SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: January 1, 2021

RFS NO. 2021-01 .
(To be filled in by WATERMASTER)

TO: Jonathan Lear
Monterey Peninsula Water Management District
PROFESSIONAL

FROM: Robert Jaques .
WATERMASTER

Services Needed and Purpose:
Perform certain Tasks contained within the Watermaster's Monitoring and Management Plan for 2021 (See detailed Scope of Work in Attachment 1).

Completion Date: The work of this RFS No. 2021-01 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: $ 51,118.00 (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: Robert Jaques Date: 10/2/20
WATERMASTER Technical Program Manager

Agreed to by: David J Stoldt Date: July 29, 2020
PROFESSIONAL

ATTACHMENT 1

Detailed Scope of Work for RFS No. 2021-01

Background:

The Watermaster Board approved the Budget for the 2021 Monitoring and Management Program (hereinafter referred to as the "2021 M&MP") at its meeting of September 2, 2020.

This RFS No. 2021-01 authorizes PROFESSIONAL to perform certain work on certain of the Tasks described in the 2021 M&MP. The Task numbers listed in Table 1 of this Detailed Scope of Work for RFS No. 2021-01 correspond to the Task numbers in the 2021 M&MP.

Table 1

I. 2. a.1	Conduct ongoing data entry/ database maintenance	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. Other than an annual reporting of data to another WATERMASTER Consultant at the end of the Water Year, as mentioned below, no reporting of water level or water quality data during the Water Year is required. However, PROFESSIONAL will promptly notify the Watermaster of any missing data or data collection irregularities that were encountered during the quarterly reporting period. 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. 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. At the end of the Water Year PROFESSIONAL will prepare an annual water production, water level, and water quality tabulation in Access format and will provide the tabulation to another WATERMASTER Consultant who will use that data in the preparation of the SIAR under Task No. I.4.c of the Monitoring and Management Program.

I. 2. b. 2	Collect Monthly Water Levels	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. The wells where the use of dataloggers is feasible or appropriate have already been equipped with dataloggers. This Task includes the purchase of one datalogger @ $700 to keep in inventory as a spare if needed, plus $50 in parts for the datalogger. All of the other wells will be manually measured.

I. 2. b. 3	Collect Quarterly Water Quality Samples	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 $CaCO_3$), Bicarbonate (as HCO_{3-}), pH, Chloride, Sulfate, Ammonia Nitrogen (as NH_3), Nitrate Nitrogen (as NO_3), Total Organic Carbon, Calcium, Sodium, Magnesium, Potassium, Iron, Manganese, Orthophosphate, Total Dissolved Solids, Hardness (as $CaC0_3$), 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. Retrofitting to use the low-flow purge approach for getting water quality samples has already been completed on all of the wells that are sampled on a quarterly basis. Retrofitting of the wells that are sampled on an annual basis is not warranted. This sampling equipment sits in the water column and may periodically need to be replaced or repaired. Accordingly, an allowance of $1,000 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, or if a sampling pump needs to be installed on a Sentinel Well, an allowance of $2,000 to purchase a sampling pump has been included in this Task.
I.2.b.7	CASGEM Data Submittal	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.
I.4.c	Review Seawater Intrusion Analyses	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.

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]			
					Level Frequency		Level Frequency		Quality Frequency	
	Professional's	Watermaster's	Level (Monthly)	Quality (Annually)	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[11]	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[13]		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		
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)

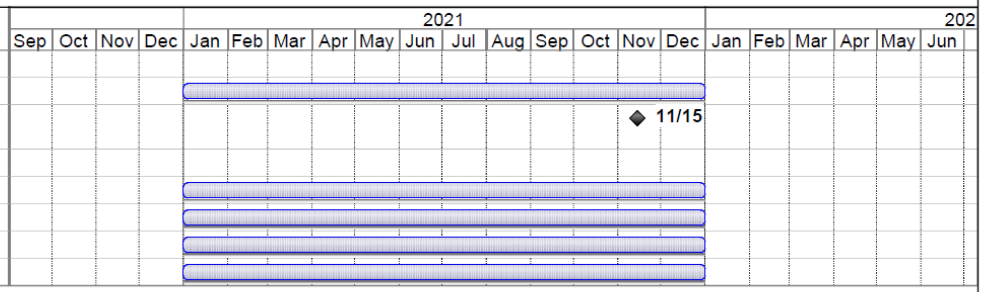
Southern Coastal Subarea (and vicinity)										
Plumas '90 Test-Deep		X					X			
K-Mart-Dune/Aromas		X					X			
CDM MW-3-Dune/Aromas		X					X			
CDM MW-4-Dune/Aromas		X					X			
MW-BW-08A-Dune/Aromas		X					X			
MW-BW-09-180-Shallow		X					X			
Shea		X						X		
Sand City Public Works Well		X					X		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 [12]		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	31	4	0	8	24	15	10	15	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) Ord Terrace deep well is obstructed and can no longer be sampled.
(12) Laguna Seca Driving Range Shallow cannot be sampled because water levels have fallen so far that they are below the level that an electric pump or a pneumatic pump can be used due to obtain samples.
(13) MW-BW-23-180 was no longer in use and was destroyed by the U.S. Army so it cannot be sampled.

ATTACHMENT 2

MPWMD RFS No. 2021-01 Work Schedule

ID	Task Name
1	**I.2.a DATABASE MANAGEMENT**
2	**I.2.a.1 Conduct Ongoing Data Entry/Database Maintenance**
3	Annual Water Production, Water Level, and Water Quality Tabulation for 2021
4	**I.2.b DATA COLLECTION PROGRAM**
5	**I.2.b.2 Collect Monthly Water Levels (MPWMD)**
6	**I.2.b.3 Collect Quarterly Water Quality Samples (MPWMD)**
7	**I.2.b.7 CASGEM Data Submittal**
8	**I.4.c MPWMD Provides Assistance in Seawater Intrusion Detection**



Work Schedule for MPWMD RFS No 2021-01 7-14-20.mpp

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ATTACHMENT 3 SUMMARY OF ESTIMATED COSTS

M&MP TASK NO.	LABOR HOURS		HOURLY	SUPPLIES AND MATERIALS		TOTAL
	BREAKDOWN	TOTAL	RATE	BREAKDOWN	TOTAL	
I. 2. a. 1	12 mo. @ 8 hrs/mo.	96	$149	Other services needed to host and maintain Watermaster's Database, estimate $300 for the year.	$300	$14,604
I. 2. b. 2.	12 mo. @ 4 hrs/mo.	48	$62	Purchase one datalogger @ $700 plus $50 in parts to keep in inventory as a spare if needed.	$750	$3,726
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	64	$62	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	$10,613
	Annual WQ wells (Table 2): 1 event @ 28 hrs/event = 28 hrs	28	$62	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 fails or is found to be inadequate due to dropping groundwater levels = $2,000.	$5,745	$7,481
	WM Sentinel and Northern Inland wells: download/store dataloggers, 4 events @ 2 hrs/event	8	$62	N/A	$0	$496
	Compile data: 4 events @ 20 hours/event	80	$62	N/A	$0	$4,960
I. 2. b. 6	Provide Data Appendix for SWI Report	14	$149	N/A	$0	$2,086
I.2.b.7	Quarterly CASGEM Data Submittal for Watermaster's Voluntary Wells	40	$149	N/A	$0	$5,960
I. 4. c	Provide SWI supplemental data and review.	8	$149	N/A	$0	$1,192
					TOTAL ESTIMATED COST =	**$51,118**

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.