

**SEASIDE GROUNDWATER BASIN WATERMASTER
REGULAR BOARD MEETING**

WEDNESDAY, DECEMBER 4, 2013 - 2:00 P.M.

MEETING LOCATION

MONTEREY REGIONAL WATER POLLUTION CONTROL AGENCY
BOARD ROOM, 5 HARRIS COURT, BUILDING "D"

"RYAN RANCH"

MONTEREY, CALIFORNIA

WATERMASTER BOARD:

Coastal Subarea Landowner – Director Paul Bruno, Chair

City of Seaside – Mayor Ralph Rubio, Vice Chair

City of Sand City – Mayor David Pendergrass

California American Water – Director Eric Sabolsice

Monterey Peninsula Water Management District – Director Bob Brower

Laguna Seca Subarea Landowner – Director Bob Costa

City of Monterey – Mayor Chuck Della Sala

City of Del Rey Oaks – Mayor Jerry Edelen

Monterey County/Monterey County Water Resources Agency – Supervisor Dave Potter, District 5

I. CALL TO ORDER

II. ROLL CALL

III. MINUTES

The minutes of the Regular Board meeting of October 16, 2013 are attached to this agenda. The Board is requested to consider approving the minutes.

IV. REVIEW OF AGENDA

If there are any items that arose after the 72-hour posting deadline, a vote may be taken to add the item to the agenda pursuant to the requirements of Government Code Section 54954.2(b). (A 2/3-majority vote is required).

V. PUBLIC COMMUNICATIONS

Oral communications is on each meeting agenda in order to provide members of the public an opportunity to address the Watermaster on matters within its jurisdiction. Matters not appearing on the agenda will not receive action at this meeting but may be referred to the Watermaster Administrator or may be set for a future meeting. Presentations will be limited to three minutes or as otherwise established by the Watermaster. In order that the speaker may be identified in the minutes of the meeting, it is helpful if speakers would use the microphone and state their names. Oral communications are now open.

VI. CONSENT CALENDAR

A. Consider Approval of Summary for Payments made during the months of October and November, 2013 totaling **\$27,397.44**.

B. Consider Approving Fiscal Year Financial Reports through November 30, 2013

C. Consider Approving the following Professional Services Contracts for Fiscal Year 2014:

- 1.** Two Contracts with Monterey Peninsula Water Management District (MPWMD)—one for **\$68,850.00** to cover their normal Management and Monitoring Program (M&MP) tasks as in preceding years and to conduct ongoing data entry/database maintenance. The second contract for **\$5,154.00** is to perform water level and water quality data collection for specified wells within the Seaside Basin.

2. Two Contracts with HydroMetrics Water Resources, Inc.—one for **\$13,600.00** to cover their providing general hydrogeologic consulting services during the year and the second one for **\$25,750.00** to prepare the Seawater Intrusion Analysis Report (SIAR) for 2014.

VII. ORAL PRESENTATION

None Scheduled

VIII. OLD BUSINESS

None Scheduled

IX. NEW BUSINESS

A. COMMITTEE REPORTS

1. TECHNICAL ADVISORY COMMITTEE (TAC)

- a) Discussion/Consider Approving the Seawater Intrusion Analysis Report (SIAR for FY2013)
The Executive Summary is included in the Board agenda packet. The complete SIAR is posted on the Watermaster's website at <http://www.seasidebasinwatermaster.org>.

- B.** Discussion/Consider Adopting for Water Year 2014 a **Declaration regarding the Unavailability of Artificial Replenishment Water** (Water Year 2014 Allocation attached).

- C.** Discussion/Consider Approving the Watermaster's Annual Report for Water Year 2013.
Attached is the body of the Draft 2013 Annual Report, reflecting input from the TAC. The complete Draft version is posted on the Watermaster's website at <http://www.seasidebasinwatermaster.org>.

X. INFORMATIONAL REPORTS (No Action Required)

- A.** Timeline Schedule of Milestone Dates (Critical date monitoring)
- B.** Technical Advisory Committee (TAC) minutes from November 13, 2013 meetings
- C.** Replenishment Assessments for WY 2013 Over Production

XI. DIRECTOR'S REPORTS

XII. EXECUTIVE OFFICER COMMENTS

XIII. NEXT MEETING DATE: JANUARY 8, 2014, (MRWPCA BOARD ROOM) 2:00 P.M.

XIV. ADJOURNMENT

This agenda was forwarded via e-mail to the City Clerks of Seaside, Monterey, Sand City and Del Rey Oaks; the Clerk of the Monterey Board of Supervisors, the Clerk to the Monterey Peninsula Water Management District; the Clerk at the Monterey County Water Resources Agency, Monterey Regional Water Pollution Control Agency and the California American Water Company for posting on November 29, 2013 per the Ralph M. Brown Act, Government Code Section 54954.2(a).

ITEM NO. III.

MINUTES

SPECIAL MEETING
MINUTES
Seaside Groundwater Basin Watermaster
October 16, 2013

I. **CALL TO ORDER** – Chair Bruno called the meeting to order at 2:00 p.m.

II. **ROLL CALL**

Coastal Subarea Landowner – Director Paul Bruno, Chair
California American Water (“CAW”) – Director Eric Sabolsice
City of Seaside – Mayor Ralph Rubio
City of Del Rey Oaks – Mayor Jerry Edelen
Laguna Seca Subarea Landowner – Director Bob Costa
City of Sand City – Mayor David Pendergrass
City of Monterey – Mayor Charles “Chuck” Della Sala
Monterey Peninsula Water Management District – Director Jeanne Byrne, Alternate
Monterey County/Monterey County Water Resources Agency – Supervisor Dave Potter (arrived 2:14pm)
Absent: None

III. **APPROVAL OF MINUTES**

Moved by Director Byrne, seconded by Mayor Edelen, and carried, to approve the minutes of the September 4, 2013 Watermaster regular meeting. Mayor Della Sala abstained having not attended the meeting.

IV. **REVIEW OF AGENDA**

There were no requested changes to the agenda.

V. **PUBLIC PARTICIPATION/ORAL COMMUNICATIONS**

There were no public communications.

VI. **CONSENT CALENDAR**

- A. Consider approval of Summary for Payments made during September 2013 totaling \$9,445.00.
- B. Consider approving fiscal year financial reports through September 30, 2013.

Moved by Mayor Rubio, seconded by Mayor Della Sala, and unanimously carried, to approve the consent calendar as presented.

VII. **ORAL PRESENTATION** – None scheduled.

VIII. **OLD BUSINESS** – None scheduled.

IX. **NEW BUSINESS**

A. COMMITTEE REPORTS

1. BUDGET AND FINANCE COMMITTEE AND TECHNICAL ADVISORY COMMITTEE (TAC)

- a). The board received and reviewed the Proposed Fiscal Year 2014 Annual Budgets:
 - 1). Administrative Fund
 - 2). Monitoring and Management – Operations Fund
 - 3). Monitoring and Management – Capital fund
 - 4). Replenishment Fund (Informational only, no action required).

CEO Evans reported that the Budget and Finance Committee met October 7th and unanimously recommended approval of the proposed Administrative Fund and Monitoring and Management – Operations Fund budgets for 2014. The Monitoring and Management – Capital Fund budget is not proposed to be funded in 2014 as there are no projects anticipated. The Replenishment Fund budget is informational as the fund contains no real dollars. Mr. Jaques pointed out the three-step task 1.3.a of the Monitoring and Management – Operations Fund budget, a new task to review the accuracy of the model currently being used for Basin analyses. Director Bruno requested assurance that Watermaster is performing all of its duties as designated in the Decision. Mr. Jaques responded that the TAC had gone through the Decision line by line to ensure that all tasks have been, or are currently being, addressed. Current Watermaster efforts focus on gaining a better understanding of the Basin to optimize the management of it.

Supervisor Potter arrived at the meeting at 2:14 p.m.

Mayor Rubio requested that revenue and roll-over line items be included in the proposed Monitoring and Management - Operations budget.

Moved by Mayor Rubio, seconded by Mayor Edelen, and carried, to approve the 2014 Administrative Fund Budget, and the 2014 Monitoring and Management – Operations Fund Budget as proposed. (Directors Bruno and Costa did not cast votes per Decision requirements.)

B. Rescheduling of Watermaster November Board Meeting

Director Bruno inquired whether board members can participate in board meetings via telephone. Mr. Evans stated he would look into the matter. The board concurred to cancel the November 6th regular board meeting and reschedule for the following regular meeting date, December 4th.

X. INFORMATIONAL REPORTS (No Action Required)

- A. Timeline Schedule of Milestone Dates (Critical date monitoring)
- B. TAC meeting minutes from August 14th and September 11, 2013 meetings.

XI. DIRECTORS' REPORTS

There were no reports from directors.

XII. EXECUTIVE OFFICER COMMENTS

The next TAC meeting will be Wednesday, November 13, 2013 at 1:30 p.m. in the MRWPCA conference room. Items for the December 4th board meeting include election of officers, the Declaration of Non-availability of Replenishment Water, consideration of contracts for work to be performed in 2014, and review of the final draft of the 2014 Annual Report to Court.

XIII. NEXT MEETING DATE – It was agreed that the next meeting would be a Regular Meeting held on Wednesday, December 4, 2013, at the Monterey Regional Water Pollution Control Agency (MRWPCA) Board meeting room at 5 Harris Court, Building "D" on Ryan Ranch in Monterey at 2:00 p.m.

XIV. There being no further business, Chair Bruno adjourned the meeting at 2:22 p.m.

ITEM NO. VI.

CONSENT CALENDAR

**SEASIDE GROUNDWATER BASIN
WATERMASTER**

TO: Board of Directors
FROM: Dewey D Evans, CEO
DATE: December 4, 2013
SUBJECT: Summary of Payments Authorized to be paid during the months of October and November, 2013.

PURPOSE:

To advise the Board of payments authorized to be paid during the months of October and November, 2013 totaling **\$27,397.44**.

RECOMMENDATIONS:

Consider approving the payment of bills submitted and authorized to be paid during the months of October and November, 2013.

COMMENTS and FISCAL IMPACT:

OCTOBER, 2013

DDEvans Consulting (Professional Services Agreement—CEO)— September 26, 2013 through October 25, 2013 worked on Watermaster business a total of 51.5 hours at \$100.00 per hour or **\$5,150.00**. Responded to telephone inquiries, e-mail, and other correspondence as needed regarding the Seaside Basin. Received and reviewed water production and water level reports. Discussed October 16th Board meeting agenda with Paul Bruno, Laura and Bob J. Worked on October 7, 2013 Budget and Finance Committee meeting agenda packet. Sent out October 7th Budget and Finance Committee meeting packet to committee members and others as appropriate. Attended October 7th B&F Committee meeting and conducted follow-up actions as needed; received and processed for payments to consultants and others as appropriate. Worked on October 16 Special Board meeting agenda and agenda packet. Sent out Board meeting packet to Board members and others as appropriate. Attended October 16th Board meeting and conducted follow-up actions as needed. Received and reviewed TAC agenda packet. Updated email address files; Sent out posting notices for October 7th Budget and Finance Committee meeting and October 16th Special Board meeting. Prepared bills to be paid and took to City of Seaside for payment.

Robert “Bob” Jaques (Technical Program Manager)—September 28, 2013 through October 31, 2013 worked on Watermaster business a total of 30.0 hours at \$100.00 per hour or **\$3,000.00**. Responded to email, telephone inquiries and other correspondence on a variety of Watermaster issues. Worked on November 13h TAC agenda. Prepared for and attended Watermaster Board meeting on October 16th plus follow-up meeting after Board meeting. Participated in conference call regarding geophysical imaging; worked on Annual Report

HydroMetrics Water Resources, Inc.—One invoice was submitted for payment totaling **\$1,098.75**. The invoice was for 8.25 hours working on Laguna Seca Operational Safe Yield. Prepare for and attend September 18th conference call discussing model simulations and reviewing existing model runs; Select hydrographs to plot; and set up analysis tools.

AT&T Teleconference Services—Invoice for **\$36.00** for monthly teleconference service for TAC meeting of September 11, 2013.

Total for October, 2013 **\$9,284.75**

NOVEMBER, 2013

DDEvans Consulting (Professional Services Agreement—CEO)—October 28, 2013 through November 26, 2013 worked on Watermaster business a total of 45.5 hours at \$100.00 per hour or **\$4,550.00**. Responded to telephone inquiries, email, and other correspondence as needed regarding the Seaside Basin. Received and reviewed water production and water level reports. Sent out Board meeting November 6, 2013 cancellation notice. Received copy of preliminary draft Annual Report and TAC agenda packet. Sent our draft FY2014 budgets to all producers and all interested parties to the Seaside Groundwater Basin; Received draft SIAR report from Bob J. Worked on WM Holiday Party list for Paul Bruno; Worked on Watermaster December 4, 2013 Board meeting agenda and agenda packet. Paid monthly bills and took to City of Seaside for payment.

Robert “Bob” Jaques (Technical Program Manager)—November 1, 2013 through November 24, 2013 worked on Watermaster business a total of 28.0 hours at \$100.00 per hour or **\$2,800.00**. Responded to email, telephone inquiries and other correspondence on a variety of Watermaster issues; Discussions with HydroMetrics regarding Laguna Seca modeling issue; Worked on 2014 schedule and worked on November 13th TAC meeting agenda packet. Prepared and emailed notes from Geophysical Imaging conference call; Prepared and submitted comment letter to SWRCB on Groundwater Management Concept Paper. Worked on Annual Report and TAC agenda packet. Prepared for and attended TAC meeting and prepared and emailed out draft minutes from this meeting. Worked on December 4th Board meeting agenda items.

HydroMetrics Water Resources, Inc.—Three invoices were received during the month totaling **\$10,736.25**. The first invoice for \$215.00 was for 1.0 hour of time for discussion by telephone call with Joe Oliver, Rosemary Knight and Bob Jaques regarding geophysics of the Basin. The second invoice for \$6,943.75 was for preparation of the 2013 SIAR, where a total of 48.75 hours were spent by several individuals. The third invoice for \$3,577.50 was for 28 hours for modeling work done on the Laguna Seca Operational Safe Yield by several individuals working for the firm.

AT&T Teleconference Services—Invoice for **\$26.44** for monthly teleconference services for TAC meeting of November 13, 2013.

Total for November, 2013 **\$18,112.69**

Total for October and November, 2013 **\$27,397.44**

Seaside Groundwater Basin Watermaster
Budget vs. Actual Administrative Fund
 Fiscal Year (January 1 - December 31, 2013)
 Balance through November 30, 2013

	2013 Adopted Budget	Contract Amount	Year to Date Revenue / Expenses
Available Balances & Assessments			
Dedicated Reserve	15,000.00		9,000.00
FY (Rollover)	-		-
Admin Assessments	70,000.00		70,000.00
Available	85,000.00		79,000.00
Expenses			
Contract Staff	60,000.00	60,000.00	45,325.00
Legal Advisor	-	-	-
Total Expenses	60,000.00	60,000.00	45,325.00
Total Available	25,000.00		
Dedicated Reserve	25,000.00		
Net Available	-		

Seaside Groundwater Basin Watermaster
Budget vs. Actual Monitoring & Management - Operations Fund
 Fiscal Year (January 1 - December 31, 2013)
 Balance through November 30, 2013

	<u>2013 Adopted Budget</u>	<u>Contract Encumbrance</u>	<u>Year to Date Revenue/Expenses</u>
Available Balances & Assessments			
Operations Fund Assessment	\$ -	\$ -	\$ -
FY 2012 Rollover	583,900.00	-	560,383.18
Total Available	\$ 583,900.00	\$ -	\$ 560,383.18
Appropriations & Expenses			
GENERAL			
Technical Project Manager	\$ 60,000.00	\$ 60,000.00	\$ 32,931.00
Contingency @ 20% (not including TPM)	39,844.00	\$ 9,990.00	9,950.00
Total General	\$ 99,844.00	\$ 69,990.00	\$ 42,881.00
CONSULTANTS (Hydrometrics; Web Site Database)			
Program Administration	\$ 8,600.00		
Production/Lvl/Qlty Monitoring	3,900.00	\$ 62,100.00	\$ 11,101.97
Basin Management Action Plan	75,000.00		
Seawater Intrusion Analysis Report	27,750.00	22,655.00	6,943.75
Total Consultants	\$ 115,250.00	\$ 84,755.00	\$ 18,045.72
MPWMD			
Production/Lvl/Qlty Monitoring	\$ 69,086.00	69,086.00	28,755.00
Basin Management	4,700.00	4,700.00	4,700.00
Seawater Intrusion	10,184.00	10,184.00	-
Direct Costs	-	-	-
Total MPWMD	\$ 83,970.00	\$ 83,970.00	\$ 33,455.00
Reserve	\$ -		-
Transfer Out to Capital Fund			-
Total Appropriations & Expenses	\$ 299,064.00	\$ 238,715.00	\$ 94,381.72
Total Available	284,836.00		

Footnote 1: The \$5,154 contract with MPWMD for data collection services consists of pass through expenditures paid by producers and is not budgeted. For 2013 \$3,621 has been collected from producers, and MPWMD has invoiced \$1,305 for services rendered.

**SEASIDE GROUNDWATER BASIN
WATERMASTER**

TO: Board of Directors

FROM: Robert S. Jaques, Technical Program Manager
REVIEWD AND APPROVED by Dewey D. Evans, CEO

DATE: December 4, 2013

SUBJECT: Consider approving the following Professional Service Contracts for Fiscal Year 2014:

- 1) Two Contracts with MPWMD—one for \$68,850 and the second one for \$5,154 for continuing monitoring and other work on the Seaside Groundwater Basin Management and Monitoring Program (M&MP)
- 2) Two Contracts with HydroMetrics Water Resources, Inc. — one for \$13,600 for providing ongoing and as-requested general hydrogeologic consulting services during the year and the second for \$25,750 to prepare the Seawater Intrusion Analysis Report (SIAR) for 2014.

RECOMMENDATIONS:

It is recommended that the Board approve the attached RFSs No. 2014-01 and 2014-02 with MPWMD, and RFSs No. 2014-01 and 2014-02 with HydroMetrics for FY 2014.

BACKGROUND:

Attached are the proposed initial contracts for each of the Watermaster's consultants that are expected to work on M&MP activities during 2014. Each of these firms is currently working under a master form of agreement with the Watermaster called a "Professional Services Agreement" (PSA). Actual work assignments are made through the issuance of Requests for Service (RFS) under the umbrella language of the PSA. The TAC reviewed each of these contracts at its November 13, 2013 meeting and recommends that the Board approve each of them.

DISCUSSION

The attached RFSs constitute the proposed initial 2014 work assignments for MPWMD and HydroMetrics as follows:

- MPWMD RFS No. 2014-01 for \$68,850 [was \$83,970 last year] covering their normal M&MP tasks as in preceding years, as well as (1) Continuing the barium and chloride testing, which commenced in 2011, under the water quality monitoring program, due to its benefit in helping to detect seawater intrusion, (2) Since all the dataloggers on the monitoring wells have now been installed it is appropriate to budget for an additional replacement datalogger because there are now more dataloggers in our system. (3) Since retrofitting to use the low-flow purge sampling approach has now been completed, it is appropriate to include a modest amount (\$1,000) to repair or replace the sampling equipment since there are now more wells equipped with this equipment. [The decrease in cost for this RFS is largely because several prior tasks were either partially or fully completed in 2013, thereby reducing the scope of work in the 2014 Budget.]

MPWMD reports that although the budget for RFS No. 2014-01 should not be changed yet, they are planning to review the Water Quality data and will probably make a recommendation

regarding reducing the frequency of Water Quality monitoring at the BLM site monitoring wells (SBWM-5 Shallow & Deep), as a result of having built up a Water Quality baseline of annual results since these wells were constructed and first sampled in 2009. Subject to confirming the stability of the data, MPWMD anticipates that the frequency could be reduced to once every 3 years, unless some other indications of changing Water Quality in that area of the Basin are observed. If this change is made during 2014, it will simply lower the cost of this work. However, making this change may require Court approval, since it would be a change to the previously-approved monitoring program. It has been included in the 2013 Annual Report to provide the Watermaster with the flexibility to make this change in 2014 if the data justifies it.

- MPWMD RFS No. 2014-02 for \$5,154 [was \$5,154 last year] covering their obtaining water quality and water level data from private producers who ask the Watermaster collect this data for them. The costs for this work are paid for by the well owners and are at no cost to the Watermaster. [There is no change in cost from last year]
- HydroMetrics RFS No. 2014-01 for \$13,600 [was \$12,100 last year] covering their providing general hydrogeologic consulting services throughout the year. [This was increased because more agenda items are requiring HydroMetrics participation in TAC and Board meetings.]
- HydroMetrics RFS No. 2014-02 for \$25,750 [was \$22,655 last year] covering their preparing the 2014 Seawater Intrusion Analysis Report. [Increase due to increased hourly rates and some increase in expenses associated with preparing the report]

If recommended by the TAC, and approved by the Board, additional RFSs will be developed for HydroMetrics during 2014 to (1) verify the accuracy of the groundwater model (and perform recalibration if found to be necessary), (2) perform additional groundwater modeling, and/or (3) update the BMAP. These are all included as tasks in the Board-approved 2014 M&MP. An RFS to verify the accuracy of the model is currently being drafted for presentation to the TAC at its February 2014 meeting. The other two tasks are not yet scheduled pending further direction from the TAC and the Board during 2014.

The costs for all of these RFSs are included in the FY 2014 M&MP Budget which the Board approved at its October 2013 meeting. These contracts are being presented to the Board for approval at today's meeting to ensure the contacts can be in effect at the start of 2014.

ATTACHMENTS:

1. MPWMD RFS No. 2014-01
2. MPWMD RFS No. 2014-02
3. HydroMetrics RFS No. 2014-01
4. HydroMetrics RFS No. 2014-02

SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: January 1, 2014

RFS NO. 2014-01

(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 2014 (See detailed Scope of Work in Attachment 1).

Completion Date: The work of this RFS No. 2014-01 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: \$ 68,850.00 (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: _____
WATERMASTER Technical Program Manager

Authorized by: _____ Date: _____
WATERMASTER Chief Executive Officer

Agreed to by: _____ Date: _____
PROFESSIONAL

ATTACHMENT 1

Detailed Scope of Work for RFS No. 2014-01

Background:

The Watermaster Board approved the Budget for the 2014 Management and Monitoring Program Work Plan (hereinafter referred to as the “2014 M&MP Work Plan”) at its meeting of October 2, 2013.

This RFS No. 2014-01 authorizes PROFESSIONAL to perform certain work on certain of the Tasks described in the 2014 M&MP Work Plan. The Task numbers listed in Table 1 of this Detailed Scope of Work for RFS No. 2014-01 correspond to the Task numbers in the 2014 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>Pursuant to Section 4(a) on page 9 of the Management and Monitoring Plan approved by the Court on September 25, 2006, in 2013 wells at 2 additional sites in the Laguna Seca Subarea were equipped with dataloggers taking measurements in two aquifers at each site. Included in the cost for this Task is the purchase of two replacement dataloggers @ \$500.</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 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 prior years, PROFESSIONAL has completed retrofitting the wells that are sampled quarterly and on an annual basis to use the new low-flow purge approach for collecting water quality samples. No costs are included in this Task to retrofit any additional wells in 2014.</p> <p>The dedicated devices sit in the water column and may periodically need to be replaced or repaired. A not-to-exceed amount of \$1,000 is included in the costs contained in Attachment 3 for performing ongoing maintenance and/or replacement of the sample collection equipment.</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 the water production data and summarizing and analyzing the water quality and water level data from the 1st & 2nd Quarters of the Water Year. 2. One annual report summarizing the water production data and 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 from the quarterly reports and a narrative summarization of the findings, conclusions, and recommendations from the quarterly reports. This annual report may include, as attachments, each of the quarterly reports.
I. 4. a	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 (Purissima) ⁽⁶⁾		X						X	X	
SBWM MW-2-Deep (Purissima) ⁽⁶⁾		X						X	X	
SBWM MW-3-Deep (Purissima) ⁽⁶⁾		X						X	X	
SBWM MW-4-Deep (Purissima/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 ⁽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		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

**MPWMD RFS No. 2014-01
Work Schedule**

ID	Task Name	2014												Jan	Feb	Mar	A		
		Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct					Nov	Dec
1	I.2.a DATABASE MANAGEMENT																		
2	I.2.a.1 Conduct Ongoing Data Entry/Database Maintenance (MPWMD)			[Blue shaded bar from Jan to Dec]															
3	I.2.b DATA COLLECTION PROGRAM																		
4	I.2.b.2 Collect Monthly Water Levels (MPWMD)			[Blue shaded bar from Jan to Dec]															
5	I.2.b.3 Collect Quarterly Water Quality Samples (MPWMD)			[Blue shaded bar from Jan to Dec]															
6	I.2.b.6 Reports (from MPWMD)																		
7	MPWMD Prepares Combined Quarterly Water Production, Water Level, and Water Quality Reports for 1st & 2nd Quarters																		
8	MPWMD Prepares Annual Water Production, Water Level, and Water Quality Report																		
9	I.4.a HydroMetrics & MPWMD Provide Oversight of Seawater Intrusion Detection and Tracking			[Blue shaded bar from Jan to Dec]															



◆ 6/6

◆ 10/30

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	\$94	Other services needed to host and maintain Watermaster's Database, estimate \$300 for the year.	\$300	\$9,324
I. 2. b. 2.	12 mo. @ 4 hrs/mo.	48	\$87	2 replacement dataloggers @ \$500	\$1,000	\$5,176
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	\$87	Fuel: 4 events @ \$10/site x 3 sites = \$120; Lab costs: 4 events @ \$250/well x 7 wells = \$7000	\$7,120	\$12,688
	Annual WQ wells (Table 2): 1 event @ 28 hrs/event = 28 hrs	28	\$87	Eductor setup for BLM well site (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): \$250 x 15 wells x 1 event = \$3,750; Maintenance on previously installed sample collection equipment = \$1,000.	\$4,870	\$7,306
	WM Sentinel and Northern Inland wells: download/store dataloggers, 4 events @ 2 hrs/event	8	\$87	N/A	\$0	\$696
	WM Sentinel wells: Semi-annual induction logging -- all 4 sites; annual WQ samples from each aquifer at each site (2 per well site) -- all 4 sites; semi-annual WQ samples -- SBWM MW-4 site only. Total labor = 2 events @ 4 hr/event.	8	\$87	Induction logging: 2 events = \$15,500; Lab cost (annual samples): \$250 x 4 sites x 2 samples = \$2,000; Lab cost (semi-annual sampling @ SBWM MW-4 site only): \$250 x 1 site x 2 samples = \$500	\$18,000	\$18,696
	Compile data: 4 events @ 24 hours/event	96	\$87	N/A	\$0	\$8,352
I. 2. b. 6	1 - combined Q1 and Q2 quarterly report @ 18 hrs	18	\$94	N/A	\$0	\$1,692
	1 - annual report @ 24 hrs	24	\$94	N/A	\$0	\$2,256
I. 4. a	Provide SWI supplemental data and review	24	\$111	N/A	\$0	\$2,664

TOTAL ESTIMATED COST = \$68,850

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.

SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: January 1, 2014

RFS NO. 2014-02

(To be filled in by WATERMASTER)

TO: Joe Oliver

FROM: Robert Jaques

Monterey Peninsula Water Management District
PROFESSIONAL

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. 2014-02 shall be completed on an as-directed basis from the Watermaster during 2014. All work under this RFS will be completed not later than December 31, 2014.

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

Total Price Authorized by this RFS: \$5,154.00 (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: _____ **Date:** _____

WATERMASTER Technical Program Manager

Authorized by: _____ **Date:** _____

WATERMASTER Chief Executive Officer

Agreed to by: _____ **Date:** _____

PROFESSIONAL

ATTACHMENT 1
Scope of Work for RFS No. 2014-02

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 January 17, 2008 “Notice to Well Owners” that was sent out by the Watermaster to well owners in the Seaside Groundwater Basin..

This RFS No. 2014-02 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 \$87/hr, so the estimated cost per water level measurement would be \$43.50.

The total estimated cost would be \$522 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 \$250 per sample for the laboratory analysis. The sampling work would be billed at the field rate of \$87/hr, so the estimated cost per annual water quality sample would be \$87 for labor, and \$250 for laboratory services, for a total cost per sample of \$337. Only one sample per well per year will need to be collected and analyzed. This sample will be collected in the fall.

The total estimated cost for collecting and analyzing the sample per well is \$337.

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 \$859.

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 @ \$522 =	\$3,132
Potential No. of Wells Needing Water Quality Data Collected	= 6 @ \$337 =	<u>\$2,022</u>
	TOTAL =	<u>\$5,154</u>

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	MPPRPD	Y	T16S/R2E-05Gd	Y	?	N	
173-011-025, -026	LS Cnty Park #4	MPPRPD	Y	T16S/R2E-05Ge	Y	?	N	
					Y = 38	N or ? = 21	Y = 16	N or ? = 16

SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: January 1, 2014

RFS NO. 2014-01

(To be filled in by WATERMASTER)

TO: Derrick Williams
HydroMetrics WRI
PROFESSIONAL

FROM: Robert Jaques
WATERMASTER

Services Needed and Purpose: See Scope of Work in Attachment 1.

Completion Date: All work of this RFS shall be completed not later than December 31, 2014, and shall be performed in accordance with the Schedule contained in Attachment 2.

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

Total Price Authorized by this RFS: \$ 13,600.00 (Cost is authorized only when evidenced by signature below.) (See Attachment 1 for Estimated Costs).

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

Requested by: _____ Date: _____
WATERMASTER Technical Program Manager

Authorized by: _____ Date: _____
WATERMASTER Chief Executive Officer

Agreed to by: _____ Date: _____
PROFESSIONAL

ATTACHMENT 1

SCOPE OF WORK

On an ongoing and as-requested basis, PROFESSIONAL will provide general hydrogeologic consulting services to WATERMASTER on a variety of topics. These may include, but not be limited to interpretation of water level and water quality data collected by WATERMASTER, and BMAP and SIRP implementation issues.

Providing these services will likely involve attending certain of WATERMASTER's Technical Advisory Committee (TAC) meetings, most of which will be attended telephonically. These TAC meetings do not include special TAC or other meetings which may be required as part of performing other work which may be authorized under other RFSs issued to PROFESSIONAL by WATERMASTER. Any such other scope and cost proposals will incorporate costs for those meetings.

The Tasks in WATERMASTER's 2014 Monitoring and Management Program (M&MP) to which this RFS No. 2014-01 pertains are:

- M. 1. c - Preparation and Attendance of Meetings
- M. 1. e - Peer Review of Documents and Reports
- I. 2. b. 6 - Reports
- I. 4. a. - Oversight of Seawater Intrusion Detection and Tracking

ESTIMATED COSTS

General Consulting Services, including attending some TAC and other meetings either via telephone or in-person in Seaside, as requested by WATERMASTER will be billed at the following hourly rates, including all markups and other direct costs:

Derrick Williams = \$215.00/hour

Georgina King = \$185.00/hour

In addition to hourly labor costs, an allowance of \$1,000.00 is included in this RFS to cover travel and other incidental costs associated with the performance of this work.

The total cost authorized by this RFS No. 2014-01 is \$13,600.00.

ATTACHMENT 2
SCHEDULE

HydroMetrics RFS No. 2014-01
Work Schedule

ID	Task Name	2014												Jan	Feb	Mar	A	
		Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct					Nov
1	M. 1. c - Preparation and Attendance of Meetings																	
2	M. 1. e - Peer Review of Documents and Reports																	
3	L2.b.6 Reports (by HydroMetrics)																	
4	L4.a HydroMetrics & MPWMD Provide Oversight of Seawater Intrusion Detection and Tracking																	

SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: 1/1/2014

RFS NO. 2014-02

(To be filled in by WATERMASTER)

TO: Derrick Williams
HydroMetrics WRI
PROFESSIONAL

FROM: Robert Jaques
WATERMASTER

Services Needed and Purpose: Prepare the Seawater Intrusion Analysis Report for 2014. See Scope of Work in Attachment 1.

Completion Date: All work of this RFS shall be completed not later than December 31, 2014, and shall be performed in accordance with the Schedule contained in Attachment 2.

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

Total Price Authorized by this RFS: \$ 25,750.00 (Cost is authorized only when evidenced by signature below.) (See Attachment 3 for Detailed Breakdown of Estimated Costs).

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

Requested by: _____ Date: _____
WATERMASTER Technical Program Manager

Authorized by: _____ Date: _____
WATERMASTER Chief Executive Officer

Agreed to by: _____ Date: _____
PROFESSIONAL

ATTACHMENT 1

SCOPE OF WORK

The scope consists of providing professional consulting services to WATERMASTER for preparation of the 2014 Seawater Intrusion Analysis Report (SIAR).

To promote efficiency, much of the text and graphics from the 2013 SIAR will be incorporated directly into the 2014 SIAR.

Preparing the 2014 SIAR will involve analyzing all water quality data at the end of Water Year 2014 (October 1, 2013 to September 30, 2014) and producing semi-annual (2nd and 4th quarters 2013) chloride concentration maps for each aquifer in the Basin. Time series graphs, trilinear graphs, and stiff diagram comparisons will be updated with new data. Second and fourth quarter groundwater elevation maps will also be produced. The annual EM logs will be analyzed to identify changes in seawater wedge locations. A determination of whether there is any evidence of seawater intrusion will be made, and recommendations will be included as warranted.

A Draft 2014 SIAR will be provided to WATERMASTER in electronic (not printed) form for review. WATERMASTER will provide its review comments and those of its TAC members through direct discussions with PROFESSIONAL at a TAC meeting. In addition to these oral comments, some TAC members may also provide recommended editorial changes electronically directly to PROFESSIONAL. These comments will be addressed in a Final 2014 SIAR. A CD containing an electronic version of the entire Final 2014 SIAR in MS Word and up to 15 printed and bound copies of the Final 2014 SIAR (quantity to be determined by WATERMASTER) will be provided to WATERMASTER.

ATTACHMENT 2

**HydroMetrics RFS No. 2014-02
Work Schedule**

ID	Task Name	2014																	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Ju
1	I.4.c Annual Seawater Intrusion Analysis Report (SIAR)																		
2	HydroMetrics Provides Draft SIAR to Watermaster												◆ 11/4						
3	TAC Approves Annual Seawater Intrusion Analysis Report (SIAR)												◆ 11/12						
4	Board Approves Annual Seawater Intrusion Analysis Report (SIAR)												◆ 11/19						

ATTACHMENT 3

DETAILED BREAKDOWN OF ESTIMATED COSTS

Note: 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 1 of this RFS is binding and limiting as defined in Section V of the Agreement.

DETAILED BREAKDOWN OF ESTIMATED COSTS

HOURLY RATES:

Derrick Williams = \$215.00

Georgina King = \$185.00

Task	Hours		Costs			
	Derrick Williams	Georgina King	Derrick Williams	Georgina King	Expenses	Total Costs
2014 Seawater Intrusion Analysis Report						
Produce 2014 SLAR	16	88	\$3,440	\$16,280	\$3,930	\$23,650
Attend One TAC Meeting in Monterey	9	0	\$1,935	\$0	\$165	\$2,100
TOTALS	25	88	\$5,375	\$16,280	\$4,095	\$25,750

ITEM. IX.

NEW BUSINESS

ITEM IX.A.

COMMITTEE REPORTS

ITEM NO. IX.A.1.

**TECHNICAL ADVISORY
COMMITTEE
(TAC)**

**SEASIDE GROUNDWATER BASIN
WATERMASTER**

TO: Board of Directors

FROM: Robert S. Jaques, Technical Program Manager
REVIEWED AND APPROVED BY: Dewey D. Evans, CEO

DATE: December 4, 2013

SUBJECT: Discussion/Consider Approving the Seawater Intrusion Analysis Report (SIAR) for WY 2013

RECOMMENDATIONS:

It is recommended that the Board approve the Seawater Intrusion Analysis Report for WY 2013.

BACKGROUND:

HydroMetrics has prepared the Draft Seawater Intrusion Analysis Report (SIAR) for Water Year 2012-2013. The Executive Summary from the SIAR is attached. The SIAR examines the “health” of the Basin with regard to whether or not there are any indications that seawater intrusion is either occurring or is imminent. At its November 13, 2013 meeting the TAC reviewed the Draft 2013 SIAR and recommended it for approval by the Board

DISCUSSION

The key Conclusion contained in the SIAR is that depressed groundwater levels, continued pumping in excess of recharge and fresh water inflows, and ongoing seawater intrusion in the nearby Salinas Valley all suggest that seawater intrusion could occur in the Seaside Groundwater Basin. However, in spite of these factors, no seawater intrusion is currently observed in existing monitoring wells.

A trend toward increasing chloride concentration was observed in WY 2012 in three of the near-coast monitoring wells, as well as a decreasing sodium/chloride molar ratios in some of those wells. While it is too early to determine whether these are early indications of approaching seawater intrusion, this warranted increasing the monitoring frequency in those wells. The additional monitoring began being performed for the Watermaster by MPWMD in WY 2013 and will continue into the future. The costs to perform this monitoring are included in MPWMD’s contract with the Watermaster.

ATTACHMENTS:

Executive Summary of the WY 2013 Seawater Intrusion Analysis Report. The complete SIAR is posted on the Watermaster’s website at <http://www.seasidebasinwatermaster.org/>, for review by those Board members who wish to examine the entire document, including all of its attachments.

EXECUTIVE SUMMARY

This annual report addresses the potential for, and extent of, seawater intrusion in the Seaside Groundwater Basin. Continued pumping in excess of recharge and fresh water inflows, pumping depressions near the coast, and ongoing seawater intrusion in the nearby Salinas Valley all suggest that seawater intrusion could occur in the Seaside Groundwater Basin. No seawater intrusion is currently observed in existing monitoring and production wells, as demonstrated by the different tools and analyses that are used to investigate for evidence of seawater intrusion.

- Piper diagrams for groundwater samples collected from depth-discreet monitoring wells during Water Year 2013 show no changes in water chemistry towards seawater.
- No groundwater samples analyzed with Stiff diagrams are indicative of incipient seawater intrusion.
- Overall, chloride concentration trends have been stable for most monitoring wells, with one well having a slight decreasing trend.
- Chloride concentrations in the coastal monitoring well, PCA-West Deep, for the past three years consistently had concentrations 20 mg/L or greater than pre-2009 concentrations (Figure B-2 in Appendix B). MPWMD staff suggested this marked increase could be due to a change in sampling technique that occurred at approximately the same time as the shift in concentrations were seen. After testing in February 2013, it was discovered that the change in sampling method from air-lift to bladder pumps did result in the difference in concentrations observed. The outcome of the sampling method testing is that chloride concentrations are not increasing in PCA West Deep as previously thought.
- Maps of chloride concentrations for the shallow aquifer do not show chlorides increasing towards the coast. The deep aquifer maps show that higher chloride concentrations are limited to coastal monitoring wells PCA-West Deep and sentinel well SBWM-4.

- Although production wells have a different water quality than the monitoring wells, this is probably as a result of them being screened across both shallow and deep zones. The production well water qualities are not indicative of seawater intrusion.
- Induction logging data at the coastal Sentinel wells do not indicate changes indicative of seawater intrusion.
- Groundwater levels continue to be below preliminary protective elevations in the deep coastal target monitoring wells for which protective elevations were developed (MSC deep, PCA-West, and Sentinel Well 3). Two of the three shallow wells' groundwater levels are above protective elevations: PCA-W shallow and CDM-MW4. MSC shallow remains below preliminary protective elevations.

Based on the findings of this report, the following recommendations should be implemented to continue to monitor and track potential seawater intrusion.

1. Continue Semi-Annual Water Quality Sampling and Analysis for Sentinel Well SBWM-4

Because chloride concentrations in SBWM-4 are 250 mg/L, this well needs to continue semi-annual sampling and analysis.

2. Continue to Analyze and Report on Water Quality Annually

Seawater intrusion is a threat, and data must be analyzed regularly to identify incipient intrusion. Maps, graphs, and analyses similar to what are found in this report should continue to be developed every year.

**SEASIDE GROUNDWATER BASIN
WATERMASTER**

TO: Board of Directors

FROM: Laura Dadiw, Assistant to the CEO

REVIEWED AND APPROVED BY: Dewey D. Evans, CEO

DATE: December 4, 2013

SUBJ: Watermaster Declaration of **NO** Replenishment Water Available for Water Year 2014

PURPOSE:

To notify all Seaside Groundwater Basin producers that the Watermaster has declared for Water Year 2014 that **NO** Artificial Replenishment Water is available to offset Over-Production in excess of the Operating Yield for the Seaside Groundwater Basin pursuant to the Amended Decision entered in the Seaside Adjudication.

RECOMMENDATION:

Consider approving the Declaration of No Artificial Replenishment Water Available for Water Year 2014.

DISCUSSION:

The Court has declared in Section III L 3 j iii of the adjudication Decision that in the event Watermaster cannot procure Artificial Replenishment Water to offset Operating Yield Over-Production during the ensuing Water Year that the Watermaster Board shall so declare in December that no Operating Yield Over-Production then in effect may occur during the ensuing Water Year.

Watermaster has determined that there is no foreseeable replenishment water available for Water Year 2014. As ordered by the Court at the January 12, 2007 hearing, an additional 10% reduction in Operating Yield will continue to be in effect for the entire Water Year 2014. *(Commencing with the fourth Water Year, and triennially thereafter the Operating Yield for both Subareas will be decreased by ten percent (10%) until the Operating Yield is equivalent of the Natural Safe Yield.)*

If potable water becomes available to the Watermaster during Water Year 2014, such as the City of Seaside golf course irrigation program creating in-lieu replenishment water in an amount necessary to offset the 10% reduction, all producers under the Decision would be notified of such availability and of any resulting adjustments to the limits of production.

ATTACHMENTS

- 1) Declaration of Unavailability of Replenishment Water for Water Year 2014 and limits on production with Watermaster Producer Allocations Water Year 2014 including a continuing second triennial 10% Reduction for the entire Water Year.

NOTICE TO ALL SEASIDE GROUNDWATER PRODUCERS:

Case No. M66343 Amended Decision Section III.B.2.

Commencing with the fourth Water Year, and triennially thereafter, the Operating Yield for both Subareas will be decreased by ten percent (10%) until Operating Yield is the equivalent of the Natural Safe Yield unless:

- a. The Watermaster has secured and is adding an equivalent amount of Non-Native water to the Basin on an annual basis; or*
- b. The Watermaster has secured reclaimed water in an equivalent amount and has contracted with one or more of the Producers to utilize said water in lieu of their Production Allocation, with the Producer agreeing to forego their right to claim a Stored Water Credit for such forbearance; or*
- c. Any combination of a and b above which results in the decrease in Production of Native Water required by this Decision; or*
- d. The Watermaster has determined that Groundwater levels within the Santa Margarita and Paso Robles aquifers are at sufficient levels to ensure a positive offshore gradient to prevent seawater intrusion.*

The Watermaster has determined that the conditions necessary to avoid the ten percent Operating Yield reduction have not been met as follows:

1. Watermaster has not secured water for adding an equivalent amount of Non-Native water to the Basin on an annual basis. The Watermaster and the City of Seaside have, however, entered into a Memorandum of Understanding for Seaside's In-lieu Replenishment Program which may, in future water years, provide sufficient water to avoid an Operating Yield reduction.
2. The Watermaster has not secured reclaimed water in an equivalent amount.
3. The Watermaster has not secured Non-Native water or reclaimed water which results in the decrease in Production of Native Water required by the Decision.
4. The firm contracted by Watermaster for technical analyses continued to report in 2013 that Groundwater levels within the Santa Margarita and Paso Robles aquifers are not at sufficient levels to ensure a positive offshore gradient to prevent seawater intrusion, so the requirement for this item continues to not be met.

Section III.L.3.j.iii: Watermaster declares that for Water Year 2014 Artificial Replenishment Water is not available to offset Operating Yield Over-Production and producers are limited in production to the following quantities of water:

Coastal Subarea Alternative Producers:

Seaside (Golf)	540.00 acre-feet
SNG	149.00 acre-feet
Cypress (Calabrese)	14.00 acre-feet
Mission Memorial (Alderwood)	31.00 acre-feet
Sand City	9.00 acre-feet

Laguna Seca Subarea Alternative Producers:

Nicklaus Club Monterey	251.00 acre-feet
Bishop	320.00 acre-feet
York School	32.00 acre-feet
Laguna Seca County Park	41.00 acre-feet

Coastal Subarea Standard Producers:

California American Water.....	2,668.89 acre-feet*
Seaside (Municipal)	218.87 acre-feet**
Granite Rock	200.41 acre-feet***
D.B.O. Development 30	391.40 acre-feet****

Laguna Seca Subarea Standard Producers:

California American Water.....	147.20 acre-feet
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-
- * Total is the 2014 base allocation of 2,668.9 acre-feet.
California American Water has a negative balance of 349.17 acre-feet of stored water credit in WY 2014 from Basin extractions exceeding injections in 2013 under the CAW/MPWMD ASR Program, formalized through a Storage Agreement in 2012.
 - ** Total is the 2014 base allocation of 218.87 acre-feet.
 - *** Total includes 105.46 acre-feet of “free” carryover and 74.33 acre-feet of “not-free” carryover credit from previous water years, plus the 2014 base allocation of 20.62 acre-feet.
 - **** Total includes 209.67 acre-feet of “free” carryover and 144.32 acre-feet of “not-free” carryover credit from previous water years, plus the 2014 base allocation of 37.41 acre-feet.

**SEASIDE GROUNDWATER BASIN
WATERMASTER**

TO: Board of Directors

FROM: Robert S. Jaques, Technical Program Manager
REVIEWED AND APPROVED BY: Dewey D Evans, CEO

DATE: December 4, 2013

SUBJECT: Discussion/Consider Approving Watermaster Annual Report for WY 2013 due to be filed with the Court on or before December 15, 2013

RECOMMENDATIONS:

It is recommended that the Board approve the Watermaster Annual Report for WY 2013.

BACKGROUND:

The Watermaster submits an Annual Report to the Court after the end of each Water Year to fulfill one of its obligations under the Court Decision that created the Watermaster. This document summarizes and provides information on all of the Watermaster's principle activities of the year, and as required by the Decision is organized into the following Sections:

- A. Groundwater Extractions**
- B. Groundwater Storage**
- C. Amount of Artificial Replenishment, if any, performed by Watermaster**
- D. Leases or sales of Production Allocation and Administrative Actions**
- E. Use of imported, reclaimed, or desalinated Water as a source of Water for Storage or as a water supply for lands overlying the Seaside Basin**
- F. Violations of the Decision and any corrective actions taken**
- G. Watermaster administrative costs**
- H. Replenishment Assessments**
- I. All components of the Watermaster budget**
- J. Water Quality Monitoring and Basin Management (including the following subsections):**

Water Quality Analytical Results

Management and Monitoring Program Work Plan

Basin Management Database

Enhanced Monitoring Well Network

Basin Management Action Plan (BMAP)

Seawater Intrusion Response Plan

Seawater Intrusion Analysis Report

Aquifer Cross-Contamination Investigation

Investigation into Water Quality Anomalies at the City of Sand City Public Works Well

Groundwater Modeling

Revising Protective Water Levels

*California American Water Replenishment Repayment Plan
Evaluation to Determine if Injecting Water for Basin Replenishment Would be
More Effective if Done Close to the Coast Rather than Injecting Water at
Inland Sites*

K. Conclusions and Recommendations

DISCUSSION:

A Preliminary Draft Annual Report was presented to the TAC for its review and input at the TAC's November 13, 2013 meeting. Attached is the body of the Draft 2013 Annual Report, reflecting input from the TAC. The complete Draft version is posted on the Watermaster's website at <http://www.seasidebasinwatermaster.org/>.

The Draft version will be made into a Final version, reflecting any comments or recommendations from the Board at today's meeting. The Final version will be submitted to the Court.

Due to the length of the Annual Report, rather than making a presentation at today's meeting, Staff will respond to questions about the Annual Report from the Board and the Public

ATTACHMENTS:

Body of the Draft version of the Watermaster 2013 Annual Report.

SEASIDE BASIN WATERMASTER

DRAFT ANNUAL REPORT – 2013

Integral to the Superior Court Decision (Decision) rendered by Judge Roger D. Randall on March 27, 2006 is the requirement to file an Annual Report. This 2013 Annual Report is being filed on or before December 15, 2013, consistent with the provisions of the Decision, as amended by the Annual Report Review and Order dated January 7, 2011. This Annual Report addresses the specific Watermaster functions set forth in Section III. L. 3. x. of the Decision. In addition this Annual Report includes a section pertaining to Water Quality Monitoring and Basin Management.

A. Groundwater Extractions

The schedule summarizing the Water Year 2013 (WY 2013) groundwater production from all the producers allocated a Production Allocation in the Seaside Groundwater Basin is provided in Attachment 1, "Seaside Groundwater Basin Watermaster, Reported Quarterly and Annual Water Production From the Seaside Groundwater Basin for all Producers Included in the Seaside Basin Adjudication During Water Year 2013." For the purposes of this Annual Report Water Year 2013 is defined as beginning October 1, 2012 and ending on September 30, 2013.

B. Groundwater Storage

Monterey Peninsula Water Management District (MPWMD), in cooperation with California American Water (CAW), operated the Seaside Basin Aquifer Storage and Recovery (ASR) program during WY 2013. During WY 2013, a total of 294.47 acre-feet (AF) of water was diverted by CAW from its Carmel River sources during periods of flow in excess of NOAA-Fisheries' bypass flow requirements, and transported through the existing CAW distribution system for injection and storage in the Seaside Basin at the MPWMD's Santa Margarita ASR site and CAW's Seaside Middle School ASR site. In WY 2013, rainfall in the area was about 69% of normal, but due to the rainfall distribution pattern throughout the season, Carmel River flow was only 40% of normal. Accordingly, the amount of water that was diverted for ASR purposes is considerably less than the amount that was diverted in WY 2011 because of the low rainfall and flow amounts, and also due to limitations on diversions associated with the SWRCB bypass flow requirements to maintain flows in the Carmel River. This is the only reported storage of non-native groundwater into the Seaside Basin in WY 2013.

Also during WY 2013, MPWMD continued work under contract with CAW for construction of all facilities at the Seaside Middle School ASR site. This work included completing construction of the second ASR well at this site. This is the fourth ASR well in the basin, and it is anticipated to be ready for permanent service in late 2013. The new ASR wells at the Seaside Middle School site will eventually provide over twice the existing capacity to inject and store excess Carmel River winter flows, and their completion satisfies orders and decisions recently issued by the State Water Resources Control Board and the California Public Utilities Commission.

Based upon production reported for WY 2013, the following Standard Producers are entitled to Free and Not-Free Carryover Credits in accordance with the Decision, Section III. H. 5. for WY 2013:

<u>Producer</u>	<u>Free Carryover Credit</u>	<u>Not-Free Carryover Credit</u>
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	<u>(Acre-feet)</u>	<u>(Acre-feet)</u>
Granite Rock	105.46	74.33
DBO Development	209.67	144.32
CAW	00.0	00.0
City of Seaside Muni	00.0	00.0

C. Amount of Artificial Replenishment, if any, performed by Watermaster

Per the Decision, “Artificial Replenishment” means the act of the Watermaster, directly or indirectly, engaging in contracting for Non-Native Water to be added to the Groundwater supply of the Seaside Basin through Spreading or Direct Injection to offset the cumulative Over-Production from the Seaside Basin in any particular Water Year pursuant to Section III.L.3.j.iii. It also includes programs in which Producers agree to refrain, in whole or in part, from exercising their right to produce their full Production Allocation where the intent is to cause the replenishment of the Seaside Basin through forbearance in lieu of the injection or spreading of Non-Native Water (referred to herein as “In-lieu Replenishment”).

During Water Year 2013 the Watermaster indirectly engaged in In-lieu Replenishment of the Basin. Non-native water was made available to the Basin during Water Year 2013 and is foreseeable for Water Year 2014 under a Memorandum of Understanding and Agreement entered into by Watermaster with the City of Seaside for its golf course irrigation program creating in-lieu replenishment water. 383.39 acre-feet was in-lieu replenished to the Basin by the program in Water Year 2013.

This in-lieu replenishment program was extended by the Board at its April 3, 2013 meeting. Under the original terms of the MOU it would have terminated following the end of WY 2012. Under projected irrigation demands the City of Seaside estimated that its remaining Marina Coast Water District entitlement would provide sufficient irrigation water to satisfy the irrigation demands of the golf courses through WY 2018. Consequently, it was agreed that the in-lieu replenishment program should continue without interruption pursuant to the terms of this MOU. The extended MOU was made retroactively effective to January 1, 2013 and will continue until all of the City’s remaining MCWD entitlement has been used within the Program, and all of the City’s Replenishment Assessment Credit has either been used by the City, or by another party if the City transfers its Replenishment Assessment Credit. A copy of the extended MOU is contained in Attachment 13.

D. Leases or sales of Production Allocation and Administrative Actions

No sale of Production Allocation and no actions pertaining to real property and/or water rights occurred during WY 2013.

At its April 4, 2013 meeting the Watermaster Board approved a request by California American Water (CAW) to convert three of its production wells to monitoring wells and to retire and destroy one of its production wells in the Seaside Basin. These wells (CAW’s Hilby, Military, Luxton, and Darwin wells) are no longer needed by CAW for use as production wells. Converting three of the wells to monitoring wells avoids creating a gap in the spatial distribution of water level monitoring data. Such a data gap could reduce the accuracy of modeling and other evaluations of the Basin’s water levels. The proposed conversion plans for these three wells would include completing two inch diameter schedule 80 PVC monitoring wells within the existing well casings, with each monitoring well having a sand pack and a sanitary seal for the upper 50 feet. Pressure transducer dataloggers may be purchased and installed on

these wells to collect data. Destruction of the Darwin well can proceed because data from that well is not critical, since there are numerous other monitoring wells located in this same part of the Basin.

During WY 2013 the Watermaster Board did not make any revisions to its *Rules and Regulations*.

During WY 2013 the Watermaster Board was comprised of the following Members and Alternates:

<u>MEMBER</u>	<u>ALTERNATE</u>	<u>REPRESENTING</u>
Director Paul Bruno	N/A	Coastal Subarea Landowner
Eric Sabolsice	Roger Hulbert	California American Water
Director Bob Costa	N/A	Laguna Seca Subarea Landowner
Director Bob Brower	Jeanne Byrne	MPWMD
Mayor Dave Pendergrass	Steve Matarazzo	City of Sand City
Supervisor Dave Potter	Jane Parker	Monterey County (MCWRA)
Mayor Jerry Edelen	Kristin Clark	City of Del Rey Oaks
Mayor Chuck Della Sala	Libby Downey	City of Monterey
Mayor Felix Bachofner succeeded by Mayor Ralph Rubio	Dennis Alexander	City of Seaside

E. Use of imported, reclaimed, or desalinated Water as a source of Water for Storage or as a water supply for lands overlying the Seaside Basin

The CAW/MPWMD ASR Program occurred in WY 2013 with 294.47 acre-feet of water injected into the Basin as Stored Water Credits and 643.64 acre-feet extracted.

In addition to the water imported from the Carmel Basin for the ASR program described in **Section B** above, during WY 2013 383.39 acre-feet of imported water was used to irrigate golf courses owned by the City of Seaside overlying the Seaside Basin, as discussed above in **Section C**. The terms and conditions under which this in-lieu replenishment water was used to generate a credit to be applied against the City of Seaside’s overproduction replenishment assessments is described in the “Memorandum of Understanding Between the Seaside Basin Watermaster and the City of Seaside” which was contained in Attachment 3 to the Watermaster’s 2010 Annual Report. This is the only imported, reclaimed or desalinated water used either directly or for storage in the groundwater basin that has been reported to the Watermaster during WY 2013.

As reported in Section E of the 2010 and 2011 Annual Reports, the MPWMD, City of Seaside, MCWD, and Watermaster developed an MOU to add an additional 68.8 acre-fee of in lieu replenishment to the

City of Seaside's total in lieu replenishment for Water Year 2009/2010. This MOU was finalized and executed in early 2012 and resulted in a revision to the Replenishment Account balance sheet for Water Year 2009/2010.

F. Violations of the Decision and any corrective actions taken

Section III. D. of the Decision enjoins all Producers from any Over-Production beyond the Operating Yield in any Water Year in which the Watermaster declares that Artificial Replenishment is not available or possible. Section III. L. 3. j. iii. requires that the Watermaster declare the unavailability of Artificial Replenishment in December of each year, so that the Producers are informed of the prohibition against pumping in excess of the Operating Yield.

The Watermaster made a declaration regarding the availability of Artificial Replenishment for WY 2014 at its Board meeting of December 4, 2013. A copy of this declaration is contained in [Attachment 2](#). In WY 2013 the Watermaster continued the previously implemented 10% water production reductions required under Section III.B.2 of the Decision. No additional water production reductions were implemented in WY 2013.

Total pumping for WY 2013 did not exceed the Operating Yield (OY) for the Seaside Basin, but it did exceed the Natural Safe Yield (NSY) of the Basin.

CAW and the City of Seaside reported annual pumping quantities that exceeded their Standard Production NSY allocations by 595.90 and 46.31 acre-feet, respectively, and reported annual pumping quantities that exceeded their Operating Yield allocations by 260.51 and 38.86 acre-feet, respectively. The City of Seaside did not exceed its Alternative Production NSY. The Watermaster will assess CAW and the City of Seaside a Replenishment Assessment for these over productions, as further described in Section H, below.

G. Watermaster administrative costs

The total estimated Administrative costs through the end of Fiscal Year 2013 amounted to \$79,000 including a \$19,000 dedicated reserve. Costs include maintaining an office and paying a part time administrator and some part time staff to take and transcribe minutes of the Watermaster Board meetings during 2013. The "Fiscal Year 2013 Administrative Fund Report" is provided as [Attachment 3](#).

H. Replenishment Assessments

A Replenishment Assessment unit cost of \$2,780 per acre-foot was established by the Watermaster in 2009, and this same unit cost has been used since then. At its meeting of September 4, 2013 the Watermaster Board determined that an updated Replenishment Assessment unit cost of \$2,702 per acre-foot should be used against WY 2014 pumping. The Agenda transmittal from that meeting discussing this determination is contained in [Attachment 4](#).

Alternative and Standard Producers report their production amounts from the Basin to the Watermaster on a quarterly basis. Based upon the reported production for WY 2013, CAW's Replenishment Assessment for Overproduction in excess of its share of the Natural Safe Yield is \$1,656,612.48, and for Overproduction in excess of its share of the Operating Yield is \$724,229.48. The City of Seaside's Replenishment Assessment for its Municipal System for Overproduction in excess of its share of the Natural Safe Yield is \$128,755.48, and for overproduction in excess of its share of the Operating Yield is \$108,026.23. The City of Seaside did not exceed its Alternative Production Allocation for its Golf Course System production. A

summary of the calculations for Replenishment Assessment for WY 2013 is contained in Attachment 5.

I. All components of the Watermaster budget

The Watermaster budget has four separate funds: Administrative Fund; Monitoring & Management–Operations; Monitoring and Management–Capital Fund and; Replenishment Fund. Copies of the Fiscal Year 2013 adopted budgets are contained in Attachment 6. The Chief Executive Officer provides monthly financial status reports to the Watermaster Board on all financial activities for each month with year-to-date totals.

K. Water Quality Monitoring and Basin Management

Water Quality Analytical Results

Groundwater quality data continued to be collected and analyzed on a quarterly basis during WY 2013 from the enhanced network of monitoring wells. The low-flow sampling method implemented in 2009 continued to be used in 2013 and is expected to continue to be used in the future to improve the efficiency of sample collection. Where feasible, water quality at selected locations is being supplemented with continuous water-quality dataloggers to offset the reduction in sample collection frequency.

During WY 2014 the Watermaster plans to reduce the frequency of water quality sampling at SBWM-MW5. These are the most recently installed Watermaster monitoring wells and are located on the Bureau of Land Management site within the former Fort Ord, which is far inland from the coastline. When these two wells were constructed in 2009, the initial sampling plan recommended in Martin Feeney’s January 2010 *“Seaside Groundwater Basin Watermaster Inland Monitoring Well Project”* report, which documented the well completions and initial sampling of the wells, was to resample these wells until water quality was established and confirmed. The recommendation was to then reduce the sampling frequency to once every 5 years, because these wells are far away from the Basin’s boundaries and from the production wells in the Basin, so if any changes in water quality were to occur they would be expected to occur very slowly. The Watermaster has now compiled a 4-year history of water quality data from these wells, and the water quality has remained stable during this period. In WY 2014 the Watermaster is planning to reduce the frequency of water quality sampling at these wells to once every 3 years, which is slightly more conservative than Mr. Feeney’s recommended 5-year sampling interval.

No other modifications to the quarterly data collection frequency from the enhanced network of monitoring wells are being proposed for WY 2014. Any recommendations for future changes in sampling frequency will be included in the 2014 Annual Report.

Up until WY 2010 quarterly geophysical (induction) logging was performed at the four coastal Watermaster Sentinel wells that were installed in 2007. The induction logging results showed very little variations and trends were steady since that monitoring began, indicating that the coastal water quality conditions were not changing at this sample frequency. Therefore, beginning in WY 2010 the Court approved reducing the induction logging frequency to semi-annually at these wells. Water samples from these wells continue to be collected on an annual basis.

The expanded water quality analyses begun in WY 2012 were continued in WY 2013, and will be continued in WY 2014, for the four coastal Watermaster Sentinel wells (SBWM-1, SBWM-2, SBWM-3, and SBWM-4), and also for the 3 most coastal MPWMD monitoring wells (MSC, PCA, and FO-09).

Copies of the sampling results are contained in Attachment 7. Analysis of the results indicate no evidence of water quality changes indicative of seawater intrusion at the locations and depths sampled in the coastal areas of the basin.

All of the recommendations contained in the report in Attachment 7 are being actively pursued by the Watermaster. Funds to pursue these recommendations have been included in the adopted FY 2014 budgets contained in Attachment 6.

Management and Monitoring Program Work Plan

The Management and Monitoring Program (M&MP) 2014 Work Plan contained in Attachment 9 includes the types of basin management activities conducted in prior years as well as revisions recommended by the TAC when it reviewed the Draft M&MP 2014 Work Plan at its August 14, 2013 meeting, and the following revisions that resulted from subsequent discussions with MPWMD and HydroMetrics representatives:

- Task M.1.c & M.1.d: The budget for this task was increased to \$7,000 because more agenda items require HydroMetrics participation in TAC and Board meetings.
- Task I.2.b.2: The budget for this task was decreased to \$5,176 because all the dataloggers have now been installed. An additional replacement datalogger was included this year since there are now more dataloggers in our system.
- Task I.2.b.3: The budget for this task was decreased by \$1,000 because retrofitting to use the low-flow purge sampling approach has been completed. The amount included to repair or replace the sampling equipment was increased to \$1,000 since there are now more wells equipped with this equipment.
- Task I.3.a.1: This is a new task, based on a recommendation made by a Board member.

The 2014 M&MP Operations Budget is \$10,344 lower than the 2013 Budget. This is largely because several tasks were completed in 2013 and therefore did not need to be included in the 2014 Budget.

No new monitoring wells are planned for installation in 2014. Consequently no monies are budgeted in the M&MP Capital Budget for 2014.

Basin Management Database

Pertinent groundwater resource data obtained from a number of sources has been consolidated into the Watermaster's database to allow more efficient organization and data retrieval. No modifications or enhancements to the database are planned in FY 2014.

Enhanced Monitoring Well Network

The Seaside Basin M&MP uses an Enhanced Monitoring Well Network to fill in data gaps in the previous monitoring well network used by the Monterey Peninsula Water Management District (MPWMD), and others, in order to improve the Basin management capabilities of the Watermaster. The Enhanced Monitoring Well Network has been described in detail in previous Watermaster Annual Reports. It continues to be used to obtain additional data that is useful to the Watermaster in managing the Basin.

Basin Management Action Plan (BMAP)

HydroMetrics LLC was hired by the Watermaster to prepare the BMAP which contains these Sections:

- Executive Summary

- The Background and Purpose of the Plan
- The State of the Basin
- Supplemental Water Supplies (long-term water supply solutions)
- Groundwater Management Actions (to be taken as interim measures while long-term supplies are being developed)
- Recommended Management Strategies
- References

The Final BMAP was approved by the Watermaster Board at its February 2009 meeting, and the Executive Summary from the BMAP was contained in Attachment 9 of the 2009 Annual Report. The complete document may be viewed and downloaded from the Watermaster’s website at: <http://www.seasidebasinwatermaster.org/>.

Updating of the BMAP may be performed in FY 2014, but only if new data or other information warrants doing so. It is Task I.3.c in the M&MP Work Plan contained in Attachment 9.

Seawater Intrusion Response Plan

HydroMetrics LLC was hired by the Watermaster to prepare a long-term Seawater Intrusion Response Plan (SIRP), as required in the M&MP.

The Final SIRP was approved by the Watermaster Board in 2009 and a summary of the Seawater Intrusion Contingency Actions from the SIRP were contained in Attachment 10 of the 2009 Annual Report. The complete document may be viewed and downloaded from the Watermaster’s website at: <http://www.seasidebasinwatermaster.org/>. No modifications to the SIRP are planned in 2014.

Seawater Intrusion Analysis Report

The Watermaster retained HydroMetrics LLC to prepare the WY 2013 Seawater Intrusion Analysis Report (SIAR) required by the M&MP. The WY 2013 SIAR provides an analysis of data collected during this Water Year.

The SIAR examines the “health” of the Basin with regard to whether or not there are any indications that seawater intrusion is either occurring or is imminent. The WY 2013 SIAR states that depressed groundwater levels, continued pumping in excess of recharge and fresh water inflows, and ongoing seawater intrusion in the nearby Salinas Valley all suggest that seawater intrusion could occur in the Seaside Groundwater Basin. In spite of these factors, the SIAR reports that neither the Piper nor the Stiff Diagrams, chloride levels, or other water quality parameters indicate the presence of seawater intrusion in the existing monitoring wells.

In last year’s SIAR a trend toward increasing chloride concentration in a few of the near-coast monitoring wells, and decreasing sodium/chloride molar ratios in some of those wells led HydroMetrics to recommend increasing the monitoring frequency in those wells. As a result of preparing the 2013 SIAR HydroMetrics has concluded that the cause of these changes in water quality at these wells is the change in the method samples are collected. A low-flow sampling technique was implemented in 2009, replacing the previously used air-lift sampling technique. The SIAR discusses this topic and explains the basis for this conclusion.

The SIAR is lengthy, but the full *Executive Summary Section* from it is provided in Attachment 8. A complete copy of the document may be viewed and downloaded from the Watermaster's website at: <http://www.seasidebasinwatermaster.org/>. All recommendations contained in the SIAR are being carried out and are included in the budgeted activities contained in Attachment 6 and described in Attachment 9.

The Watermaster continues to analyze the data that is being gathered at the various monitoring sites in order to keep a close watch on the conditions within the Basin, as discussed under the "Enhanced Monitoring Well Network" heading above.

Aquifer Cross-Contamination Investigation

In 2012 the Watermaster had MPWMD perform an evaluation of coastal wells for cross-aquifer contamination potential. This work concluded that:

- For the 261 wells that were assessed, no problems related to maintenance or abandonment were evident from this work.
- 18 wells in the coastal zone were found to either have been completed in two aquifer zones or to have been drilled through the upper aquifer and completed in the deeper aquifer. These are potential conduits for seawater intrusion, as wells screened in two aquifers potentially provide a direct connection and wells completed in the deeper zone could contribute to cross-aquifer contamination through improperly constructed or failed seals. The 18 identified wells are currently being used as production, backup production, or monitoring wells.
- If seawater intrusion is detected in the locality of one or more of these wells at some future date, it will be necessary to perform focused evaluation to inspect the integrity of well materials and determine the effects of well completions on the movement of seawater between aquifers at specific wells on a case by case basis. Seawater intrusion has not been detected or reported in the locality of any of these wells. Therefore, no further investigative work is warranted at this time.

A complete copy of the MPWMD investigation was contained in Attachment 10 of the Watermaster's WY 2012 Annual Report. No further work regarding aquifer cross-contamination is planned for 2014.

Investigation into Water Quality Anomalies at the City of Sand City Public Works Well

Under Task I. 4. b in the 2013 M&MP, MPWMD was to undertake a "Focused Hydrogeologic Evaluation" of the Sand City Public Works well. This work was envisioned as consisting of compiling historical and current water quality data in the coastal area to provide more in-depth evaluation of conditions in the shallow Dune Sand/Aromas Sand aquifer in the vicinity of the Sand City Public Works well, where unique water quality conditions and variability have recently been observed. The results of this evaluation were to be summarized in a brief Technical Memorandum with conclusions and recommendations.

MPWMD started this work in 2013 but after an exhaustive search, including inquiries to California American Water who at one time had wells in this area (these have all since been abandoned), was only able to locate a very small amount of historical water quality data that could be used to perform the evaluation. Therefore, it was not possible to definitively determine the cause of the water quality anomalies. However, the numerous reports that are cited in the Technical Memorandum indicate that other wells perforated in this shallow dune formation had experienced unusual variations in water quality for many years dating back into the 1960s, presumably due to seawater intrusion into this shallow formation.

The Watermaster will continue performing sampling of this well at the increased (quarterly) frequency that was initiated in 2012 in order to identify any water quality trends at this well. The Technical Memorandum summarizing the work that MPWMD performed is contained in Attachment 14.

Groundwater Modeling

During FY 2009 the previous Groundwater Model of the Basin was updated and a separate Groundwater Model was developed to determine protective water levels within the Basin. The modeling work was performed by HydroMetrics LLC. This Model development work was described in the 2009 Annual Report.

Revising Protective Water Levels

In FY 2009 the Watermaster completed development of preliminary Protective Water Levels (PWLs) for each of the Basin's production aquifers at the locations of several coastal wells. It was believed that additional hydrogeologic data and information obtained since then might lead to a lowering of the 2009 protective water levels. However, further investigation performed in 2013 led to the conclusion that the 2009 protective water levels were reasonable and should not be lowered. This is discussed in Section 2.0 of the modeling report contained in Attachment 10.

California American Water Replenishment Repayment Plan

At its October 3, 2012 meeting the Watermaster Board considered making revisions to the language of the January 2009 Memorandum of Understanding (MOU) between the Watermaster and California American Water (CAW) in order to clarify the schedule of repayment by CAW of artificial or in-lieu replenishment water to the Basin. Although the MOU stipulates that CAW will ensure replenishment of the Basin with water from the Coastal Water Project or a comparable alternative project, at no cost to Watermaster, in an amount equivalent to the quantity of water that CAW has overproduced during Basin adjudication, there is currently no language as to the schedule of repayment by CAW other than "on a schedule that is feasible" per Section 2. (a) of the agreement. There is no language within the Decision itself that clarifies the schedule of repayment. The Board determined that it would be desirable to define the term "feasible" and to develop a repayment schedule.

At its November 29, 2012 meeting the Board discussed a proposal by CAW to "repay" the basin by in-lieu replenishment (non-pumping) of 700 acre-feet per year (see proposed California American Water Replenishment Schedule below). The water year subsequent to CAW's completion of its planned regional desalination plant would begin the repayment schedule. The in-lieu replenishment repayment would be achieved through obtaining alternative water supply generated by not only the desalination plant, but the currently operational Aquifer Storage and Recovery project, and the planned MRWPCA Groundwater Replenishment Project (GWRP) as well.

CALIFORNIA AMERICAN WATER REPLENISHMENT SCHEDULE

A1. Upon final completion and acceptance by California American Water of a Water Supply Project and beginning October 1 of the subsequent Water Year, California American Water shall commence replenishment of the Seaside Basin in accordance with the schedule contained herein. The schedule is agreed by all parties to be feasible in accordance with Section 2 of the MOU dated December 3, 2008.

A2. Watermaster and California American Water agree that the volume of artificial or in-lieu replenishment shall be based on a running five (5) Water Year average. Should the average volume of artificial or in-lieu replenishment calculated by the Watermaster be less than 700 acre-feet annually and if the Watermaster declares that water for Artificial Replenishment is available

from sources other than the CAW Water Supply Project, Watermaster shall have the option of requiring CAW to pay a part of CAW's Outstanding Replenishment Assessment for the purpose of providing Watermaster with funds to obtain Artificial Replenishment in sufficient quantities to replenish that quantity not provided via in-lieu replenishment.

A3. Watermaster and California American Water agree that should conditions change in the basin sufficient to indicate that Seawater intrusion is occurring; this replenishment schedule shall be subject to immediate modification.

A4. Replenishment Years subsequent to Replenishment Year 25 shall continue at 700 acre-feet annually based on a running 5-year average until California American Water's total calculated Over-Production volume has been achieved. In accordance with Section 4 of the MOU, at any stage in CAW's replenishment prior to Replenishment Year 25 should the Court determine that the Basin has been replenished in an amount sufficient to prevent seawater intrusion or the Basin has been protected by alternative seawater intrusion preventive measures CAW's obligations under conditions set by this MOU shall be deemed fully satisfied.

REPLENISHMENT YEAR *	ARTIFICIAL REPLENISHMENT (AFA)	IN-LIEU REPLENISHMENT (AFA)
1		700
2		700
3		700
4		700
5		700
6		700
7		700
8		700
9		700
10		700
11		700
12		700
13		700
14		700
15		700
16		700
17		700
18		700
19		700
20		700
21		700
22		700
23		700
24		700
25		700
--		700

At this same meeting (November 29, 2012) the Board approved:

(1) Making revisions to the language of Section 2 of the MOU regarding Replenishment Credits against future Replenishment Assessment obligations to clarify the “feasible” schedule of repayment by CAW of artificial or in-lieu replenishment water to the Basin as a 25-year schedule at 700 acre-feet annually, and

(2) A contract with HydroMetrics to perform groundwater modeling to update the previously calculated protective water levels and to evaluate replenishment scenarios.

The full report prepared by HydroMetrics on this modeling work is contained in Attachment 10. The following are the principal findings and conclusions from this work:

1. Protective Elevations Unchanged. The protective groundwater level elevations developed for the Watermaster by HydroMetrics in 2009 remain reasonable targets for groundwater management based on the most recent modeling and should not be modified.

2. Replenishment Schedule Goal. Cal Am's Board-approved 25 year repayment replenishment program consists of Cal-Am pumping 700 Acre Feet per Year (AFY) less than its Decision-allowed natural safe yield amount (774 AFY rather than the Decision-allowed 1,474 AFY). The Replenishment Schedule is estimated to begin sometime in 2018, following completion of the Monterey Peninsula Water Supply Project. The purpose of Cal-Am's Replenishment Schedule is to return to the Basin the quantity of water that Cal-Am has over pumped from the Basin. Cal-Am's Replenishment Schedule is not intended to achieve protective water level elevations in the Basin.
3. 25-Year Replenishment Schedule Simulation. Cal-Am's 25-year Replenishment Schedule will increase groundwater elevations in the shallow and deep aquifer coastal wells compared to the Baseline (i.e., no replenishment water), but in almost all locations falls short of achieving protective elevations in these wells within the replenishment period.
4. 25 Years to Achieve Protective Elevations Simulation. To achieve protective groundwater level elevations within 25 years would require the complete elimination of all Standard and all Alternative Producer pumping from the Basin at all wells. This in-lieu replenishment approach would require an overall pumping reduction of just over 2,000 AFY.
5. 25-Year Replenishment Schedule with Injection Simulation. When combined with Cal-Am's 700 AFY Replenishment Schedule, protective elevations can be achieved at all of the coastal wells by injecting and leaving in the Basin an additional 1,000 AFY of artificial replenishment water. This simulation injected water at the existing ASR wells located at the Santa Margarita and Seaside Middle School sites. Standard Producers, other than Cal Am, could continue to pump at their Decision-allowed levels. Alternative Producers could continue pumping at their 2011 rates.
6. Simulation Results Comparison. Injection of artificial replenishment water appears to require less water to achieve protective elevations than the in-lieu replenishment approach described above in item 4.

Evaluation to Determine if Injecting Water for Basin Replenishment Would be More Effective if Done Close to the Coast Rather than Injecting Water at Inland Sites

At its April 3, 2013 meeting the Board approved the following TAC Recommendations:

1. Identify and prioritize potential sources of water that could be acquired for injection to replenish the Basin and help to achieve protective water level elevations.
2. Determine if injection sites closer to the coast could (1) more rapidly reach protective levels and/or (2) reach protective levels using less outside-Basin water, than injecting at the existing inland ASR sites.
3. Report back to the Board on the findings of these 2 items and identify potential further work to be done.

Recommendation 1 was carried out by the Watermaster staff and presented to the TAC in August 2013 and to the Board in September 2013. The Discussion Paper contained in Attachment 11 provides details on a number of projects that were investigated to determine if they had the potential to serve as a source of water that could be injected into the Basin to help achieve protective water levels. This water would be used to supplement the 25-years-at-700 AFY of in-lieu replenishment that Cal Am is planning to provide.

The principle conclusions and recommendations in the Discussion Paper are to encourage the Board to support each of the projects listed below in whatever manner(s) the Board deems feasible and appropriate, for the reasons as stated:

1. Seaside Basin ASR Expansion. Injecting and leaving in the Seaside Basin any amounts of ASR water above the 1,300 AFY that Cal Am is counting on to meet demands under its Monterey Peninsula Water Supply Project would benefit the Basin.
2. MRWPCA/MPWMD Groundwater Replenishment Project (GWRP). If MRWPCA could produce more recycled water than the 3,500 AFY that will be needed for the Monterey Peninsula Water Supply Project, this project could provide a source of water that could be injected and left in the Basin.
3. Regional Urban Water Augmentation Project (RUWAP). Although this project would not provide water that could be used to replenish the Seaside Basin by direct injection, it would benefit the Basin through in-lieu replenishment.
4. City of Seaside Groundwater (not from the Seaside Basin). This project is not developed sufficiently to determine how much water it might be able to provide, whether the necessary permits and approvals could be obtained, and whether it is economically feasible. However, if these hurdles are met this project could provide a source of water that could be injected and left in the Basin.
5. City of Pacific Grove Local Water Projects (includes a stormwater component). Depending on how these project(s) are ultimately configured, they have some potential to directly or indirectly provide a source of water to replenish the Seaside Basin by injection. The potential benefit to the Seaside Basin of these projects will not be known until further decisions are made by the CPUC and Cal Am, the sizing of the Regional desalination plant has been determined, and the feasibility and methods of funding the Local Water Project components have been ascertained by the City.
6. Water Conservation. There was consensus that further water conservation beyond that which has already been achieved has a low potential to produce a meaningful quantity of water for replenishment. However, any water savings would have the potential to indirectly provide a source of water to replenish the Seaside Basin by injection, by reducing the amount of water Cal Am would need from the Regional desalination plant to meet its demands.
7. City Diversions of Stormwater to MRWPCA to Increase GWRP Quantities. If MRWPCA is successful in increasing the quantity of water that its GWRP can supply by accepting diversions of flows from its member entities, this would increase the GWRP's potential to provide a source of water that could be injected and left in the Basin.
8. Possible Initially Unused Capacity of Cal Am's Regional Desalination Plant. If it is found that there is unused capacity in the Regional desalination plant in its early years of operation that unused capacity could provide a source of water that could be injected and left in the Basin.

At its September 2013 meeting the Board directed the TAC to develop more detailed information regarding these projects and to present it to the Board for their further consideration. This is expected to occur in early 2014.

Recommendation 2 was carried out for the Watermaster by HydroMetrics. HydroMetrics' modeling report, which is contained in Attachment 12, was presented to the TAC in June 2013, and to the Board in August 2013, for their consideration.

The principle conclusions resulting from this modeling work are:

1. Two injection locations near the coast were modeled and it was found that either site would be equally suitable as a coastal injection location. Thus, the specific location near the coast does not appear to be a critical issue.
2. Average groundwater elevations in the coastal monitoring wells are similar regardless of whether coastal injection occurs seasonally (December through May) or year around (each month of the year). Thus, either year around or seasonal injection would produce similar results in terms of raising groundwater levels.
3. Coastal groundwater levels reach protective elevations faster in response to coastal injection than in response to injection at existing inland ASR sites. Depending on the well, protective groundwater elevation monitoring wells in the deep Santa Margarita aquifer reach protective elevations one to ten years sooner in response to coastal injection compared to their response to inland injection. The shallow protective groundwater elevation monitoring wells reach protective elevations at similar times with both coastal and inland injection.
4. Approximately 850 AFY of coastal injection would be needed to achieve results similar to injecting 1,000 AFY at the inland location over a 25 year injection period (until 2041). After protective groundwater elevations have been reached by injecting 1,000 AFY at the coast, 900 AFY for 7.5 years, and then 850 AFY is required to maintain groundwater levels above protective elevations.
5. Protective elevations can be achieved within five years if 1,900 AFY is injected at the coastal location. After protective groundwater elevations have been reached by injecting 1,900 AFY at the coast for five years, injection rates can be ramped down to 850 AFY by year 2029 to maintain protective elevations. No evaluation was made as to how much water would need to be injected at the inland location in order to achieve protective elevations within five years.
6. After protective groundwater elevations have been reached, it will be necessary to continue injecting water beyond 2041 to maintain groundwater levels above protective elevations. This quantity will very slowly decrease as natural recharge replenishes the Basin. No evaluation was made of how much continued injection would be required after year 2041.
7. While coastal injection appears to have some small benefits compared to inland injection, there would be substantial additional land acquisition and infrastructure costs to install coastal injection wells compared to using the inland injection wells which are already included in Cal Am's Monterey Peninsula Water Supply Project.
8. While the injection of large amounts of water can relatively rapidly achieve protective elevations, the cost to purchase this water would likely be substantial.

At its September 2013 meeting the Board received the HydroMetrics' modeling report for information but took no action on it.

K. Conclusions and Recommendations

The Seaside Basin Watermaster Board has worked diligently to meet all of the Court’s established deadline dates. All of the Phase 1 Scope of Work activities, which are described in the “Implementation Plan for the Seaside Basin Monitoring and Management Program” dated March 7, 2007, have been completed. At the Watermaster Board meeting held on October 16, 2013 the Board adopted the budgets contained in Attachment 6, which support carrying out all elements of the “Seaside Groundwater Basin Management and Monitoring Program Anticipated 2014 Work Plan.” That Work Plan describes the M&MP activities that will be conducted during Fiscal Year 2014. A copy of this Work Plan is contained in Attachment 9.

As described in Section J above, information from the Enhanced Monitoring Well Network is being utilized to detect any seawater intrusion. The response actions described in the Watermaster’s Seawater Intrusion Response Plan, which was contained in the 2009 Annual Report, will be implemented if seawater intrusion is detected within the Basin.

ITEM X.

**INFORMATIONAL
REPORTS**

(NO ACTION REQUIRED)

ANNUAL MILESTONES	Water Years											12/4/2013	
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016		
Alternative Producers may change to Standard Production by March 27, 2009 (see amendment at right) by filing a declaraton with the Court and with the other parties.	27-Mar-06	30-Sep-07	APA to SPA election amended to in-perpetuity 12/12/2009										
Commencing with the fourth Water Year and Triennially thereafter, the Operating Yield for both Subareas will be decreased by 10% until the Operating Yield is equivalent to the Natural Safe Yield unless by recharge or reclaimed water use results in a decrease in production of Native Water as required by the decision.				75% of the Operating Yield of 5,600 decreased 10% Jan 1, 2009; and 100% of 5,600 acre feet decreased 10/1/09			100% of the Operating Yield of 5,040 decreased another 10% of 5,600 on Oct 1, 2011			X.A	1-Oct		
After the close of each Water Year, the Watermaster will determine and levy a Replenishment Assessment against all Producers that incurred Operating Yield Over Production during the Water Year, with payment due from Producer 40 days after the mailing of a statement for the assessment by Watermaster.			15-Nov	30-Nov	30-Nov	23-Jan	30-Nov		30-Nov	30-Nov	30-Nov		
California American Water to submit annually to Watermaster any augmentation to water supply for possible credit toward Replenishment Assessment	Annually	15-Nov	CAW Credit Request Granted (signed MOU) January 15, 2009		CAW Credit Req Granted 2/3/10	CAW Credit Req Granted 2/2/11	1-Feb	15-Nov	15-Nov	15-Nov	15-Nov		
Water level monitoring - monthly data collection from all members for inclusion in the consolidated database.	Reported Annually	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	LSRA not rptd 4Qtr	Monthly	Monthly	Monthly		
Water quality monitoring - yearly data collection from all members for inclusion in consolidated database	Reported Annually	15-Nov	28-Feb & 15-Nov	15-Nov	15-Nov	15-Nov	31-Aug	15-Nov	15-Nov	15-Nov	15-Nov		
Summary report of water resources data to all members/parties Reported the 15th each quarter month:	Quarterly	Jan, Apr, Jul, Oct 15th	Jan, Apr, Jul, Oct 15th	Jan, Apr, Jul, Oct 15th	Jan, Apr, Jul, Oct 15th	Jan, Apr, Jul, Oct 15th	Jan, Apr, Jul, Oct 15th	Jan, Apr, Jul, Oct 15th	Jan, Apr, Jul, Oct 15th	Jan, Apr, Jul, Oct 15th	Jan, Apr, Jul, Oct 15th	Jan, Apr, Jul, Oct 15th	
Annual Report to Court	15-Jan	15-Nov	15-Nov	15-Nov	23-Dec	8-Dec	15-Dec	15-Dec					
ADMINISTRATIVE MILESTONES	Calendar Years												
Adjudication ordered by Court and filed	27-Mar-06												
Board Directors Terms		7-Nov					1-Feb-12	1-Feb-12					
Budget (Administrative) Adopted / distributed					15-Jan-10	15-Jan	15-Jan	15-Jan	15-Jan	15-Jan	15-Jan	15-Jan	
Budget (Operations) Adopted/distributed					15-Jan-10	15-Jan	15-Jan	15-Jan	15-Jan	15-Jan	15-Jan	15-Jan	
Budget (Replenishment) Adopted / distributed					15-Jan-10	15-Jan	15-Jan	15-Jan	15-Jan	15-Jan	15-Jan	15-Jan	
Administrative Assessments	15-Jan-06	15-Jan-07	15-Jan-08	15-Jan-09	15-Jan-10	15-Jan-11	NONE	15-Jan-13	15-Jan-14	15-Jan-15	15-Jan-16		
Operations Assessments	15-Jan-07	15-Jan-07	15-Jan-08	15-Jan-09	15-Jan-10	15-Jan-11	NONE	NONE	NONE	15-Jan-15	15-Jan-16		
Capital Assessments	15-Jan-07	15-Jan-07	NONE	15-Jan-09	NONE	NONE	NONE	NONE	NONE	15-Jan-15	15-Jan-16		
Replenishment Assessments	CAW credit	CAW credit	CAW credit	CAW credit	CAW credit	23-Jan-12	1-Feb-12	15-Jan-14	15-Jan-15	15-Jan-16	15-Jan-17		
Annual Report to Court	15-Nov-06	15-Nov-07	15-Nov-08	15-Nov-09	23-Dec-10	8-Dec-11	15-Dec	15-Dec		15-Dec	15-Dec		
Answers to Judge's Questions re: Annual Report		30-Jan-09	28-Feb-08	1-Feb-09	5-Feb-10	1-Aug-12	None						
Declaration of Replenishment Water Availability	Feb-06	Dec-06	Dec-07	18 Mar	2-Dec-09	1-Dec-10	30-Nov-11	4-Dec-13	Dec-14	Dec-15	Dec-16		
MONTHLY MILESTONES	2006-12	Jan 13	Feb 13	Mar 13	Apr 13	May 13	Jun 13	Jul 13	Aug 13	Sep 13	Oct 13	Nov 13	Dec 13
Fiscal Year tentative budgets distribution to all parties													Mailed Nov 12
Operating Yield of 5,600 decreased 10%; Declaration of Replenishment Water Available	18-Mar-09												
Administrative Assessments													NONE
Operations Assessments													NONE
Capital Assessments													NONE
Replenishment Assessments													Calculated
Develop Repl Assessment Unit Cost													\$2702 for 2014
SPECIAL ISSUES	2006-12	Jan 13	Feb 13	Mar 13	Apr 13	May 13	Jun 13	Jul 13	Aug 13	Sep 13	Oct 13	Nov 13	Dec 13
Cal-Am CWP/Alternative Projects EIR/Basin replenishment MOU													CAW 700AF MOU
SWRCB Cease Desist Order California American Water	In Effect												
Storage and Recovery Application and Agreement Development	Complete												
Watermaster Board Regular Meeting Schedule 2013	1-Jan - cnc'd	6-Feb - cnc'd	6-Mar - cnc'd	3-Apr	1-May	5-Jun - cnc'd	3-Jul - cnc'd	7-Aug	4-Sep	2-Oct	16-Nov	4-Dec	
SUMMARY PROJECT SCHEDULE (See detailed project schedule for more information)	Monitoring and Management Program 2013												
Program Administration, Database Management (MPWMD)			1/1/13 - 12/31/13										
Cross-Aquifer Contamination Potential (MPWMD)			1/1/13 - 3/31/13										Complete or deferred =
Focused Investigation at Sand City Public Works Well (MPWMD) - Info for Annual Report			4/1/13 - 12/15/13										Yet to be completed =
Enhanced Groundwater Model; LSSA Modeling [Hydrometrics]			11/1/12 - 12/31/13										Scheduled for Board or TAC meeting =
Potential Replenishment Projects [TAC]			8/7/13 - 12/31/13										Imminent Critical Deadline =
Seawater Intrusion Detection & Tracking/ Analysis & SIAR (Hydrometrics & MPWMD)			1/1/13 - 12/31/13										Revised November 26, 2013

D-R-A-F-T
MINUTES

**Seaside Groundwater Basin Watermaster
Technical Advisory Committee Meeting
November 13, 2013**

Attendees: TAC Members
City of Seaside – Rick Riedl
California American Water – Roger Hulbert
City of Monterey – Norm Green
Laguna Seca Property Owners – Bob Costa
MPWMD – Jon Lear
MCWRA – No Representative
City of Del Rey Oaks – Leon Gomez
City of Sand City – Leon Gomez
Coastal Subarea Landowners – No Representative

Watermaster
Technical Program Manager - Robert Jaques

Consultants
HydroMetrics - Derrick Williams

Others
Leonard McIntosh

The meeting was called to order at 1:40 p.m., once a quorum was present.

1. Public Comments

There were no public comments.

2. Administrative Matters:

A. Approve Minutes from the September 11, 2013 Meeting

On a motion by Mr. Gomez, seconded by Mr. Costa, the minutes of the September 11, 2013 meeting were unanimously approved as presented.

B. Update on Storm Water Issues

Mr. Jaques summarized the materials on this agenda item. There were no questions.

3. Approve Initial RFSs for MPWMD and HydroMetrics for 2014

Mr. Jaques summarized the agenda packet materials for this item. Mr. Lear pointed out a correction that needed to be made to the description of the scope of work for MPWMD RFS 2014-01, in section I.2.b.3 regarding barium and iodine sampling. He will send Mr. Jaques a language revision to correct this statement. He reported it would have no cost impact because the work had been properly included in the cost estimate. On a motion but Mr. Costa, seconded by Mr. Gomez, all four of the RFSs were unanimously approved.

4. Update on HydroMetrics Modeling of Laguna Seca Subarea

Mr. Jaques summarized the agenda packet materials for this item. Mr. Williams made a PowerPoint presentation to provide a status update on the Laguna Seca subarea modeling work.

Mr. Jaques asked Mr. Williams what would require there to be a "subsurface water outflow" from the Laguna Seca subarea. Mr. Williams responded that there actually is not a specific "requirement" for this. He reported that in discussions with MPWMD staff it was learned that creek flows (to the Arroyo Del Rey) are not influenced by groundwater levels because the groundwater levels are too low. HydroMetrics tried to maintain outflow at current levels as estimated by the model. If the subsurface outflow were reduced, the 240 acre feet per year Natural Safe Yield would increase. .

Mr. Williams explained some reasons for the change in Natural Safe Yield from the amount established in the Decision. He said there is a large annual variation due to rainfall variations from year to year. He went on to describe the terms Natural Safe Yield and Operational Safe Yield.

The westerly wells (for example F0-4 are R-7) are less affected i.e. groundwater levels do not go down as much, but the eastern you (for example F- 06) are very much affected.

Even if all Standard Producers stopped pumping, and Alternate Producers reduced pumping by 50 percent, well water levels would continue dropping in some wells. There is some improvement but that is mainly only in the west.

If all Standard and Alternate Producer pumping was halted (except for about eight acre feet per year of small private pumping that is not covered by the Decision) it is still not possible to achieve Operational Safe Yield conditions. There are numerous wells just outside the south easterly Basin boundary that affect groundwater levels in the Laguna Seca subarea.

Mr. Jaques asked Mr. Williams what caused the boundary to be drawn where it was when the Decision was prepared. Mr. Williams said he did not know the reason, but understood that it was based on a study done some years prior to the issuance of the Decision. Mr. Lear clarified that the boundary was taken from a 1980 U. S. G. S. report that was based on 1977 data.

Pumping outside of the Laguna Seca subarea is about twice the amount being pumped in the Laguna Seca subarea.

Mr. Riedl inquired about the request made by the Wang subdivision proponents to the Watermaster about year ago to get the Watermaster's approval to put in wells along Highway 68 in this immediate vicinity. Mr. Lear responded that the Wang subdivision geohydrologist had provided a report at that time indicating that these wells would not have an impact on the Seaside Groundwater Basin. Mr. Lear went on to say, however, that since then the MPWMD has obtained information suggesting that these wells could impact the Seaside Groundwater Basin.

Mr. Jaques asked Mr. Williams why pumping outside the Basin drops in the future as shown on Slide No. 11 of the PowerPoint presentation. Mr. Williams said he did not know but would look into this.

Mr. Costa asked Mr. Williams if the model could be used to estimate the impact of reducing the outside-Basin pumping and Mr. Williams responded that it could.

Outflow to the Coastal and Northern Inland subareas would change very little if pumping was turned off in the Laguna Seca subarea.

Mr. Williams said that groundwater levels will continue to drop in the east if all pumping is turned off, but overall the Laguna Seca subarea would be almost in balance because the westerly well water levels would rise somewhat.

Mr. Williams reiterated that under the standard definitions of Natural Safe Yield and Operational Safe Yield, neither of these can be achieved even with the extreme measures of discontinuing all pumping from the Laguna Seca subarea.

A number of modeling scenarios could be run, but they would largely be infeasible and unrealistic.

Mr. Williams said that with the current outside-Basin pumping continuing at current rates, groundwater levels in the easterly portion of the Laguna Seca subarea will continue to drop even with all Laguna Seca subarea pumping stopped.

Mr. Costa asked Mr. Williams about modeling he was familiar with in other basins, and wondered if it was common practice to include all wells that impact a basin as being located within the basin's boundaries. Mr. Williams said this model is somewhat unique in that it includes not impact of wells outside the Basin. He went on to say that other models typically don't account for wells outside the basin, but maintain a static (current) amount of outflow or inflow across the basin boundary.

Mr. Williams asked if there was a need to answer these questions at this time, and wondered if CAW would change its plans for its Laguna Seca subarea operations depending on the results of this work. Mr. Hulbert said he was not sure but would discuss this with Mr. Sabolsice.

Mr. Lear suggested that finding out when dropping groundwater levels will eventually impact Alternate Producers would be a good question to answer. Mr. Williams noted that there may be a policy issue that needs to be raised with the Court as a result of the information thus far from this modeling work.

Mr. Hulbert said that CAW plans to service its Laguna Seca subarea customers from its Main System in the future, but would like to keep its Laguna Seca subarea wells operational to provide redundancy. Mr. Lear noted that CAW could consider extending its Main System service to its Toro and Ambler Park well customers. Mr. Lear noted that CAW's Bay Ridge well is outside the Basin but was actually included in the Decision.

Mr. Williams suggested identifying refined questions to try to answer with the model. Mr. Lear said he would like to see the timeline regarding when Alternate Producers would experience "material injury". Mr. Williams said that is within the current scope of work. Mr. Hulbert recommended the TAC evaluate what can be answered with the current model results, and what, if any, additional modeling might be desirable.

A motion was made by Mr. Lear, seconded by Mr. Hulbert to have HydroMetrics finish its currently authorized scope of work and come to the January 8, 2014 TAC meeting to make a further presentation on the results.

5. Discuss and Provide Input on the 2013 Seawater Intrusion Analysis Report (SIAR)

Mr. Jaques introduced the topic and Mr. Williams made a PowerPoint presentation on the Seawater Intrusion Analysis Report (SIAR).

Mr. Williams reported that very little change had occurred from prior SIAR findings, and that there were no indications of seawater intrusion. He described how Piper and Stiff diagrams are used in the SIAR.

Only one Santa Margarita Sentinel well has a chloride level > 250 ppm (SBWM MW-4) and it had a level higher than 250 ppm previously, so it continues to be sampled twice per year. The changing chloride levels at PCA West Deep starting in 2009 were found to be due to the change in sampling technique that occurred then.

Mr. Williams reported that groundwater levels continue to drop, noting that it was a dry year and there was therefore heavy pumping.

On a basinwide basis, groundwater production overall is well below the Decision-allowed pumping levels.

Mr. Jaques asked Mr. Lear if he would please get the Sand City Public Works Well report to him soon so can be included in the Annual Report. Mr. Lear said he would notify Mr. Oliver of this.

Mr. Riedl asked Mr. Williams some questions and answers were provided with regard to that well. Mr. Lear said that the Sand City desalination plant intake well may be impacting the Public Works well. It was noted that the Sand City Public Works Well now has a chloride level of 261 ppm which is above the Drinking Water Regulation secondary standard of 250 ppm.

A motion was made by Mr. Green, second by Mr. Gomez, to approve the SIAR and to forward it to the Board for their consideration of approval.

6. Discuss and Provide Input on the Preliminary Draft Watermaster 2013 Annual Report

Mr. Jaques briefly described the purpose of the Annual Report and highlighted some specific issues and then invited questions. There were no questions.

On a motion by Mr. Costa, seconded by Mr. Hulbert, the TAC unanimously approved the Preliminary Draft Annual Report, and when the missing items in the Preliminary Draft are included, recommended that it become the Draft Annual Report for the Board to consider approving.

7. Further Discussion of Geophysical Imaging of Saltwater Intrusion

Mr. Jaques summarized the agenda packet materials on this item. There was consensus to keep the topic open for further discussion with the researchers when they have more information to provide.

8. Schedule

Mr. Jaques summarized the agenda packet materials for this item. There were no questions or discussion.

9. Other Business

Mr. Hulbert said that he will be periodically serving as Mr. Sabolsice's alternate, and asked if he needed a formal authorization submitted to the Watermaster for this purpose. Mr. Jaques responded that simply having Mr. Sabolsice send an e-mail to formalize this to Mr. Jaques would suffice.

10. Set Next Meeting Date

A motion was made by Mr. Riedl, seconded by Mr. Lear, to set the next meeting for Wednesday January 8, 2014. There will be no December 2013 TAC meeting.

The meeting adjourned at 3:28 p.m.

WATERMASTER PRODUCER ALLOCATIONS WATER YEAR 2013 IN ACRE-FEET (AF) INCLUDING A 10% REDUCTION FOR 100% OF THIS WATER YEAR								ITEM NO. X.C.							
Initial Basin-Wide Operating Yield ⁽¹⁾		4480.00		Coastal Operating Yield ⁽¹⁾		3688.80									
Natural Safe Yield (NSY) ⁽²⁾		3000.00		Laguna Seca Operating Yield ⁽¹⁾		791.20									
ALTERNATIVE PRODUCER ALLOCATIONS								ALTERNATIVE PRODUCER AMOUNT PUMPED WY 2013							
Coastal Subarea ⁽³⁾		AF		Laguna Seca Subarea ⁽³⁾		AF		Coastal Subarea ⁽³⁾		AF		Laguna Seca Subarea ⁽³⁾		AF	
Seaside (Golf)		540.00		Nicklaus Club Monterey		251.00		Seaside (Golf)		0.05		Nicklaus Club Monterey		191.96	
SNG		149.00		Bishop		320.00		SNG		0.00		Bishop		295.57	
Calabrese		14.00		York School		32.00		Calabrese		0.13		York School		16.98	
Mission Memorial (Alderwood)		31.00		Laguna Seca County Park		41.00		Mission Memorial (Alderwood)		24.95		Laguna Seca County Park		31.22	
Sand City		9.00						Sand City		0.60					
Total⁽¹⁾		743.00		Total⁽¹⁾		644.00		Total⁽¹⁾		25.73		Total⁽¹⁾		535.72	
														Total Alternative Producer WY 2013 Production	
														561.45	
STANDARD PRODUCER ALLOCATIONS															
Coastal Operating Yield Available to Standard Producers (AF)				2945.80		Laguna Seca Operating Yield Available to Standard Producers (AF)				147.20					
Coastal Subarea		Standard Producer Allocations		AF Available to This Producer	Laguna Seca Subarea	Standard Producer Allocations		AF Available to This Producer							
		Base Water Right % ⁽⁴⁾	Weighted % ⁽⁵⁾			Base Water Right % ⁽⁴⁾	Weighted % ⁽⁵⁾								
California American Water (CAW)		77.55%	90.60%	2668.89	CAW	45.13%	100.00%	147.20							
Seaside (Municipal)		6.36%	7.43%	218.87											
Granite Rock		0.60%	0.70%	20.62											
D.B.O. Development No. 30		1.09%	1.27%	37.41											
Total		85.60%	100.0%	2945.80	Total	45.13%	100.0%	147.20							
Allocation of Available Operating Yield Among Standard Producers		Base Water Right Available to this Producer (AF)	% NSY to SPA (Base Water Right / Total Water Right)	NSY Available to Producers (AF) Current Water Year	Free Carryover Credits from Prior Water Year	Not-Free Carryover Credits from Prior Water Year	Water Rights Transferred / Sold	Total Producer NSY (AF) (NSY Available + Free Carryover Credits)	Total Authorized Production in Current Water Year (Base Water Right Plus All Carryover) ⁽⁶⁾	Actual AF Pumped by Producer in WY 2013	Free Carryover Credits to WY 2014	Not-Free Carryover Credits to WY 2014	Stored Water Credits to WY 2014		
				WY 2013 APA Pumped - 561.45 AF											
			NSY 3000 - 561.45 AF =	2438.55											
California American Water		2816.09	91.0%	2220.24	0.00	0.00	0.00	2220.24	2816.09	3076.61	0.00	0.00	(349.17)		
Seaside (Municipal)		218.87	7.1%	172.56	0.00	0.00	0.00	172.56	218.87	257.73	0.00	0.00	0.00		
Granite Rock		20.62	0.7%	16.26	89.21	69.97	0.00	105.46	179.80	0.00	105.46	74.33	0.00		
D.B.O. Development No. 30		37.41	1.2%	29.49	180.17	136.41	0.00	209.67	353.99	0.00	209.67	144.32	0.00		
Total		3093.00	100.00%	2438.55	269.38	206.38	0.00	2707.93	3568.76	3334.34	315.13	218.66	(349.17)		
Footnotes:															
(1) From page 17 of Exhibit A (Amended Decision) of Court Order filed February 9, 2007.															
(2) From page 14 of Exhibit A (Amended Decision) of Court Order filed February 9, 2007.															
(3) From page 21 of Exhibit A (Amended Decision) of Court Order filed February 9, 2007.															
(4) From Table 1 on page 19 of Exhibit A (Amended Decision) of Court Order filed February 9, 2007.															
(5) Calculated from the Base Water Right percentages in the adjacent column.															
(6) Base Water Right plus Free and Not Free Carryover Credit = 2013 Production Allocation (see 2013 Declaration from December 4, 2013 Watermaster board meeting)															

ITEM NO. XI.

**DIRECTOR'S
REPORTS**

ITEM NO. XII.

**EXECUTIVE OFFICER
COMMENTS**