

SEASIDE BASIN WATERMASTER  
REQUEST FOR SERVICE

DATE: December 8, 2016

RFS NO. 2017-01

(To be filled in by WATERMASTER)

TO: Martin Feeney  
Martin Feeney  
PROFESSIONAL

FROM: Robert Jaques  
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 described in Attachment 1.

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

**Total Price** Authorized by this RFS: \$ 25,685.56 (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.

Authorized by:  Date: 12/7/16  
WATERMASTER Technical Program Manager

Agreed to by:  Date: 11/30/16  
PROFESSIONAL



# 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, 2017. 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 revision consists of performing semi-annual, rather than annual, water quality sampling of well SBWM-2.

Increasing the water quality sampling of this well is being recommended in the 2016 Seawater Intrusion Analysis Report (SIAR), prepared by HydroMetrics. The increase in sampling frequency is caused by the finding, as discussed in the SIAR, that there may have been a change in water quality in this well as detected in the July 2016 sampling event. The change in water quality in the July 2016 sample was in conflict with the induction logging data for July 2016 and therefore no conclusion could be drawn with regard to the possible beginning of seawater intrusion at that well location.

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 well SBWM-2, by having it analyzed in the January 2017 sampling event (or earlier if possible), has been included in the scope and cost of this RFS. The increase in cost for this revision is \$1,000, and will be funded from the Contingency line item in the Watermaster’s approved M&MP Operations Budget for 2017.

### **Scope of Work**

This RFS No. 2017-01 authorizes PROFESSIONAL to perform the work described in PROFESSIONAL’s Revised Proposal for Hydrogeologic Services, dated November 9, 2016 and contained in Attachment 2, with the following clarifications and/or additions:

PROFESSIONAL will collect water quality and water level data from the wells identified as SBWM-1 Deep (from two discrete depth zones), SBWM-2 Deep (from two discrete depth zones), SBWM-3 Deep (from two discrete depth zones), and SBWM-4 Deep (from two discrete depth zones). PROFESSIONAL will also perform induction logging on each of these wells. These wells are commonly referred to as WATERMASTER’s Sentinel Wells. Water level data collection, water quality analyses, and induction logging will be performed on each of these wells as described below and according to the schedule described below:

#### Induction Logging

Induction logging will be performed on each of these wells semi-annually.

#### Water Level

Water levels in each of the four Sentinel Wells will be continuously measured by data loggers and will be downloaded semi-annually when induction logging is being performed.

#### Water Quality Analyses

The water quality constituents that will be measured in these analyses are: Specific Conductance (micromhos/cm), Bicarbonate (as HCO<sub>3</sub>-), pH, Chloride, Sulfate, Nitrate Nitrogen (as NO<sub>3</sub>), Calcium, Sodium, Magnesium, Potassium, Iron, Manganese, Orthophosphate, Total Dissolved Solids, Boron, Bromide, Barium, Iodide, and Fluoride. The samples collected for analysis will be submitted to a State-certified analytical laboratory for analysis.



### Schedule

Well SBWM-3 will be sampled annually (nominally in July) for water quality. Wells SBWM-1, SBWM-2, and SBWM-4 will be sampled twice during the year (nominally in January and July) for water quality. This will constitute a total of 14 water quality samples taken during the year.

PROFESSIONAL will transmit the digital water level and water quality data to the Monterey Peninsula Water Management District (MPWMD) and to the Watermaster promptly after the data is acquired, so MPWMD can use that data in preparing its reports to the WATERMASTER. Digital induction data will provided to MPWMD and to the Watermaster. Digital induction data will also be reduced and presented graphically and provided to HydroMetrics WRI for use by HydroMetrics WRI in preparing reports for the WATERMASTER.

## **ATTACHMENT 2**

**Professional's Proposal for Hydrogeologic Services for RFS No. 2017-01**



Martin B. Feeney  
Consulting Hydrogeologist

P.G. 4634  
C.E.G. 1454  
C.Hg 145

November 9, 2016

Seaside Basin Watermaster  
PO Box 51502  
Pacific Grove CA.  
93950

Attention: Bob Jaques, PE

Subject: Sentinel Well Data Collection Program 2017– Revised Proposal for Hydrogeologic Services

Dear Bob:

Following up on our recent discussions, I'm pleased to provide this revised proposal to assist the Seaside Basin Watermaster (Watermaster) with data collection from the Sentinel Wells for the upcoming year. Presented in this proposal are an outline of the revised data collection plan and an estimate of associated costs.

The data collection program for the Sentinel Wells will change slightly from the way it was described in my July 28, 2016 Proposal with the addition of semi-annual water quality sampling at certain of the wells as detailed below. The data collection program will include semi-annual induction logging and continuous water level data collection. This basic program is supplemented with the periodic collection of depth-specific downhole water quality sampling. The subcontractors for the induction logging/downhole sampling and laboratory services remain unchanged.

The components of this program are as follows:

Data collection from each well:

- Semi-Annual down-loading of water level data logger.
- Semi-Annual induction logging.
- Annual depth-specific sample collection at two depths in one well (SBWM #3) with additional sampling of the other three wells (SBWM #1, #2, and #4). 14 samples total – SBWM #3 in July, the other three wells also in January.
- Water quality analysis (MPWMD "Sentinel Well Suite" – General Mineral plus Iodide) of collected water quality samples.

It is understood that, as in the past, the Monterey Peninsula Water Management District (District) will share some of the data collection and analysis tasks of the overall data collection program. The District will collect water level data from the array of data loggers on the alternate quarters. Water level data from the data loggers will be collected as part of this scope of services only when induction logging is performed. Collected water level data will be transmitted to the District for compilation and processing. Induction logging data will continue to be compiled and processed by this author.

Annual costs for the data collection program are estimated at \$ 25,685.56 (Say \$25,700) inclusive of outside services. A breakdown of costs is presented in the table below.

P.O. Box 23240, Ventura, CA 93002 • Phone: 805/643-7710 • e-mail mfeeney@ix.netcom.com

SENTINEL WELLS LOGGING/SAMPLING WL DATA COLLECTION PROGRAM					
2017					
Pacific Surveys	Unit Cost	Number	Semi-Annual Cost	# per annum	Annual Cost
Service Charge	\$1085.00	1	\$1085.00	2	\$2,170.00
Induction Logging	\$0.75	5310	\$3,982.50	2	\$7,965.00
Rinse Only Depth Specific Samples	\$275.00	14	\$3,850.00	1	\$3,850.00
E-file generation/transmittal	\$115.00	1	\$115.00	2	\$230.00
mileage	\$0.99	422	\$417.78	2	\$835.56
per diem	\$175.00	3	\$525.00	1	\$525.00
					\$15,575.56
<b>Lab Costs</b>					
General Mineral Analysis plus Ba and I	\$225.00	14	\$3,150.00	1	\$3,150.00
<b>Professional Services</b>					
Supervise Logging/Download Data Loggers	\$165.00	14	\$2,310.00	2	\$4,620.00
Process Induction Data	\$195.00	4	\$780.00	2	\$1560.00
Transmit Water Level Data	\$195.00	2	\$390.00	2	\$780.00
					\$6,960.00
				Total	\$25,685.56

The opportunity to present this proposal is appreciated. Please call if you have any questions.

Sincerely,



Martin B. Feeney