 Management and Monitoring Program Work Plan (hereinafter referred to as the “2016 M&MP Work Plan”) at its meetings of October 21 and December 2, 2015.

This RFS No. 2016-01 authorizes PROFESSIONAL to perform certain work on certain of the Tasks described in the 2016 M&MP Work Plan. The Task numbers listed in Table 1 of this Detailed Scope of Work for RFS No. 2016-01 correspond to the Task numbers in the 2016 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>

M&MP TASK NO.	TASK DESCRIPTION	WORK TO BE PERFORMED
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 possible replacement of up to 2 dataloggers at a unit price of \$750, plus \$100 for installation parts.</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 (Ba + I) will also be measured annually: SBWM MW-1 Deep (from two discrete depth zones), SBWM MW-2 Deep (from two discrete depth zones), SBWM MW-3 Deep (from two discrete depth zones), and SBWM MW-4 Deep (from two discrete depth zones)– 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, the Laguna Seca Driving Range sampling pump is no longer adequate due to declining groundwater levels, so \$2,000 to purchase a replacement sampling pump has been included in this Task.</p> <p>\$1,000 has been included in this Task to perform additional semi-annual water quality sampling at Sentinel Well SBMW-1 as recommended in the 2014 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 summarizing and analyzing the data that is collected, according to the following schedule:</p> <ol style="list-style-type: none"> 1. One combined report summarizing and analyzing the water quality and water level data from the 1st & 2nd Quarters of the Water Year. 2. One annual report summarizing and analyzing the water quality and water level data from the 3rd & 4th Quarters of the Water Year, and containing tables consolidating the data for the complete Water Year and a narrative summarization of the findings, conclusions, and recommendations for the complete Water Year. This annual report may include, as attachments, additional documentation as needed to support the findings, conclusions and recommendations. 3. One report containing a compilation of the available water level records for monitor wells that are part of the Seaside Basin Monitoring & Management Plan (M&MP) in a format to allow assessment of the long-term trends in water levels in each of the wells. This report will contain a table showing pertinent well construction data, existing average annual water level changes, and projected future water level changes. This will be accompanied by a brief description and recommendations regarding those monitor wells for which future monitoring complications may arise due to falling water levels.
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 will participate in meetings with that consultant during the course of its work, and will provide review comments and recommendations to WATERMASTER regarding this work as it is being carried out by that consultant.</p>

Table 2

WELL NAME AND SUBAREA LOCATION ⁽⁶⁾	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		Quality	
					Frequency		Frequency		Frequency	
					Monthly	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	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			
CDM MW-2-Dune/Aromas		X					X			
CAW Del Monte Observation-Shallow		X								X
SBWM MW-1-Deep (Purisima) ⁽⁶⁾		X						X		X
SBWM MW-2-Deep (Purisima) ⁽⁶⁾		X						X		X
SBWM MW-3-Deep (Purisima) ⁽⁶⁾		X						X		X
SBWM MW-4-Deep (Purisima/Santa Margarita) ⁽⁶⁾		X						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)

WELL NAME AND SUBAREA LOCATION ⁽⁶⁾	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		Quality	
					Frequency		Frequency		Frequency	
					Monthly	Quarterly	Monthly	Quarterly	Annually	Quarterly
Southern Coastal Subarea (and vicinity)										
Plumas '90 Test-Deep		X					X			
K-Mart-Dune/Aromas		X					X			
CDM MW-3-Dune/Aromas		X					X			
CDM MW-4-Dune/Aromas		X					X			
MW-BW-08A-Dune/Aromas		X					X			
MW-BW-09-180-Shallow		X					X			
Laguna Seca Subarea (and vicinity)										
MPWMD #FO-03-Shallow	X					X				
MPWMD #FO-03-Deep	X					X				
MPWMD #FO-04-Shallow (E)	X					X				
MPWMD #FO-04-Deep (W)	X					X				
MPWMD #FO-05-Shallow	X					X				
MPWMD #FO-05-Deep	X					X				
MPWMD #FO-06-Shallow	X					X				
MPWMD #FO-06-Deep	X					X				
Justin Court (RR M2S)-Shallow	X					X				
LS Pistol Range (Mo Co TH-1)-Deep	X					X				
York Rd-West (Mo Co MW-1 D)-Deep	X					X				
Seca Place (Mo Co MW-2)-Deep	X					X				
Robley Shallow (North) (Mo Co MW-3S)-Shallow	X					X				
Robley Deep (South) (Mo Co MW-3D)-Deep	X					X				
LS No. 1 Subdivision-Deep	X					X				
Blue Larkspur-East End-Believed to be Deep	X					X				
York School-Shallow		X	X							X
Laguna Seca Driving Range (SCS-Deep)-Shallow		X						X		X
Laguna Seca County Park #2-Shallow		X	X							X
CAW Granite Construction-Deep		X						X		
CAW Ryan Ranch (RR) #7-Deep		X	X							X
Laguna Seca Golf New #12-Deep ⁽⁹⁾		X								X
Pasadera Main Gate-Deep		X	X							X
No. of Wells in Each Network⁽⁵⁾	32	29	4	0	8	24	14	9	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. SBWM MW-4 Deep is to be sampled for water quality semi-annually.
- (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.

ATTACHMENT 2 SCHEDULE

MPWMD RFS No. 2016-01 Work Schedule		2016												2017									
ID	Task Name	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1	I.2.a DATABASE MANAGEMENT																						
2	I.2.a.1 Conduct Ongoing Data Entry/Database Maintenance																						
3	I.2.b DATA COLLECTION PROGRAM																						
4	I.2.b.2 Collect Monthly Water Levels (MPWMD)																						
5	I.2.b.3 Collect Quarterly Water Quality Samples (MPWMD)																						
6	I.2.b.6 Reports (from MPWMD)																						
7	Watermaster Prepares Combined Quarterly Water Production, Water Level, and Water Quality Reports for 1st & 2nd Quarters											◆ 6/6											
8	Watermaster Prepares Annual Water Production, Water Level, and Water Quality Report for 2016															◆ 10/31							
9	Watermaster Prepares Report Regarding Long-Term Trends in Water Levels in Monitoring Wells																						
10	I.4.c MPWMD Provides Assistance in Seawater Intrusion Detection																						

ATTACHMENT 3 SUMMARY OF ESTIMATED COSTS

M&MP 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 @ \$750, plus \$100 for installation parts	\$1,600	\$5,872
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 quarterly WQ well sample. Labor: 4 events @ 16 hrs/event	64	\$89	Fuel: 4 events @ \$10/site x 3 sites = \$120; Lab costs: 4 events @ \$225/well x 7 wells = \$6,300	\$6,420	\$12,116
	Annual WQ wells (Table 2): 1 event @ 28 hrs/event = 28 hrs	28	\$89	BLM site (no sampling required in 2016): Eductor setup (use MPWMD portable unit): \$0 x 1 site = \$0; Airlift equip.: \$100 x 1 site x 0 event = \$0; Fuel: \$20 x 1 site x 0 event = \$0. 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 for replacing LS Driving Range well pump = \$2,000.	\$5,625	\$8,117
	WM Sentinel and Northern Inland wells: download/store dataloggers, 4 events @ 2 hrs/event	8	\$89	N/A	\$0	\$712
	WM Sentinel wells: Semi-annual induction logging -- all 4 sites; annual WQ (Jul) from each aquifer at each site (2 per well site) -- 4 sites; semi-annual WQ (Jan) -- SBWM MW-1 and MW-4 only. Total labor = 2 events @ 4 hr/event.	8	\$89	Induction logging: 2 events = \$23,705 Cost includes semi-annual induction log collection, water sample collection, WQ analyses, misc site maintenance costs; WQ samples are collected annually at all 4 sites; additional semi-annual WQ at MW-4 (& MW-1 per 2014 SIAR for add'l \$1,000).	\$24,705	\$25,417
	Compile data: 4 events @ 24 hours/event	96	\$89	N/A	\$0	\$8,544
I. 2. b. 6	1 - combined Q1 and Q2 quarterly report @ 18 hrs	18	\$112	N/A	\$0	\$2,016
	1- annual report @ 24 hrs	24	\$112	N/A	\$0	\$2,688
	1- well records report	24	\$112	N/A	\$0	\$2,688
I. 4. c	Provide SWI supplemental data and review	24	\$122	N/A	\$0	\$2,928
TOTAL ESTIMATED COST =					\$82,150	

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.