SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: January 1, 2010

RFS NO. 2010-02 .
(To be filled in by WATERMASTER)

TO: Joe Oliver
Monterey Peninsula Water Management District
PROFESSIONAL

FROM: Robert Jaques .
WATERMASTER

Services Needed and Purpose:
Perform water level and water quality data collection for specified wells within the Seaside Basin in accordance with the Scope of Work contained in Attachment 1.

Completion Date: The work of this RFS No. 2010-02 shall be completed on an as-directed basis from the Watermaster during 2010. All work under this RFS will be completed not later than December 31, 2010.

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

Total Price Authorized by this RFS: $5,760.00 (See Attachment 1 for details regarding this Total Price, and how costs will be authorized on an as-directed basis. 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 S. Jaques Date: 12/25/09
WATERMASTER Technical Program Manager

Authorized by: Date: 12/29/2009
WATERMASTER Chief Executive Officer

Agreed to by: Darby Dierst Date: 12/22/09
PROFESSIONAL

ATTACHMENT 1

Scope of Work for RFS No. 2010-02

Background:

The WATERMASTER Board authorized its staff to contract with the PROFESSIONAL to collect water level and water quality data from certain wells located within the Seaside Basin, if the owners/operators of those wells expressed this desire to the WATERMASTER. The procedures for this data collection are described in the Notice to Well Owners that is contained in Exhibit "A" to this Attachment 1.

This RFS No. 2010-02 authorizes PROFESSIONAL to perform this data collection work on an as-directed basis, with formal authorization from the WATERMASTER to the PROFESSIONAL being required prior to the PROFESSIONAL performing such work on any specified well. This will provide the WATERMASTER with full control over which wells are provided this service, as well as over the costs for having this work performed.

The wells to which these services may be provided are listed in Table 1.

The estimated costs, per well, to perform these services are as follows:

Monthly Water Levels - It is estimated that it will take approximately 0.5 hour/well to perform a water level measurement. This time estimate is based on the assumption that the water level measurements will be performed at the time that a field person is already out and about collecting data from other wells, and the fact that the distance between wells located within the Basin is not that great. This labor would be billed at the field rate of $70/hr, so the estimated cost per water level measurement would be $35.

The total estimated cost would be $420 per year per well for 12 monthly measurements.

Annual Water Quality Sampling - Assuming that annual water sample collection would coincide with water level collection at a well, it is estimated that it will take approximately 0.5 hr to collect the water quality sample, including sampling time, bottle labeling, custody forms, delivery to laboratory, etc. There will also be an estimated 0.5 hr for receipt, review and computer entry of laboratory data, and an estimated $200 per sample for the laboratory analysis. The sampling work would be billed at the field rate of $70/hr, so the estimated cost per annual water quality sample would be $70 for labor, and $200 for laboratory services, for a total cost per sample of $270. Only one sample per well will need to be collected and analyzed in 2010. This sample will be collected in the fall of 2010.

The total estimated cost for collecting and analyzing the sample per well is $270.

Combined Water Level Measurements and Water Quality Sampling: For combined water level and water quality monitoring, the total estimated cost, per well, for the 12-month period is $690.

Of the wells listed in Table 1 it is assumed that not more that 6 will ask to have data collected for them by the WATERMASTER, the total estimated cost would be:

Potential No. of Wells Needing Water Level Data Collected = 6 @ $420	=	$2,520
Potential No. of Wells Needing Water Quality Data Collected = 6 @ $540	=	$3,240
TOTAL	=	$5,760

Table 1

APN	DETAILS	COMPANY	Watermaster "Producer" Well?	MPWMD Assigned Well #	Monthly Water Levels Required	Monthly Water Levels Being Collected?	Annual Water Quality Analyses Required?	Annual Water Quality Data Being Collected?
Within MPWMD Boundaries								
012-432-004	CAW - Plumas #4	California American Water Co.	Y	T15S/R1E-27Jg	Y	Y	Y	N
012-843-013	CAW - Darwin	California American Water Co.	Y	T15S/R1E-23Ea	Y	Y	Y	N
011-041-018	CAW - Military	California American Water Co.	Y	T15S/R1E-14Nd	Y	Y	Y	N
011-061-004	CAW - Ord Grove #2	California American Water Co.	Y	T15S/R1E-23Bc	Y	Y	Y	N
011-071-018	CAW - New Luzern	California American Water Co.	Y	T15S/R1E-23De	Y	Y	Y	N
011-091-017	CAW - Playa #3	California American Water Co.	Y	T15S/R1E-22Bc	Y	Y	Y	N
011-091-017	CAW - Playa #4	California American Water Co.	Y	T15S/R1E-22Bf	Y	Y	N	
011-493-028	CAW - Paralta	California American Water Co.	Y	T15S/R1E-14Ra	Y	Y	Y	N
031-151-010	Reservoir Well	City of Seaside	Y	T15S/R1E-13Na	Y	?	Y	N
031-231-062	Coe Avenue Well	City of Seaside	Y	T15S/R1E-14Ma	Y	?	Y	N
011-181-014	Public Works Corp. Yard	City of Sand City	Y	T15S/R1E-22Ed	Y	?	Y	N
011-011-020	Cypress Pacific	Monterey Peninsula Engineering	Y	T15S/R1E-22Dd	Y	N	Y	N
011-236-010	Robinette -Design Ctr.	City of Sand City	Y	T15S/R1E-22Mc	Y	?	Y	N
011-041-043	(in front of Target)	DBO Development	Y	T15S/R1E-22Ce	Y	N	N	
011-061-022	MMP prod well	Mission Memorial Park	Y	T15S/R1E-23Ab	Y	Y	N	
011-061-022	PRTIW -operated by MMP	Mission Memorial Park	Y	T15S/R1E-23Ac	Y	N	Y	N
011-501-014-500		Security National Guaranty, Inc.	Y	T15S/R1E-15K1	Y	N	Y	N
011-532-005		Granite Rock Company	Y	T15S/R1E-22Eb	Y	?	N	
012-511-005	Shea Well	City of Del Rey Oaks	Y	T15S/R1E-26Mc	Y	N	N	
012-115-017	City #4	Seaside Municipal Water System	Y	T15S/R1E-23Gc	Y	?	Y	?
012-653-003	City #2	Seaside Municipal Water System	Y	T15S/R1E-23Pb	Y	?	N	
012-664-017	City #1	Seaside Municipal Water System	Y	T15S/R1E-23Lb	Y	?	N	
012-115-017	City #3	Seaside Municipal Water System	Y	T15S/R1E-23Ga	Y	?	Y	?
173-071-052	East Well (Lot #9)	CAW - Bishop Unit	Y	T16S/R2E-05Fa	Y	N	N	
173-072-034	well lot Bishop #1 (west)	CAW - Bishop Unit	Y	T16S/R2E-05Ea	Y	Y	N	
173-072-041	well lot Bishop #2 (east)	CAW - Bishop Unit	Y	T16S/R2E-05Fb	Y	Y	N	
416-111-002	Mutual	CAW - Hidden Hills Unit	Y	T16S/R2E-09Cb	Y	N	N	
416-111-004	Standex	CAW - Hidden Hills Unit	Y	T16S/R2E-09Cc	Y	N	N	
416-111-004	Bay Ridge	CAW - Hidden Hills Unit	Y	T16S/R2E-09Cd	Y	Y	N	
259-031-011	RR#7	CAW - Ryan Ranch #7	Y	T15S/R1E-36Nb	Y	Y	N	
259-031-012	RR#8	CAW - Ryan Ranch #8	Y	T16S/R1E-01Cb	Y	Y	N	
259-031-012	RR#11	CAW - Ryan Ranch #11	Y	T16S/R1E-01Cd	Y	Y	N	
173-071-056	Old Main Gate (Lot #12)	Pasadera - New Cities Developme	Y	T16S/R2E-05Mg	Y	Y	N	
173-071-051	Paddock #1(Lot #11)	Pasadera - New Cities Developme	Y	T16S/R2E-05Mf	Y	N	N	
203-031-034	01-349	York School	Y	T15S/R1E-36Qa	Y	?	N	
173-071-048	(new #12)	Laguna Seca Golf Resort	Y	T16S/R2E-06Hb	Y	Y	N	
173-071-048	(racetrack)	Laguna Seca Golf Resort	Y	T16S/R2E-06Ga	Y	Y	N	
Outside MPWMD Boundaries								
173-011-025, -026	LS Cnty Park #3	MPRPD	Y	T16S/R2E-05Gd	Y	?	N	
173-011-025, -026	LS Cnty Park #4	MPRPD	Y	T16S/R2E-05Ge	Y	?	N	
					Y = 38	**N or ? = 21**	**Y = 16**	**N or ? = 16**

EXHIBIT "A"

NOTICE
OF
REQUEST FOR WATER WELL DATA
January 17, 2008

You are receiving this Notice because the Seaside Groundwater Basin Watermaster's records indicate you are the owner or operator of a water well located within the Seaside Groundwater Basin.

The Seaside Groundwater Basin Watermaster (Watermaster) is responsible for enforcing and administering the provisions of the adjudication Decision for the Seaside Groundwater Basin (Basin) located in northern Monterey County, California. This Decision was issued by the Superior Court in Monterey County on March 27, 2006 and amended on February 9, 2007.

Concerns about overpumping of groundwater from the Basin, and the potential for this to lead to seawater intrusion, led to the Court's issuing of the Decision. The Decision requires that certain actions be taken by the Watermaster to preserve and protect the groundwater resources within the Basin. Two of these requirements are:

1. All active and inactive production wells in the basin must have static (i.e., non-pumping) water levels collected and recorded a minimum of once per month.
2. All active production wells in the coastal subareas of the basin must have a water quality sample from each well collected and analyzed by a state-approved (certified) laboratory for the full general inorganic mineral suite a minimum of once per year.

An active production well is defined as any well that has extracted water within the last year for a beneficial use, such as landscape irrigation, commercial uses, or drinking water. An inactive production well is defined as any well that could extract water for a beneficial use, but which has not extracted water within the last year and currently either has an inoperable pump, or no pump at all, and is therefore not currently capable of extracting water for a beneficial use.

The Decision states that it shall be the responsibility of each owner/operator of the well(s) to report water level and quality analytical results to the Watermaster for inclusion of these data in the consolidated groundwater resource database. This database is being developed by the Watermaster pursuant to the Decision.

The check box on the following page shows what our records indicate with regard to receipt of the required data from you for the indicated water well(s) located within the Seaside Groundwater Basin. If the data has not been submitted, you are hereby requested to provide the indicated 2006 and 2007 data to the Watermaster, as well as any prior well data of this type.

Water System Name: _____

Well Name: _____

Well Status: ☐ Active ☐ Inactive

Required Data to be Submitted: ☐ Monthly Static Water Levels ☐ Annual Water Quality

Has Data Has Been Submitted to the Watermaster as Required? ☐ Yes ☐ No

Are There Any Extenuating Circumstances Pertaining to this Well for Which You Believe the Well Should Not be Required to Submit this Data?: ☐ Yes ☐ No
If the answer to this question is "Yes" please provide a detailed explanation of these circumstances, and why the data cannot, or should not, be submitted:

_____

_____

_____

_____

_____

_____

_____

For ongoing compliance, there are two ways for you to obtain and submit the required data to the Watermaster:

1. Obtain the data yourself, and submit it to the Watermaster. This will likely involve (1) either making the water level measurements yourself, or having another qualified party do this for you, and (2) taking a water quality sample and sending it to a state-approved laboratory for analysis.
2. Have the Watermaster obtain the data for you, and pay the Watermaster for its costs to provide this service.

If you choose to obtain the data yourself, you will need to have the skills and equipment to make the water level measurements, and to collect a representative sample for water quality testing. A brief description of the procedures for performing each of these tasks is contained in Attachment A to this Notice. A listing of the water quality parameters for which the annual water sample must be analyzed are contained in Attachment B. These parameters are standard tests performed by many water quality laboratories. Water level data are to be collected once each month, and are to be submitted to the Watermaster within 15 days after the data are collected. Water quality

sampling is to be performed in September or October, and the water quality results are to be submitted to the Watermaster not later than October 15 of each year. **If you choose to obtain the data yourself, please send written notification of this to the Watermaster not later than January 31, 2008.**

If you choose to have the Watermaster obtain the data on your behalf, you will need to provide written authorization to the Watermaster for this purpose. This can be done by filling out and returning the form contained in Attachment C to this letter, and returning it to the Watermaster along with your check made out in the appropriate amount per well, as described in Attachment C. **If you choose to have the Watermaster obtain the data on your behalf, please complete and return the form in Attachment C, along with your check, to the Watermaster not later than January 31, 2008.** Note: Well owners/operators who are currently collecting this data themselves may also ask to have the Watermaster collect the data for them, under the same terms and conditions set forth in Attachment C.

The Watermaster has been ordered by the Court to provide a report by February 28, 2008 on progress being made to collect the required data. The responses received from each affected well owner/operator will be used in the preparation of that report. Any well owners from whom no definitive response has been received will be noted in that report. Since the Court has the power to impose sanctions on any well owner/operator that does not carry out the requirements contained in the Decision, it is imperative that all affected well owners respond to this Notice.

If you have any questions regarding this Notice, please contact the Seaside Groundwater Basin Watermaster at (831) 641-0113, or by mail at the address shown on the letterhead.

Thank you for your attention to this Notice.

Dewey D. Evans
Chief Executive Officer

Attachments (3)

ATTACHMENT A

OUTLINE OF PROCEDURES TO MEASURE STATIC WATER LEVELS AND TO COLLECT A SAMPLE FOR WATER QUALITY ANALYSIS

Water Level Measurement

An acceptable method for collecting static (i.e., non-pumping) water level measurements is with the use of a coaxial electric water level sounding device, such as shown in Figure 1. All water level measurements must be referenced to a described point at the wellhead. For active production wells, the well must be shut down 24 hours prior to water level measurement to ensure an accurate static water level reading. All measurements should be recorded to the nearest one hundredth of a foot (e.g., depth to water from wellhead reference point = 85.94 feet).

Water Sample Collection

Samples are to be collected for water quality analysis only from active production wells. Active wells have operable pumps and motors, and are therefore able to pump the water that will be used for the water quality analysis. Therefore, no portable or temporary pumping equipment or piping should be necessary.

The volume of water removed from each well prior to sampling is should be at least three casing volumes, consistent with standard sampling protocol. This is accomplished by calculating the casing volume and then running the pump long enough to pump the required pre-sampling volume. This purges the well of water that may have been residing in it for some period of time, so that the sample collected for analysis will represent the current quality of the water being pumped from the underlying aquifer. A representative wellhead configuration for collection of water quality samples is shown in Figure 2.

Sampling is supplemented by field measurement of several indicator parameters that are collected during pumping, which ensures that water quality has stabilized prior to sample collection. An example of the recordation of field data is provided on the field ground water sampling form in Figure 3.

Once the samples are collected, they are to be sent or taken to a state-certified laboratory for analysis. The laboratory should be contacted to determine the volume of sample they will need to be provided in order to perform the required analyses. The laboratory should also be consulted with regard to proper "chain-of-custody" sample submittal forms, proper sample collection techniques, and suitable sample containers, to ensure that the sample is not contaminated during the sampling process.

Figure 1. Representative Method for Collecting Static Water Level Measurements

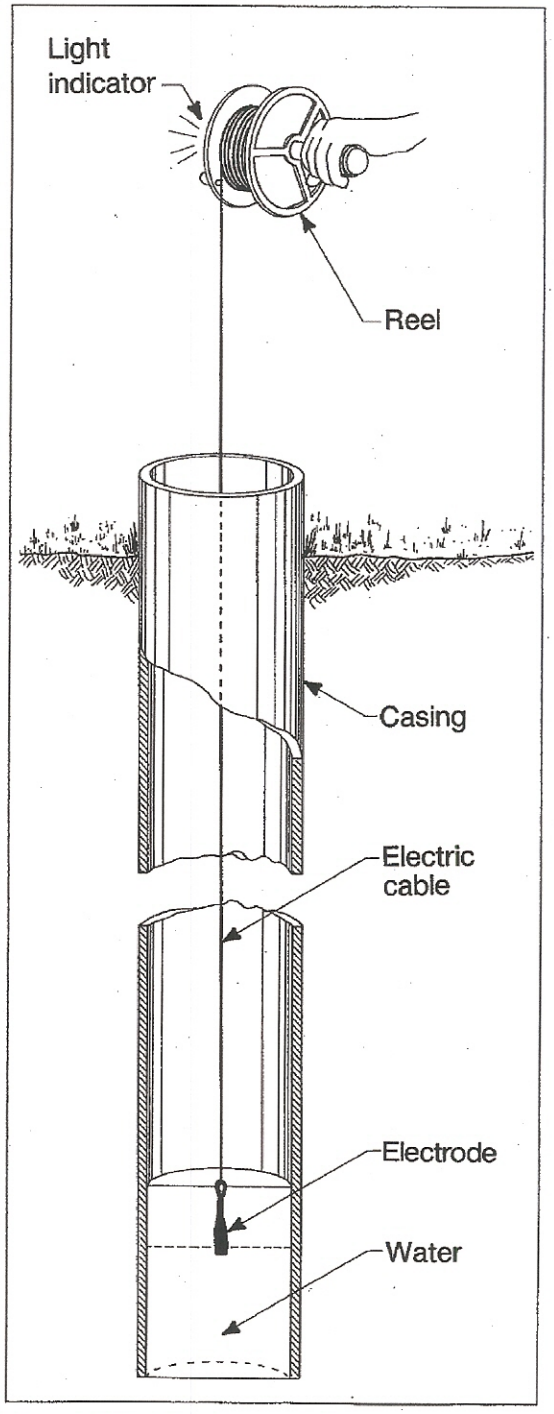

Figure 16.12. Electric sounder for measuring depth to water consists of electrode, two-wire cable, and a light which indicates a closed circuit when electrode touches water.

From: Groundwater and Wells 2nd Ed., 1986, pg. 549.

Figure 2. Representative Wellhead Configuration for Water Quality Sample Collection

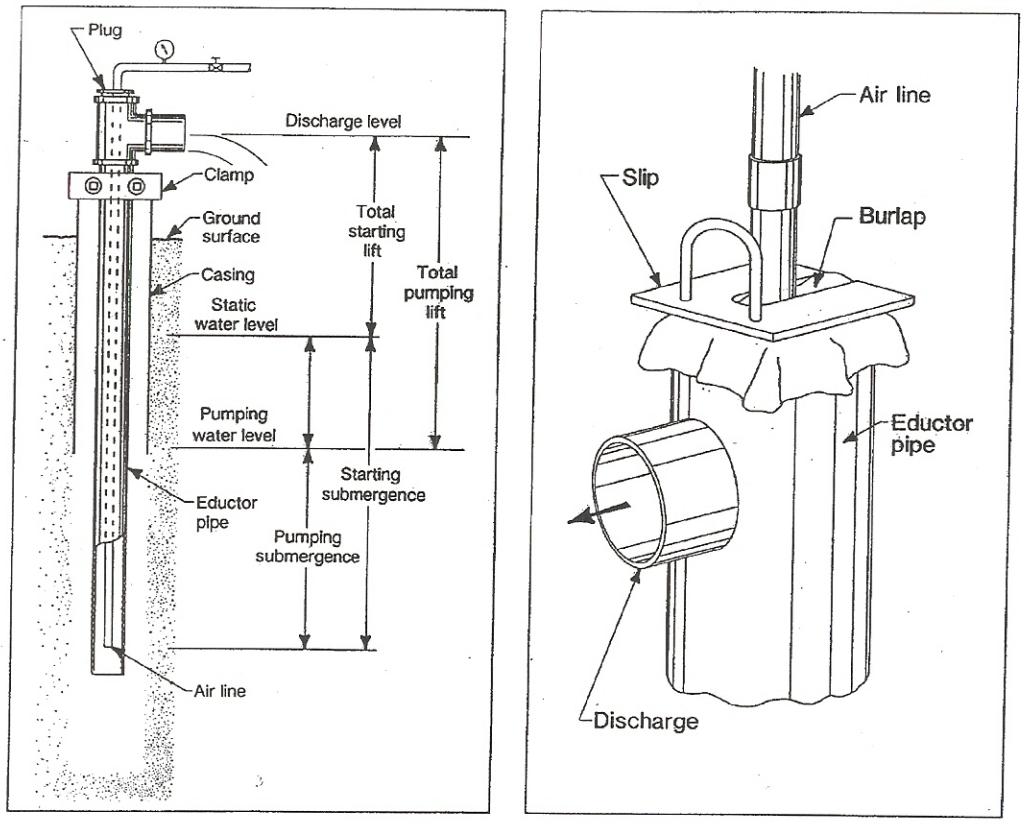

Figure 3. Example Ground Water Data Collection Form

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

GROUND-WATER SAMPLING FORM

Well No. PCA East - Deep 15S/1E-15K4

Well Type: ☑ Monitor ☐ Extraction ☐ Other

Well Material: ☑ PVC ☐ St. Steel ☐ Other

Date 10/24/2008 Time 1310 hr

Recorded by Joe C. (Signature) Sampled by JWO, TLL, TTC (Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):

☑ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other

Total Depth of Casing (TD in feet BTOC): 710

Water Level Depth (WL in feet BTOC): 89.95

Number of Well Volumes to be purged (# Vols)

☑ 3 ☐ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailer - Type:

☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:

☑ Other - Type: airlift - 185 H Sullair compressor

PUMP INTAKE SETTING

☐ Near Bottom ☐ Near Top ☑ Other bottom of airline

Depth in feet (BTOC): Screen Interval in feet (BTOC): from 650 to 700

PURGE VOLUME CALCULATION

(710 (TD) − 90 (WL)) X 2 (D, inches)^2 X 3 (# Vols) X 0.0408 = 304 gallons (Calculated Purge Volume)

PURGE TIME

1320 Start 1411 Stop 51 Elapsed

PURGE RATE

Initial 6+ gpm Final 6+ gpm

ACTUAL PURGE VOLUME

306 + · gallons

FIELD PARAMETER MEASUREMENT

Minutes Since Pumping Began		pH	Cond. (µmhos/cm)	T ☐°C ☑°F	Other #gal
1321	1	—	651	66	clr 6
1335	15		614	72	" 90
1345	25		577	74	" 150
1400	40		710	76	" 240
1411	51		714	76	" 306

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐°C ☐°F	Other
Meter Nos.				

Observations During Purging (Well Condition, Turbidity, Color, Odor): slight H_2S odor after 90 gal pumped.

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☑ Other directed to swale away from wellhead.

WELL SAMPLING

SAMPLING METHOD

☐ Bailer - Type:

☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:

☑ Same As Above

☐ Grab - Type:

☐ Other - Type:

SAMPLE DISTRIBUTION Sample Series:

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
— See chain-of-custody record sheet —					

QUALITY CONTROL SAMPLES

Duplicate Samples

Original Sample No.	Duplicate Sample No.

Blank Samples

Type	Sample No.

Other Samples

Type	Sample No.

ATTACHMENT B

Listing of the Water Quality Parameters for Which Annual Water Samples Must be Analyzed

The water quality constituents that must be measured and reported for the annual water quality analyses are:

Specific Conductance (micromhos/cm)
Total Alkalinity (as $CaCO_3$)
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
Fluoride

I am the Party responsible for the well(s) described below, and I am empowered to provide this Authorization to the Seaside Groundwater Basin Watermaster. (List all wells to which this authorization applies).

Water System Name (if applicable): _____

Well Name: _____

Well Name: _____

Well Name: _____

I hereby authorize the Seaside Groundwater Basin Watermaster (Watermaster) and/or its agents to perform the services indicated below on my behalf. I agree to pay the Watermaster all of its reasonable costs incurred in the performance of this work. I agree to provide the Watermaster with reasonable access to the well(s) for the purpose of performing these services, and to provide such information and/or assistance as is requested by the Watermaster in order for the Watermaster to perform these services.

I have attached a check made out to the Seaside Groundwater Basin Watermaster in the appropriate amount (based on the estimated costs described on the preceding page) per well, as an advance payment toward the cost of annual collection of data on my well(s). Should the Watermaster's actual costs to perform these services differ from the amount of this advance payment, the Watermaster will either bill me for the additional amount owed, or will refund me the amount of overpayment, whichever is appropriate, at the end of the 12-month period for which these services will be provided.

Services to be Performed by the Seaside Groundwater Basin Watermaster

(Note: The well owner/operator should put a check mark in the box for each service it wishes the Watermaster to provide)

☐ Visit each well site listed above once each month during calendar year 2008 and make a static water level measurement.

☐ Visit each well site listed above twice during calendar year 2008 and collect and analyze one sample at each visit for water quality analysis.

☒ Record and report the data obtained under items 1 and 2 in the Quarterly and/or Annual Reports the Watermaster prepares. Provide a copy of the information collected from the well owner's/operator's well to the well owner/operator.

Signed: _____ Date: _____

(Signature of Responsible Party)

Printed Name of Signatory: _____