I. CALL TO ORDER

II. ROLL CALL

III. 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.

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. MINUTES
Approve Minutes of Regular Board meeting held October 5, 2016

VI. CONSENT CALENDAR
A. Consider approval of Summary for Payments made during April - September, 2016 totaling $22,355.00
B. Consider Approving Fiscal Year 2016 Financial Reports through November 30, 2016
C. Consider Approval of Minor Revisions to the 2017 Work Plan and Budget for the Management and Monitoring Program
D. Consider Approving the following Professional Service Contracts for Fiscal Year 2017:
   1. Two Contracts with MPWMD—one for $53,454 and the second one for $4,788, both pertaining to 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 $11,400 for providing ongoing and as-requested general hydrogeologic consulting services during the year and the second for $20,890 to prepare the Seawater Intrusion Analysis Report (SIAR) for 2017
   3. Two Contracts with Martin Feeney - a Professional Services Agreement (no cost involved), and a RFS for $25,685.56 for Sentinel Wells induction logging and water quality sampling
4. One Contract with Todd Groundwater – to extend the completion time of a previously authorized contract (RFS 2015-01) that has a balance remaining of $4,876.92.................................56
5. One Contract with Brownstein Hyatt Farber Schreck, LLP (Russ McGlothlin, Esq.) – for $14,000 to provide legal services to prepare and file a motion, and appear on March 17, 2017 at a status conference hearing with Judge Nichols of the Superior Court; assist with filing the Watermaster Annual Report to Court by December 15, 2017 as may be needed by Watermaster; and provide miscellaneous legal consultation as may be required. ..............................................57

VII. ORAL PRESENTATION
None Scheduled

VIII. NEW BUSINESS
A. COMMITTEE REPORTS
   1. TECHNICAL ADVISORY COMMITTEE (TAC)
      a. Consider Approving the Seawater Intrusion Analysis Report (SIAR for 2016). The Executive Summary is included in the Board agenda packet. The complete SIAR is posted on the Watermaster website at http://www.seasidebasinwatermaster.org ................................. 62
      
   B. Discussion/Consider Adopting for Water Year 2017 a Declaration regarding the Unavailability of Artificial Replenishment Water (Water Year 2017 Allocation attached) ...............................68
      
   C. Discussion/Consider Approving the Watermaster Annual Report for Water Year 2016. Attached is the body of the Draft 2016 Annual Report, reflecting input from the TAC. The complete Draft version is posted on the Watermaster website at http://www.seasidebasinwatermaster.org .................. 71

IX. OLD BUSINESS
A. Discuss/Consider Action and/or Direction to Staff on the Marina Coast Water District's (MCWD's) Notification to the Department of Water Resources (DWR) to become a Groundwater Sustainability Agency (GSA) under the Sustainable Groundwater Management Act ...............................................91

X. INFORMATIONAL REPORTS (No Action Required)
A. Timeline Schedule of Milestone Dates (Critical date monitoring)..............................................97
B. Technical Advisory Committee (TAC) minutes from meetings held September 14 and November 16, 2016.................................................................98, 101
C. Watermaster report of production of the Seaside Basin through Water Year 2016 (October 1, 2015 – September 30, 2016). Note: the In Lieu Replenishment Program 2,500 acre-feet of water available to the City of Seaside under its contract with Marina Coast Water District is effectively expended, with the City and MCWD currently reconciling final amounts delivered. .....105
D. Replenishment Fund Assessment calculations and Standard Producer Assessments .......................106

XI. DIRECTOR’S REPORTS

XII. STAFF COMMENTS

XIII. NEXT REGULAR MEETING DATE – Wednesday, January 4, 2017 - 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 December 1, 2016 per the Ralph M. Brown Act, Government Code Section 54954.2(a).
I. CALL TO ORDER – Chair Rubio called the meeting to order at 2:00 p.m.

II. ROLL CALL
City of Seaside – Mayor Ralph Rubio- Chair
City of Sand City – Mayor David Pendergrass – Vice Chair
California American Water (CAW) – Director Roger Hulbert, Alternate
Coastal Subarea Landowner – Director Paul Bruno
Laguna Seca Subarea Landowner – Director Bob Costa
City of Del Rey Oaks – Mayor Jerry Edelen
City of Monterey – Vice Mayor Libby Downey
Monterey Peninsula Water Management District (MPWMD) – Director Bob Brower
Monterey County/Monterey County Water Resources Agency – Supervisor Dave Potter

Absent: None

III. PUBLIC COMMUNICATIONS: There were no public communications.

IV. REVIEW OF AGENDA: There were no requested changes to the agenda.

V. RESOLUTION CITING MERITORIOUS SERVICE - DEWEY D. EVANS

Moved by Mayor Edelen, seconded by Director Bruno, and unanimously carried to adopt Resolution No. 16-01 citing meritorious service and expressing appreciation to Dewey D. Evans who retired on May 31, 2016 after 10 years as Chief Executive Officer of Watermaster.

VI. APPROVAL OF MINUTES

Moved by Vice Mayor Downey, seconded by Mayor Edelen, and unanimously carried to approve the minutes of the Watermaster Regular Board meeting held May 4, 2016.

VII. CONSENT CALENDAR
A. Consider approval of Summary for Payments made during April - September 2016 totaling $64,362.89.
C. Consider approving Watermaster Administrative Officer contract with Dadiw Associates.

Moved by Supervisor Potter, seconded by Director Bruno, and unanimously carried, to approve the consent calendar as presented.

VIII. ORAL PRESENTATION: None Scheduled

IX. OLD BUSINESS: None Scheduled
X. NEW BUSINESS
   A. COMMITTEE REPORTS
      1. BUDGET & FINANCE COMMITTEE/TECHNICAL ADVISORY COMMITTEE
         a. Fiscal Year 2017 Annual Work Plan and Annual Budgets
            i. The Board reviewed the submitted report and proposed 2017 fiscal year Administrative Fund Budget and Mrs. Dadiw gave highlights.

            **Moved by Supervisor Potter, seconded by Director Brower, and unanimously carried, to approve the Fiscal Year (Calendar Year) 2017 Administrative Budget as presented.**

            ii. The Board reviewed the submitted report and proposed 2017 Work Plan and Management and Monitoring – Operations Fund Budget and Mr. Jaques gave highlights. The Operations Fund Budget is $57,657.00 less than last year’s budget.

            **Moved by Supervisor Potter, seconded by Director Brower, and unanimously carried, to approve as presented the Fiscal Year (Calendar Year) 2017 Monitoring and Management Work Plan and Operations Fund Budget.**

         b. Water Year 2017 Replenishment Assessment Unit Cost
            Mr. Jaques provided a table of the most recent base unit cost estimates in dollars per acre-foot of the four potential water supply projects that the Board had determined in past years as the most likely to be implemented. Based on the data provided in the table, the proposed unit cost per acre-foot for Water Year 2017 is $2,872. The Committee was pleased that the proposed amount differs only slightly from the amount of $2,702 adopted each year for the previous 3 years without benefit of updated project cost estimates.

            **Moved by Director Bruno, seconded by Mayor Edelen, and unanimously carried, to approve $2,872 per acre-foot as the Replenishment Assessment Unit Cost for Water Year 2017 (October 1, 2016 – September 30, 2017).**

XI. INFORMATIONAL REPORTS:
   A. Timeline Schedule of Milestone Dates (Critical date monitoring)
   B. Technical Advisory Committee (TAC) minutes from meetings of June 8, July 13, August 10, and September 14, 2016.
   D. The next status conference hearing with Judge Nichols is scheduled for March 17, 2017.
E. Letter from Marina Coast Water District (MCWD) regarding its intent to form two Groundwater Sustainability Agencies pursuant to the Sustainable Groundwater Management Act for sub basins within its boundaries that border the Seaside Groundwater Basin.

Due to the complex nature of the Salinas Valley Groundwater Basin and the high level of collaboration and cooperation required of numerous agencies to insure proper management, Supervisor Potter requested that the Watermaster Board discuss fully the formation of the GSAs by MCWD at the next Watermaster Board meeting. Mr. Jaques will inquire with the State Department of Water Resources whether the public will have the opportunity to comment regarding MCWD’s proposed GSA formation and, if so, when the period ends in order to schedule a special meeting of the Watermaster prior to that if needed.


XII. DIRECTOR’S REPORTS

XIII. ADMINISTRATIVE OFFICER COMMENTS: Mrs. Dadiw commented that TAC meeting scheduled for October 12th has been canceled. The next TAC meeting is tentatively scheduled for November 16th.

XIV. NEXT MEETING DATE: The next meeting of the Watermaster board will be held November 2, 2016 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.

XV. There being no further business, Chair Rubio adjourned the meeting at 2:29 p.m.
SEASIDE GROUNDWATER BASIN
WATERMASTER

TO: Board of Directors

FROM: Laura Dadiw, AO

DATE: December 7, 2016

SUBJECT: Summary of Payments made during the months of October – November 2016

RECOMMENDATIONS:
Consider approving the payment of bills submitted and authorized to be paid during the months of October – November 2016.

COMMENTS and FISCAL IMPACT:

OCTOBER 2016

Dadiw Associates (Administrative Officer (AO)) — September 26, 2016 through October 25, 2016 worked on Watermaster business a total of 56.5 hours at $100.00 per hour or $5,650. Responded to telephone inquiries, e-mail, and other correspondence as needed regarding the Seaside Basin. Gathered and posted water production and water level data. Prepared agenda and packet materials for October 5th board meeting, distributed agenda for posting and packet materials for board, staff and interested parties; attended meeting. Assignment of water rights to California American Water from Cypress Pacific Investors distributed to all parties for a 21-day review period. Calculated water production, overproduction, and replenishment assessments for 2016 water year. Prepared invoices for Administrative and Operations Fund assessments, with budgets and statements. Provided input to the 2016 Annual Report to Court. Routinely picked up mail from PO Box; reconciled accounts to the City of Seaside Watermaster accounts; processed invoices, reviewed and posted items to web site; reviewed TAC minutes.

Robert “Bob” Jaques (Technical Program Manager) — October 5, 2016 through November 1, 2016 worked on Watermaster business a total of 21.0 hours at $100.00 per hour or $2,100. Responded to emails, telephone inquiries, and other correspondence on a variety of Watermaster issues; prepared for the TAC meeting on November 16th; prepared for and attended board meeting on October 5th; began preparation of Annual Report to Court.

HydroMetrics Water Resources, Inc. (Technical Consultant) One invoice was received totaling $4,005.00 for 31.0 hours of work on the 2016 Seawater Intrusion Analysis Report.

Total for October 2016 $11,755.00
NOVEMBER 2016

Dadiw Associates (Professional Services Agreement—Administrative Officer (AO)) — October 26 through November 25, 2016 worked on Watermaster business a total of 28 hours at $100.00 per hour or $2,800.00. Responded to telephone inquiries, e-mail, and other correspondence as needed regarding the Seaside Basin. Gathered and posted water production and water level data; prepared meeting cancellation notice; teleconference with RReidl regarding status of in lieu replenishment. Distributed to all interested parties for the 15-day review period the 2017 Watermaster Operations and Administrative budgets. Emailed and mailed to all applicable parties invoices for Administrative and Operations Fund assessments with budgets and statements. Teleconference with Jaques regarding sentinel well chloride levels during SIAR preparation; reviewed Basin Management and Management Plan/Seawater Intrusion Response Plan. Reviewed SIAR and draft Annual Report to Court and commented. Developed agenda for 12/7 board meeting. Processed invoices for payment; reviewed TAC minutes.

Robert “Bob” Jaques (Technical Program Manager) — November 1 through November 24, 2016 worked on Watermaster business a total of 54 hours at $100.00 per hour or $5,400.00. Responded to email, telephone inquiries and other correspondence on a variety of Watermaster issues; TAC agenda packet preparation and meeting attendance; review of SIAR; Annual Report preparation; revised RFSs.

Paxton Imaging (Watermaster Web Site Coordinator) – Hosting Unix Server and maintenance of web site for the months of January through December, 2065 for $2,400.00.

Total for November 2016 $10,600.00

Total for October through November, 2016 $22,355.00
### Seaside Groundwater Basin Watermaster

#### Budget vs. Actual Administrative Fund

Fiscal Year (January 1 - December 31, 2015)
Balance through November 30, 2016

<table>
<thead>
<tr>
<th>Available Balances &amp; Assessments</th>
<th>2016 Adopted Budget</th>
<th>Contract Amount</th>
<th>Year to Date Revenue / Expenses</th>
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</thead>
<tbody>
<tr>
<td>Dedicated Reserve</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>FY (Rollover)</td>
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<tr>
<td>Admin Assessments</td>
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<tr>
<td>Available</td>
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<table>
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<th>Expenses</th>
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<tbody>
<tr>
<td>Contract Staff</td>
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<td>65,000.00</td>
<td>41,103.19</td>
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<tr>
<td>Legal Advisor</td>
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<td>25,000.00</td>
<td>22,324.74</td>
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<tr>
<td>Total Expenses</td>
<td>65,000.00</td>
<td>90,000.00</td>
<td>63,427.93</td>
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</tbody>
</table>

| Total Available                   | 25,000.00           |                 |                                 |
| Dedicated Reserve                 | 25,000.00           |                 | 25,000.00                       |
| Net Available                     | -                   |                 | 1,572.07                        |
### Available Balances & Assessments

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<tr>
<th>Description</th>
<th>2016 Adopted Budget</th>
<th>Contract Encumbrance</th>
<th>Year to Date Revenue/Expenses</th>
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<td>Pass Through 2016</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>FY 2015 Rollover</td>
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<td>279,632.55</td>
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<tr>
<td>Total Available</td>
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<td>$407,120.55</td>
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</table>

### Appropriations & Expenses

#### GENERAL

<table>
<thead>
<tr>
<th>Description</th>
<th>2016 Adopted Budget</th>
<th>Contract Encumbrance</th>
<th>Year to Date Revenue/Expenses</th>
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</thead>
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<tr>
<td>Technical Project Manager</td>
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<td>$60,000.00</td>
<td>$28,850.00</td>
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<td>Contingency @ 20% (not including TPM)</td>
<td>36,248.00</td>
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<tr>
<td>Total General</td>
<td>$96,248.00</td>
<td>$60,000.00</td>
<td>$28,850.00</td>
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#### CONSULTANTS (Hydrometrics; Todd Groundwater; Web Site Database)

<table>
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<tr>
<th>Description</th>
<th>2016 Adopted Budget</th>
<th>Contract Encumbrance</th>
<th>Year to Date Revenue/Expenses</th>
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<td>Program Administration</td>
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<td>$11,400.00</td>
<td>$6,493.75</td>
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<tr>
<td>Production/Lvl/Qlty Monitoring</td>
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<td>$11,400.00</td>
<td>$6,493.75</td>
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<tr>
<td>Basin Management Action Plan</td>
<td>67,300.00</td>
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<td>4,005.00</td>
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<tr>
<td>Seawater Intrusion Analysis Report</td>
<td>20,390.00</td>
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<td>4,005.00</td>
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<tr>
<td>Total Consultants</td>
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<td>$31,790.00</td>
<td>$10,498.75</td>
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#### MPWMD

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<tr>
<th>Description</th>
<th>2016 Adopted Budget</th>
<th>Contract Encumbrance</th>
<th>Year to Date Revenue/Expenses</th>
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</thead>
<tbody>
<tr>
<td>Production/Lvl/Qlty Monitoring</td>
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<td>79,222.00</td>
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<tr>
<td>Pass Through 2015</td>
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<td>1,335.00</td>
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<tr>
<td>Basin Management</td>
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<tr>
<td>Seawater Intrusion</td>
<td>2,928.00</td>
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<tr>
<td>Direct Costs</td>
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<td>-</td>
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<tr>
<td>Total MPWMD</td>
<td>$82,150.00</td>
<td>$82,150.00</td>
<td>$30,992.16</td>
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### Reserve

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<th>Description</th>
<th>2016 Adopted Budget</th>
<th>Contract Encumbrance</th>
<th>Year to Date Revenue/Expenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transfer Out to Capital Fund</td>
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<td>-</td>
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</table>

### Total Appropriations & Expenses

<table>
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<tr>
<th>Description</th>
<th>2016 Adopted Budget</th>
<th>Contract Encumbrance</th>
<th>Year to Date Revenue/Expenses</th>
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<tbody>
<tr>
<td>Total Appropriations &amp; Expenses</td>
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### Total Available

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<th>Year to Date Revenue/Expenses</th>
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<tr>
<td>Total Available</td>
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<td>336,779.64</td>
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<tr>
<td>Item VI.B.</td>
<td>Replenishment Fund</td>
<td>Water Year 2017 (October 1 - September 30) / Fiscal Year (January 1 - December 31, 2016)</td>
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</tr>
<tr>
<td>------------</td>
<td>--------------------</td>
<td>-----------------------------------------------------------------------------------</td>
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</table>

**Replenishment Fund Totals Through 2016**

<table>
<thead>
<tr>
<th>Year</th>
<th>Totals</th>
<th>Proposed</th>
<th>Projected</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Replenishment Fund Assessments**

|------------|--------------|-----------|---------------------|

**Cal-Am Water Balance Forward**

<table>
<thead>
<tr>
<th>Year</th>
<th>Cal-Am Water Balance Forward</th>
<th>Cal-Am Water Production</th>
<th>Exceeding Natural Safe Yield</th>
</tr>
</thead>
</table>

**City of Seaside Balance Forward**

<table>
<thead>
<tr>
<th>Year</th>
<th>City of Seaside Balance Forward</th>
<th>City of Seaside Municipal Production</th>
<th>City of Seaside Late Payment 5%</th>
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</table>

**Total Replenishment Fund Balance**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Replenishment Fund Balance</th>
<th>Replenishment Fund Balance Forward</th>
<th>Total Replenishment Assessments</th>
<th>Total Paid and/or Credited</th>
<th>Grand Total Fund Balance</th>
</tr>
</thead>
</table>

10
TO: Board of Directors

FROM: Robert S. Jaques, Technical Program Manager

DATE: December 7, 2016

SUBJECT: Consider Approval of Minor Revisions to the 2017 Work Plan and Budget for the Management and Monitoring Program

RECOMMENDATIONS: Approve the attached minor revisions to the 2017 Management and Monitoring Program (M&MP) Work Plan and the attached revised 2017 M&MP Budget.

BACKGROUND
Subsequent to the Board’s approval of the M&MP Work Plan and Budget for 2017 at its October meeting the Watermaster received information that will slightly change a few of the line items in those documents. For purposes of consistency it would be desirable to revise the Work Plan and Budget to reflect these changes.

DISCUSSION
One of the recommendations in the 2016 Seawater Intrusion Analysis Report (prepared for the Watermaster by HydroMetrics) is to perform verification resampling of two of the Sentinel Wells and the Ord Terrace Well, and to install a datalogger on the PCA-West-Shallow Monitoring Well. MPWMD has recommended the replacement of some existing dataloggers, and keeping one datalogger in inventory in case one of the existing dataloggers fails. Staff is also recommending that an amount be included in the 2017 M&MP Budget for additional hydrogeologic consulting services by Todd Groundwater (the firm that performed the peer review of HydroMetrics’ prior groundwater modeling work) in the event such services are deemed desirable if the verification resampling indicates seawater intrusion is actually occurring, or if other issues arise during the year.

This is additional work which was not anticipated when the 2017 M&MP Budget and Work Plan were adopted by the Board in October 2016. This additional work is incorporated into the Work Plan by the revised wording of Tasks I.2.b.2 and I.2.b.3 shown highlighted in the first attachment. The services of Todd Groundwater fall within the existing description of Task M.1.e, so no revision to the wording in that Section is necessary. The revisions to the M&MP Budget are highlighted in the attached revised Budget for 2017.

The details of these items are described in the agenda transmittal for the 2017 RFSs for MPWMD, Martin Feeney, and Todd Groundwater under agenda item VI.D in today’s agenda packet.

FISCAL IMPACTS
These changes will be funded from the Contingency line-item in the 2017 M&MP Budget that was approved by the Board in October 2016. Consequently, there is no increase in the M&MP Budget.

ATTACHMENTS
1. Revised portions of the M&MP Work Plan for 2017
2. Revised M&MP Budget for 2017
### I. 2. b. 2
**Collect Monthly Manual Water Levels**

Each of the monitoring wells will be visited on a regular basis. Water levels will be determined by either taking manual water levels using an electric sounder, or by dataloggers. Most wells where the use of dataloggers is feasible or appropriate have been equipped with dataloggers, but in accordance with the recommendation in the 2016 SIAR this Task budget amount includes the purchase and installation of one additional new datalogger at Monitoring Well PCA West-Shallow at a price of $680, plus $50 for installation parts. This Task also includes 2 replacement dataloggers @ $680, and the purchase of one datalogger @ $680 to keep in inventory as a spare if needed, plus $50 in parts for each datalogger.

### I. 2. b. 3
**Collect Quarterly Water Quality Samples**

The monitoring wells from which water quality data is to be collected by PROFESSIONAL are listed under the heading “MONITORING TO BE PERFORMED BY PROFESSIONAL” in the column titled “Quality” in Table 2. PROFESSIONAL will visit each of the indicated wells at the frequencies shown in Table 2 in order to obtain the water quality samples, and will perform water quality analyses on these samples. The water quality constituents that will be measured in these analyses are: Specific Conductance (micromhos/cm), Total Alkalinity (as 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 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.

Under this Task in 2013 retrofitting to use the low-flow purge approach for getting water quality samples was completed on all of the wells that are sampled. This sampling equipment sits in the water column and may periodically need to be replaced or repaired. Accordingly, an allowance to perform maintenance on previously installed equipment has been included in this Task. Also, in the event a sampling pump is found to be no longer adequate due to declining groundwater levels, an allowance of $2,000 to purchase a replacement sampling pump has been included in this Task.

Performing one additional water quality verification sampling at Sentinel Wells SBWM-2 and SBWM-4 and the Ord Terrace Shallow Monitoring Well has been included under this Task, as recommended in the 2016 SIAR.
## Revised Management and Monitoring Plan Operations Budget
### For Tasks to be Undertaken in 2017

<table>
<thead>
<tr>
<th>Task</th>
<th>Subtask</th>
<th>Sub-Subtask</th>
<th>Cost Description</th>
<th>CONSULTANTS &amp; CONTRACTORS&lt;sup&gt;3&lt;/sup&gt;</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>MEPWMD Private Consultants</td>
<td>Contractor</td>
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<td>M.1</td>
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<td>M.1.b</td>
<td>Assist with Board and TAC Agendas</td>
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<td>M.1.c</td>
<td>Preparation for and Attendance at Meetings&lt;sup&gt;9&lt;/sup&gt;</td>
<td></td>
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<tr>
<td>M.1.e</td>
<td>Peer Review of Documents and Reports&lt;sup&gt;10&lt;/sup&gt;</td>
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<td>I.1</td>
<td>Initial Phase 1 Monitoring Well Construction (Task Completed in Phase 1)</td>
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<tr>
<td>I.2</td>
<td>Production, Water Level and Quality Monitoring</td>
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<tr>
<td>I.2.a</td>
<td>Database Management</td>
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<tr>
<td>I.2.a.1</td>
<td>Conduct Ongoing Data Entry/Database Maintenance/Enhancement</td>
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<td>I.2.a.2</td>
<td>Verify Accuracy of Production Well Meters</td>
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<td>I.2.b</td>
<td>Data Collection Program</td>
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<tr>
<td>I.2.b.1</td>
<td>Site Representation and Selection&lt;sup&gt;7&lt;/sup&gt;</td>
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<td>I.2.b.2</td>
<td>Collect Monthly Water Level&lt;sup&gt;13(19)&lt;/sup&gt;</td>
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<td>I.2.b.3</td>
<td>Collect Quarterly Water Quality Sample&lt;sup&gt;13(19)&lt;/sup&gt;</td>
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<td>I.2.b.4</td>
<td>Update Program Schedule and Standard Operating Procedures</td>
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<td>I.2.b.5</td>
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<td>I.3</td>
<td>Basin Management</td>
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<td>I.3.a</td>
<td>Enhanced Seaside Basin Groundwater Model (Costs Shown in Subtasks Below)</td>
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<td>Evaluate Replenishment Scenarios and Develop Answers to Basin Management Questions&lt;sup&gt;10&lt;/sup&gt;</td>
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<td>Complete Preparation of Basin Management Action Plan</td>
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<td>I.3.b.1</td>
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<td>I.3.c</td>
<td>Refine and/or Update the Basin Management Action Plan&lt;sup&gt;10&lt;/sup&gt;</td>
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<td>I.3.d</td>
<td>Evaluate Coastal Wells for Cross-Aquifer Contamination Potential</td>
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<td>Seawater Intrusion Contingency Plan</td>
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<td>I.4.a</td>
<td>Oversight of Seawater Intrusion Detection and Tracking</td>
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<td>I.4.a.1</td>
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<td>I.4.b</td>
<td>Provide focused area hydrogeologic investigation for Sand City Public Works</td>
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<td>Annual Report-Seawater Intrusion Analysis</td>
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<td></td>
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<td>$20,890</td>
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<td>Complete Preparation of Seawater Intrusion Response Plan&lt;sup&gt;10&lt;/sup&gt;</td>
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<td></td>
<td></td>
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<tr>
<td>I.4.e</td>
<td>Refine and/or Update the Seawater Intrusion Response Plan&lt;sup&gt;10&lt;/sup&gt;</td>
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<td></td>
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<td>I.4.f</td>
<td>If Seawater Intrusion is Determined to be Occurring, Implement Contingency Response Plan&lt;sup&gt;10&lt;/sup&gt;</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>I.4.f.1</td>
<td></td>
<td></td>
<td></td>
<td>(No Costs are Included for This Task, as This Task Will Likely Not be Necessary During 2017. If it Does Become Necessary, Use of Contingency Funds or a Budget Modification Will Likely be Necessary)</td>
<td></td>
</tr>
</tbody>
</table>

Comparative Costs from 2017 Budget Approved in October 2016:

- TOTALS CONSULTANTS & CONTRACTORS: $53,454
- SUBTOTAL not including Technical Program Manager: $183,706
- Contingency (not including Technical Program Manager, approximately 10%): $12,090
- Technical Program Manager: $60,000
- TOTAL: $255,797

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<sup>3</sup> Costs shown in 2017 Budget Approved in October 2016.
TO: Board of Directors

FROM: Robert S. Jaques, Technical Program Manager

DATE: December 7, 2016

SUBJECT: Consider Approving the Following Professional Services Contracts for Fiscal Year 2017:

1) Two Contracts with MPWMD—one for $53,454 and the second one for $4,788, both pertaining to 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 $11,400 for providing ongoing and as-requested general hydrogeologic consulting services during the year and the second for $20,890 to prepare the Seawater Intrusion Analysis Report (SIAR) for 2017.

3) Two Contracts with Martin Feeney - one Professional Services Agreement (no cost involved) and one for $25,685.56 to perform induction logging and water quality sampling of the Sentinel Wells.

4) One Contract with Todd Groundwater —to extend the completion time of a previously authorized contract (no cost involved).

5) One Contract with Brownstein Hyatt Farber Schreck, LLP (Russ McGlothlin, Esq.) – for $14,000 to provide legal services to prepare and file a motion, and appear on March 17, 2017 at a status conference hearing with Judge Nichols of the Superior Court; and to assist with filing the Watermaster Annual Report to Court by December 15, 2017 as may be needed by Watermaster.

RECOMMENDATIONS:
It is recommended that the Board approve the attached RFSs No. 2017-01 and 2017-02 with MPWMD, RFSs No. 2017-01 and 2017-02 with HydroMetrics, Professional Services Agreement and RFS No. 2017-01 with Martin Feeney, Amendment No. 1 to RFS No. 2015-01 with Todd Groundwater, and RFS No. 2017-01 with Brownstein Hyatt Farber Schreck, LLP.

BACKGROUND:
Attached are the proposed initial contracts for each of the Watermaster’s consultants that are expected to work on M&MP activities in December 2016 and/or during 2017. Other than Martin Feeney, 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 and discussed the MPWMD, HydroMetrics, and Martin Feeney items at its November 16, 2016 meeting and recommends that the Board approve each of them.

The agreement with Brownstein Hyatt Farber Schreck, LLP was developed by Ms. Dadiw. I have reviewed it and recommend its approval.

DISCUSSION
Note that the contracts include approving the verification resampling of certain wells as recommended in the 2016 SIAR, which is covered in a later agenda item. The attached RFSs
constitute the proposed initial 2017 work assignments for each of the consultants and/or contractors as follows:

- **MPWMD RFS No. 2017-01** for $53,454 [was $82,150 last year] covering their normal M&MP tasks as in preceding years and also performing work recommended in the 2016 Seawater Intrusion Analysis Report (SIAR) which is contained in Attachment 8 of the Draft 2016 Annual Report. One of the recommendations discussed in the 2016 SIAR is to perform verification resampling of some of the monitoring wells, along with associated actions. This is discussed further under Agenda Item No. VIII.A.1.a in today’s agenda packet. The reduction in cost for this item is largely due to having the Watermaster contract directly with the contractor (Martin Feeney) that performs the induction logging and water quality sampling of the Sentinel Wells rather than having MPWMD contract with Mr. Feeney to perform that work.

- **MPWMD RFS No. 2017-02** for $4,788 [was $4,788 last year] covering their obtaining water quality and water level data from private producers who ask the Watermaster to collect this data for them. The costs for this work are reimbursed by the private producers, and there is no net cost to the Watermaster for work performed under this RFS.

- **HydroMetrics RFS No. 2017-01** for $11,400 [was $11,400 last year] covering their providing general hydrogeologic consulting services and for providing assistance in preparing documents that the Watermaster will need to submit to fulfill its reporting requirements under the Sustainable Groundwater Management Act.

- **HydroMetrics RFS No. 2017-02** for $20,890 [was $20,390 last year] covering their preparing the 2017 SIAR.

- **Martin Feeney Professional Services Agreement (PSA)** (no cost involved).

- **Martin Feeney RFS No. 2017-01** for $25,685.56 to perform induction logging and water quality sampling of the Sentinel Wells. [This work was performed under a contract with MPWMD last year].

- **Todd Groundwater Amendment No 1 to RFS No. 2015-01** (no cost involved) to extend the completion date of that RFS to enable Todd Groundwater to continue providing on-call hydrogeologic consulting services.

- **RFS No. 2017-01 with Brownstein Hyatt Farber Schreck, LLP** for $14,000 for Mr. Russ McGlothlin to (1) provide legal services to prepare and file a motion, and appear on March 17, 2017 at a status conference hearing with Judge Nichols of the Superior Court, (2) assist with filing the Watermaster Annual Report to the Court by December 15, 2017, and (3) provide miscellaneous legal consultation as may be needed by Watermaster.

These contracts are being presented to the Board for approval at today’s meeting to ensure the contracts can be in effect as soon as possible. The MPWMD and Martin Feeney RFSs No. 2017-01 will involve implementing some of the recommendations contained in the 2016 SIAR in December of 2016.

**ATTACHMENTS:**

1. MPWMD RFS No. 2017-01
2. MPWMD RFS No. 2017-02
3. HydroMetrics RFS No. 2017-01
4. HydroMetrics RFS No. 2017-02
5. Martin Feeney PSA
6. Martin Feeney RFS No. 2017-01
7. Todd Groundwater Amendment No. 1 to RFS No. 2015-01.
8. Brownstein Hyatt Farber Schreck, LLP RFS No. 2017-01
SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: December 8, 2016

RFS NO: 2017-01
(To be filled in by WATERMASTER)

TO: Jonathan Lear
Monterey Peninsula Water Management District
PROFESSIONAL

FROM: Robert Jaques
WATERMASTER

Services Needed and Purpose:
Perform certain Tasks contained within the Watermaster’s Monitoring and Management Plan for 2017 (See detailed Scope of Work in Attachment 1).

Completion Date: The work of this RFS No. 2017-01 shall be completed in accordance with the schedule 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: $53,454.00 (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

Agreed to by: ___________________________ Date: ___________
PROFESSIONAL

MPWMD RFS No. 2017-01 Page 1
ATTACHMENT 1

Detailed Scope of Work for RFS No. 2017-01

Background:

The Watermaster Board approved the Budget for the 2017 Management and Monitoring Program Work Plan (hereinafter referred to as the “2017 M&MP Work Plan”) at its meeting of October 5, 2016. The work and cost authorized by this RFS No. 2017-01 is slightly revised from the work and cost originally described under Task L2.b.3 of the 2017 M&MP Work Plan when it was approved by the Board. The revisions consist of (1) deleting the water quality sampling at the Sentinel Wells (that work is now being performed by another contractor) and (2) performing one additional verification sampling event at the Ord Terrace Shallow Well.

Performing the verification water quality sampling of the Ord Terrace Shallow Well is being recommended in the 2016 Seawater Intrusion Analysis Report (SIAR), prepared by HydroMetrics. This results from the finding, as discussed in the SIAR, that increasing chloride levels have been observed at this well, although other geochemical evidence suggests this may not be incipient seawater intrusion.

The first step listed in the Watermaster’s Seawater Intrusion Response Plan (SIRP) is to resample, as soon as possible, any well which is found to have water quality that may be indicative of seawater intrusion. Therefore, in accordance with the SIRP resampling of the Ord Terrace Shallow Well has been included in the scope and cost of this RFS. The net cost impact of these two revisions is a reduction of $4,175 from the amount that was budgeted for this work in the M&MP Operations Budget for 2017 that was approved by the Watermaster Board in October 2016.

This RFS No. 2017-01 authorizes PROFESSIONAL to perform certain work on certain of the Tasks described in the 2017 M&MP Work Plan. The Task numbers listed in Table 1 of this Detailed Scope of Work for RFS No. 2017-01 correspond to the Task numbers in the 2017 M&MP Work Plan.
<table>
<thead>
<tr>
<th>M&amp;MP TASK NO.</th>
<th>TASK DESCRIPTION</th>
<th>WORK TO BE PERFORMED</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. 2. a.1</td>
<td>Conduct ongoing data entry/database maintenance</td>
<td>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. 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 follow up 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. 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.</td>
</tr>
<tr>
<td>I. 2. b. 2</td>
<td>Collect Monthly Water Levels</td>
<td>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. This Task budget amount includes the purchase and installation of four new and/or replacement dataloggers at a price of $680, plus $50 for installation parts, for each datalogger. All of the other wells will be manually measured.</td>
</tr>
<tr>
<td>M&amp;MP TASK NO.</td>
<td>TASK DESCRIPTION</td>
<td>WORK TO BE PERFORMED</td>
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<td>---------------</td>
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<td>----------------------</td>
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<tr>
<td>1. 2. b. 3</td>
<td>Collect Quarterly Water Quality Samples</td>
<td>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-N), 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 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. Under this Task in 2013 retrofitting to use the low-flow purge approach for getting water quality samples was completed on all of the wells that are sampled. This sampling equipment sits in the water column and may periodically need to be replaced or repaired. Accordingly, an allowance to perform maintenance on previously installed equipment has been included in this Task. Also, in the event a sampling pump is found to be no longer adequate due to declining groundwater levels, an allowance of $2,000 to purchase a replacement sampling pump has been included in this Task. Performing one additional water quality verification sampling at the Ord Terrace Shallow Monitoring Well has been included under this Task, as recommended in the 2016 SIAR.</td>
</tr>
<tr>
<td>M&amp;MP TASK NO.</td>
<td>TASK DESCRIPTION</td>
<td>WORK TO BE PERFORMED</td>
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<td>---------------</td>
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<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
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</table>
| I. 2. b. 6    | Reports                      | PROFESSIONAL will prepare and submit reports to WATERMASTER according to the following schedule.  
1. PROFESSIONAL will review the water quality and water level data at the end of each quarter of the Water Year and will provide to WATERMASTER tabularized data summaries of the WQ/WL data twice per year, once for the Q1 and Q2 period and once for the Q3 and Q4 period, so this data can be posted to WATERMASTER’s website. These two reports will be accompanied by brief cover letters describing any missing data or data collection irregularities that are encountered during the reporting periods. No reporting on a quarterly basis is required. However, PROFESSIONAL will promptly notify WATERMASTER in writing if PROFESSIONAL identifies any missing data or data collection irregularities that were encountered during the quarterly reporting periods.  
2. PROFESSIONAL will prepare one annual report summarizing the water quality and water level data for the Water Year, and containing tables of this data for the complete Water Year. The report will include a brief cover letter describing any missing data or data collection irregularities that were encountered during the reporting period, and any recommendations for changes to be made to the data collection program. |
<p>| I.2.b.7       | CASGEM Data Submittal        | PROFESSIONAL will compile and submit data on the Watermaster’s “Voluntary Wells” into the State’s CASGEM groundwater management database. The term “Voluntary Well” refers to a well that is not currently having its data reported into the CASGEM system, but for which the Watermaster obtains data. This will be done in the format and on the schedule required by the Department of Water Resources under the Sustainable Groundwater Management Act. |
| I.4.c         | Review Seawater Intrusion Analyses | WATERMASTER will have another consultant perform analyses and prepare mapping and other documents pertaining to seawater intrusion detection. PROFESSIONAL may participate in meetings with that consultant during the course of its work, and may provide review comments and recommendations to WATERMASTER regarding this work as it is being carried out by that consultant. |</p>
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<th>WELL NAME AND SUBAREA LOCATION(6)</th>
<th>MONITORING NETWORK(1)</th>
<th>MONITORING REQUIRED BY DECISION(2)</th>
<th>MONITORING CURRENTLY BEING PERFORMED BY PROFESSIONAL NOT SUBJECT TO THIS RFS(3)</th>
<th>MONITORING TO BE PERFORMED BY PROFESSIONAL UNDER THIS RFS(4)</th>
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<td>Professional's</td>
<td>Watermaster's</td>
<td>Level (Monthly)</td>
<td>Quality (Annually)</td>
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<td>MSC Deep</td>
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<tr>
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<td>PCA-E (Multiple) Shallow</td>
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<td>Ord Grove Test Shallow/Deep</td>
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<td>Ord Terrace Shallow (11)</td>
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<td>Fort Ord Monitor MW-B-23-18B Dune/Aromas</td>
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<td>CDI MW-1 Dune/Aromas</td>
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<td>CDI MW-2 Dune/Aromas</td>
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<td>DAW Del Monte Observation Shallow</td>
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<td>SBWM MW-1 Deep (Purisima)(5)</td>
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<tr>
<td>Northern Inland Subarea (and vicinity)</td>
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<tr>
<td>HPWMD #FO-01 Shallow</td>
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<td>HPWMD #FO-01 Deep</td>
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<td>HPWMD #FO-08 Shallow</td>
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<td>SBWM MW-5 Deep (Santa Margarita)(5)</td>
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<td>Table 2 (Continued)</td>
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<td>Shea</td>
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<td><strong>Laguna Seca Subarea (and vicinity)</strong></td>
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<td>MPWMD FM-05-Shallow</td>
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<td>MPWMD FM-04-Deep (W)</td>
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<td>Justin Court (RR 28N)-Shallow</td>
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<td>Ridley Deep (South) (Mc Co MW-3D)-Deep</td>
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<td>Blue Lagoon East End Believed to be Deep</td>
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<td>York School-Shallow</td>
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<td>Laguna Seca County Park #2-Shallow</td>
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<td>CAW Granite Construction-Deep</td>
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<td>Laguna Seca Golf New #12-Deep*</td>
<td>X</td>
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<td>Pasadera Main Gate-Deep</td>
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<td><strong>No. of Wells in Each Network</strong></td>
<td>32</td>
<td>30</td>
<td>4</td>
<td>0</td>
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</table>

MPWMD RFS No. 2017-01 Page 7
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.


(6) The Seaside Basin Watermaster (SBWM) wells are all equipped with dataloggers that obtain measurements at least daily, but will be manually sounded for water level on a quarterly basis for calibration purposes.

(7) Not used.

(8) Shallow--Paso Robles; Deep--Santa Margarita or Purisima.

(9) This well is so close to the Laguna Saca Old No. 12 well that no water level monitoring is necessary.

(10) CAW East Fence Shallow well can no longer be sampled and was therefore dropped from this list.

(11) The Ord Terrace Shallow well will be verification-sampled early in WY 2017 as recommended by the 2016 SIAR.
## ATTACHMENT 2
### SCHEDULE

| ID | Task Name                                                                 | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun |
|----|---------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1  | 1.2.a DATABASE MANAGEMENT                                                 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 2  | 1.2.a.1 Conduct Ongoing Data Entry/Database Maintenance                  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 3  | 1.2.b DATA COLLECTION PROGRAM                                            |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 4  | 1.2.b.2 Collect Monthly Water Levels (MPWMD)                             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 5  | 1.2.b.3 Collect Quarterly Water Quality Samples (MPWMD)                  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 6  | 1.2.b.6 Reports (from MPWMD)                                             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 7  | Water Level and Water Quality Data Summaries for 1st & 2nd Quarters     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 8  | Water Level and Water Quality Data Summaries for 2nd & 3rd Quarters     | 5/1 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 9  | Annual Water Production, Water Level, and Water Quality Report for 2017  | 11/1|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 10 | Watermaster Prepares Report Regarding Long-Term Trends in Water Levels in Monitoring Wells | 11/15 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 11 | 1.2.b.7 CASGEM Data Submittal                                            | 3/1 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 12 | 1.4.c MPWMD Provides Assistance in Seawater Intrusion Detection          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
### ATTACHMENT 3 SUMMARY OF ESTIMATED COSTS

<table>
<thead>
<tr>
<th>M&amp;MP TASK NO.</th>
<th>LABOR HOURS BREAKDOWN</th>
<th>HOURSLY RATE</th>
<th>SUPPLIES AND MATERIALS BREAKDOWN</th>
<th>TOTAL</th>
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<tbody>
<tr>
<td>1.2. a. 1</td>
<td>12 mo. @ 8 hrs/mo.</td>
<td>96</td>
<td>$112</td>
<td>$300</td>
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<tr>
<td></td>
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<td>Other services needed to host and maintain Watermaster's Database, estimate $300 for the year.</td>
<td>$11,052</td>
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<tr>
<td>1.2. b. 2.</td>
<td>12 mo. @ 4 hrs/mo.</td>
<td>48</td>
<td>$89</td>
<td>$2,920</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>2 replacement dataloggers @ $680, plus $100 for installation parts; purchase and install one new datalogger on Well PCA West @ $680 plus $50 for parts; purchase one datalogger @ $680 plus $50 in parts to keep in inventory as a spare if needed.</td>
<td>$7,192</td>
</tr>
<tr>
<td>1.2. b. 3.</td>
<td>Quarterly WQ wells (Table 2): MPWMD Coastal wells (1 well - shallow and deep aquifers @ 3 sites: MSC, PCA-W, FG-09), plus one additional verification WQ sample at Ord Terrace Shallow Well, Labor: 4 events @ 16 hrs/event</td>
<td>64</td>
<td>$89</td>
<td>$6,645</td>
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<tr>
<td></td>
<td>Annual WQ wells (Table 2): 1 event @ 28 hrs/event = 28 hrs</td>
<td></td>
<td>Fuel: 4 events @ $10/site x 3 sites = $120; Lab costs: 4 events @ $225/well x 7 wells = $6,300; plus one verification sample lab cost = $225.</td>
<td>$12,341</td>
</tr>
<tr>
<td></td>
<td>WM Sentinel and Northern Inland wells: download/store dataloggers, 4 events @ 2 hrs/event</td>
<td>8</td>
<td>$89</td>
<td>$0</td>
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<td>Compile data: 4 events @ 24 hours/event</td>
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<td>N/A</td>
<td>$0</td>
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<td></td>
<td>Data summaries and 1-annual report</td>
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<td>$0</td>
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<tr>
<td>1.2. b. 7.</td>
<td>CASGEM Data Submittal for Watermaster's Voluntary Wells</td>
<td>16</td>
<td>$112</td>
<td>$0</td>
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<tr>
<td></td>
<td>Provide SWI supplemental data and review</td>
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<td></td>
<td>$0</td>
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</table>

**TOTAL ESTIMATED COST = $53,454**

**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, 2017

RFS NO: 2017-02

(To be filled in by WATERMASTER)

TO: Jonathan Lear
Monterey Peninsula Water Management District
PROFESSIONAL

FROM: Robert Jaques
WATERMASTER

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

Completion Date: The work of this RFS No. 2017-02 shall be completed on an as-directed basis from the Watermaster during 2017. All work under this RFS will be completed not later than December 31, 2017.

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

Total Price Authorized by this RFS: $4,788.00 (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

Agreed to by: ________________________________ Date: ____________
PROFESSIONAL
ATTACHMENT 1
Scope of Work for RFS No. 2017-02

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. 2017-02 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 $89/hr, so the estimated cost per water level measurement would be $44.50.

The total estimated cost would be $534 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 $175 per sample for the laboratory analysis. The sampling work would be billed at the field rate of $89/hr, so the estimated cost per annual water quality sample would be $89 for labor, and $175 for laboratory services, for a total cost per sample of $264. 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 $264.

**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 $798.

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 @ $534 = $3,204
Potential No. of Wells Needing Water Quality Data Collected = 6 @ $264 = $1,584
TOTAL = $4,788

MPWMD RFS No. 2017-02 Page 2
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<td>012-432-004</td>
<td>CAV - Plumas #4</td>
<td>California American Water Co.</td>
<td>Y</td>
<td>T15S/R1E-27Jg</td>
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<td>012-432-013</td>
<td>CAV - Darwin</td>
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<td>011-981-016</td>
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<td>T15S/R1E-14Nd</td>
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<td>T15S/R1E-23Db</td>
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<td>California American Water Co.</td>
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<td>T15S/R1E-13Na</td>
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<td>021-301-062</td>
<td>Cos Avenue Well</td>
<td>City of Sausalito</td>
<td>Y</td>
<td>T15S/R1E-14Ma</td>
<td>Y</td>
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<td>Y</td>
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<td>011-181-014</td>
<td>Public Works Corp. Yard</td>
<td>City of Sand City</td>
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<td>Cypress Pacific</td>
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<td>Y</td>
<td>N</td>
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<tr>
<td>011-296-010</td>
<td>Holmanes - Design Grp.</td>
<td>City of Sand City</td>
<td>Y</td>
<td>T15S/R1E-22Mc</td>
<td>Y</td>
<td>?</td>
<td>Y</td>
<td>N</td>
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<tr>
<td>011-041-043</td>
<td>(in front of Target)</td>
<td>SDO Development</td>
<td>Y</td>
<td>T15S/R1E-22Ca</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
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<tr>
<td>011-661-022</td>
<td>MMP pond well</td>
<td>Mission Memorial Park</td>
<td>Y</td>
<td>T15S/R1E-23Ab</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>011-661-022</td>
<td>NRTW - operated by MMP</td>
<td>Mission Memorial Park</td>
<td>Y</td>
<td>T15S/R1E-23Ac</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
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<tr>
<td>011-501-050</td>
<td>Security National Guaranty, Inc.</td>
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<td>T15S/R1E-15K1</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
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<tr>
<td>011-502-005</td>
<td>Grads Rock Company</td>
<td>Y</td>
<td>T15S/R1E-22Bb</td>
<td>Y</td>
<td>?</td>
<td>Y</td>
<td>N</td>
<td></td>
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<tr>
<td>012-511-005</td>
<td>Shea Well</td>
<td>City of Del Rey Oaks</td>
<td>Y</td>
<td>T15S/R1E-26Mc</td>
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<td>N</td>
<td>N</td>
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<tr>
<td>012-115-017</td>
<td>City #4</td>
<td>Seaside Municipal Water System</td>
<td>Y</td>
<td>T15S/R1E-23Gc</td>
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<td>?</td>
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<td>?</td>
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<td>012-433-003</td>
<td>City #2</td>
<td>Seaside Municipal Water System</td>
<td>Y</td>
<td>T15S/R1E-23Pb</td>
<td>Y</td>
<td>?</td>
<td>N</td>
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<td>012-206-017</td>
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<td>Seaside Municipal Water System</td>
<td>Y</td>
<td>T15S/R1E-23Lb</td>
<td>Y</td>
<td>?</td>
<td>N</td>
<td>N</td>
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<tr>
<td>011-115-017</td>
<td>City #3</td>
<td>Seaside Municipal Water System</td>
<td>Y</td>
<td>T15S/R1E-23Gb</td>
<td>Y</td>
<td>?</td>
<td>Y</td>
<td>?</td>
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<tr>
<td>175-071-052</td>
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<td>CAV - Bishop Unit</td>
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<td>T16S/R2E-05Fa</td>
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<tr>
<td>175-072-034</td>
<td>well #1 Bishop #1 (west)</td>
<td>CAV - Bishop Unit</td>
<td>Y</td>
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<td>Y</td>
<td>Y</td>
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<tr>
<td>173-072-041</td>
<td>well #1 Bishop #2 (east)</td>
<td>CAV - Bishop Unit</td>
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<td>T16S/R2E-05Fa</td>
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<tr>
<td>416-111-001</td>
<td>Mutual</td>
<td>CAV - Hidden Hills Unit</td>
<td>Y</td>
<td>T16S/R2E-09Cd</td>
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<td>N</td>
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<td>416-111-004</td>
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<td>Bay Ridge</td>
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<td>T16S/R2E-09Cd</td>
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<tr>
<td>259-031-011</td>
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<td>T15S/R1E-36Nb</td>
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<tr>
<td>259-031-012</td>
<td>RR#6</td>
<td>CAV - Ryan Ranch #6</td>
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<td>Y</td>
<td>N</td>
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<tr>
<td>259-031-012</td>
<td>RR#11</td>
<td>CAV - Ryan Ranch #11</td>
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<td>T15S/R1E-01Cd</td>
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<tr>
<td>175-071-056</td>
<td>Old Main Gate (Lot #12)</td>
<td>Pasadera - NewCities Develop</td>
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<td>T16S/R2E-05Mg</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>175-071-051</td>
<td>Paddock #11 (Lot #11)</td>
<td>Pasadera - NewCities Develop</td>
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<td>203-031-034</td>
<td>01-349</td>
<td>York School</td>
<td>Y</td>
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<tr>
<td>173-071-048</td>
<td>(new #12)</td>
<td>Laguna Seca Golf Resort</td>
<td>Y</td>
<td>T16S/R2E-06Hb</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>173-071-048</td>
<td>(racetrack)</td>
<td>Laguna Seca Golf Resort</td>
<td>Y</td>
<td>T16S/R2E-06Ga</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
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</table>

Y = 38
N or ? = 21
Y = 16
N or ? = 15
SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: December 8, 2016
RFS NO. 2017-01
(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, 2017, 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: $11,400.00 (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

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, BMAP and SIRP implementation issues, and preparation of documents for WATERMASTER's use in fulfilling its Sustainable Groundwater Management Act reporting requirements.

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 2017 Monitoring and Management Program (M&MP) to which this RFS No. 2017-01 pertains are:

- M. 1. c - Preparation and Attendance of Meetings
- M. 1. e - Peer Review of Documents and Reports
- M.1.g – Sustainable Groundwater Management Act Documentation Preparation

ESTIMATED COSTS

General Consulting Services, including working on the Tasks listed above and 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:

Derrik Williams = $220.00/hour  Georgina King = $195.00/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. 2017-01 is $11,400.00.
HydroMetrics RFS No. 2017-01
Work Schedule

| ID | Task Name                          | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|----|-----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1  | M. 1. c - Preparation and Attendance of Meetings |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 2  | M. 1. e - Peer Review of Documents and Reports  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 3  | M.1.g - SGMA Document Preparation |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|    |                                   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

Work Schedule for HydroMetrics RFS No 2017-01 8-27-16

HYDROMETRICS RFS NO. 2017-01 Page 3
SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: 1/1/2017

RFS NO. 2017-02 (To be filled in by WATERMASTER)

TO: Derrik Williams
    HydroMetrics WRI
    PROFESSIONAL

FROM: Robert Jaques
    WATERMASTER


Completion Date: All work of this RFS shall be completed not later than December 31, 2017, 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: $20,890.00 (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

Agreed to by: ______________________________ Date: ______________
    PROFESSIONAL
ATTACHMENT 1

SCOPE OF WORK

The scope consists of providing professional consulting services to WATERMASTER for preparation of the 2017 Seawater Intrusion Analysis Report (SIAR).

To promote efficiency, much of the text and graphics from the 2016 SIAR will be incorporated directly into the 2017 SIAR.

Preparing the 2017 SIAR will involve analyzing all water quality data at the end of Water Year 2017 (October 1, 2016 to September 30, 2017) and producing semi-annual (2nd and 4th quarters 2017) 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 2017 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 2017 SIAR. A CD containing an electronic version of the entire Final 2017 SIAR in MS Word and up to 15 printed and bound copies of the Final 2017 SIAR (quantity to be determined by WATERMASTER) will be provided to WATERMASTER.
## ATTACHMENT 2

### HydroMetrics RFS No. 2017-02

#### Work Schedule

<table>
<thead>
<tr>
<th>ID</th>
<th>Task Name</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Jan</td>
</tr>
<tr>
<td>1</td>
<td>I.4.c Annual Seawater Intrusion Analysis Report (SIAR)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>HydroMetrics Provides Draft SIAR to Watermaster</td>
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<tr>
<td>3</td>
<td>TAC Approves Annual Seawater Intrusion Analysis Report (SIAR)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Board Approves Annual Seawater Intrusion Analysis Report (SIAR)</td>
<td></td>
</tr>
</tbody>
</table>
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.

<table>
<thead>
<tr>
<th>Task</th>
<th>Hours</th>
<th>Costs</th>
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<tbody>
<tr>
<td>2017 Seawater Intrusion Analysis Report</td>
<td></td>
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<tr>
<td>Produce 2017 SIAR</td>
<td>32</td>
<td>$6,240</td>
</tr>
<tr>
<td>Attend One TAC Meeting in Monterey</td>
<td>10</td>
<td>$1,950</td>
</tr>
<tr>
<td></td>
<td>42</td>
<td>$8,190</td>
</tr>
<tr>
<td>TOTALS</td>
<td>100</td>
<td>$12,000</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th></th>
<th>Georgina King ($195 per hr)</th>
<th>Nick Byler ($120 per hr)</th>
<th>Georgina King</th>
<th>Nick Byler</th>
<th>Expenses</th>
<th>Total Costs</th>
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</thead>
<tbody>
<tr>
<td>Produce 2017 SIAR</td>
<td>32</td>
<td>100</td>
<td>$6,240</td>
<td>$12,000</td>
<td>$500</td>
<td>$18,740</td>
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<tr>
<td>Attend One TAC Meeting in Monterey</td>
<td>10</td>
<td>0</td>
<td>$1,950</td>
<td>$-</td>
<td>$200</td>
<td>$2,150</td>
</tr>
<tr>
<td>TOTALS</td>
<td>42</td>
<td>100</td>
<td>$8,190</td>
<td>$12,000</td>
<td>$1,200</td>
<td>$20,890</td>
</tr>
</tbody>
</table>
PROFESSIONAL SERVICES AGREEMENT

THIS AGREEMENT TO PROVIDE PROFESSIONAL SERVICES is made and entered into on __________ by and between SEASIDE GROUNDWATER BASIN WATERMASTER, hereinafter referred to as "WATERMASTER," and MARTIN BLAIR FEENEY, hereinafter referred to as "PROFESSIONAL," as follows:

SECTION I: ADHERENCE TO TERMS OF AGREEMENT

WATERMASTER intends to literally interpret and strictly apply all terms and conditions of this Agreement. All approvals which are required to be in writing must be in writing to be valid and binding. PROFESSIONAL is encouraged to raise to WATERMASTER any questions with regard to interpretation or applicability of any provision of this Agreement before undertaking the work.

SECTION II: EMPLOYMENT

WATERMASTER hereby employs PROFESSIONAL, as an independent contractor to furnish the professional services covered by this Agreement, and the Requests for Service issued under it, in accordance with the terms and conditions set forth below, and PROFESSIONAL hereby accepts such employment.

SECTION III: WORK ASSIGNMENTS

It is the intent of WATERMASTER and PROFESSIONAL to authorize the performance of work under this Agreement by executing a series of written work assignments setting forth the specific description, scope, and costs of the work to be performed. Such assignments shall be called "Requests For Service" (RFS) and shall be numbered consecutively. Each RFS, upon execution by PROFESSIONAL and by WATERMASTER, shall become and be considered as a part of this Agreement, and all provisions herein shall apply to said RFSs. The RFS form to be used is contained in Attachment A to this Agreement.

SECTION IV: TIME OF PERFORMANCE

A. General - Time is of the essence on the work of the RFSs issued under this Agreement. Therefore, PROFESSIONAL shall perform its services in a
timely manner. Specific performance times shall be specified for each individual RFS under this Agreement. PROFESSIONAL shall make every reasonable effort, including assigning of additional personnel to the work and/or working overtime, to complete the authorized work within these stipulated time periods. The taking of such additional measures to complete the work within the stipulated time periods will not entitle PROFESSIONAL to additional compensation, if the work is being performed under the Lump Sum Payment Method, except as provided for in Section V, Paragraph B.

B. **Subcontracted Services** - For subcontracted services PROFESSIONAL shall contract for and schedule such services in a timely fashion in accordance with the requirements of the work, and shall be fully responsible for the performance and quality of all work performed by its subcontractors.

C. **Extensions of Time** - The time of performance established for a particular RFS may be extended at any time prior to completion of the work by mutual agreement in writing between WATERMASTER and PROFESSIONAL.

**SECTION V: COMPENSATION**

A. **General** - WATERMASTER and PROFESSIONAL shall negotiate the costs and fees for each specific RFS. The method of payment of said costs and fees shall be either on a lump-sum basis, on a cost-plus-a-fixed-fee basis, or on a time-and-expense basis. The method of payment will depend on the specific conditions, the scope of work, and the services to be performed for each specific RFS.

B. **Projected Cost Overruns Under Cost-Plus-a-Fixed-Fee or Time-and-Expense Payment Methods** - If, at any time in the performance of the work of a specific RFS under the Cost-Plus-a-Fixed-Fee or Time-and-Expense payment methods, PROFESSIONAL has reason to believe that the costs which it expects to incur to complete the work of that RFS will exceed the total amount authorized for that RFS, PROFESSIONAL shall notify WATERMASTER in writing to that effect. The notice shall:

1. State the reason(s) why PROFESSIONAL anticipates a cost overrun;
2. State the estimated amount of additional funds beyond the
total amount currently authorized that will be required to complete the work authorized by the RFS; and

(3) Provide recommendations of how the overrun can be avoided;

If, after such notification, additional funds are not allotted, WATERMASTER will, if required in writing by PROFESSIONAL, terminate the work of that particular RFS pursuant to the provisions in Section VI, TERMINATION.

C. Lump-Sum Payment Method - WATERMASTER may elect to pay PROFESSIONAL a lump sum Total Price amount to be determined for a specific RFS. In addition to this lump sum amount, a Special Services allowance, as defined in this section, may also be established.

1. Lump Sum Total Price - PROFESSIONAL shall perform all work authorized by a lump sum type of RFS for the lump sum Total Price amount. No additional payments for said work will be requested by PROFESSIONAL or authorized by WATERMASTER, unless both parties agree that there is additional work, beyond the scope of services authorized by the RFS, which must also be performed. Before any such additional work is undertaken, WATERMASTER and PROFESSIONAL shall execute a separate amendment to the RFS setting forth the scope and costs of the additional work to be performed.

2. Special Services Allowance - To cover unforeseen circumstances, WATERMASTER and PROFESSIONAL may negotiate a Special Services allowance. PROFESSIONAL shall provide WATERMASTER with written notification stating the reasons for requiring the utilization of any or all of the Special Services allowance. No utilization of any portion of the allowance shall occur without the prior written approval of the WATERMASTER. Special Services costs will be charged in accordance with the Time-and-Expense Payment Method as defined in Paragraph D of this section.

D. Cost-Plus-A-Fixed-Fee Payment Method - WATERMASTER may elect to pay PROFESSIONAL on a cost-plus-a-fixed-fee basis which shall be the sum of (1) Direct Salaries, (2) Overhead Costs, (3) Direct Non-Salary
Expenses, and (4) A Fixed Fee.

1. **Direct Salaries** - Shall be the amount paid by PROFESSIONAL to its employees for time directly chargeable to a given RFS, exclusive of costs for fringe benefits for said employees and other payroll costs not paid to the employee.

2. **Overhead Cost** - Shall be a percentage of the Direct Salaries. The percentage to be charged shall be negotiated between WATERMASTER and PROFESSIONAL, and it shall be stipulated in each RFS for which this type of payment method will be used.

3. **Direct Non-Salary Expenses** - Shall be all identifiable costs directly chargeable to each RFS including, but not limited to: travel and subsistence expenses; work subcontracted to others; reproduction of plans, specifications, reports and other documents; equipment rental; and, drafting and stenographic supplies used in the work. The chargeable rate for automobile mileage for the work to be performed under this shall be stated in the RFS.

4. **Fixed Fee** - Shall be a fixed amount for interest on invested capital, readiness to serve, and profit. A fixed fee shall be established for each specific RFS for which the cost-plus-a-fixed-fee payment method will be used. This fixed fee will not change regardless of whether the Total Estimated Cost is greater than or less than the actual costs, unless both parties agree that there has been a change in scope. In such instance, the fixed fee will be renegotiated.

5. **Total Estimated Cost** - Is the sum of categories (1), (2), and (3) above.

6. **Total Price** - Is the sum of categories (1), (2), (3), and (4) above.

7. **Invoices** - Invoices shall include the costs incurred in categories (1), (2), and (3), plus a proportionate amount of the category (4) Fixed Fee.

E. **Time-and-Expense Payment Method** - For tasks for which the scope of work is not readily definable, WATERMASTER may elect to pay
PROFESSIONAL on a time-and-expense basis in accordance with the PROFESSIONAL’s most current Standard Schedule of Compensation. The hourly rates set forth in the Standard Schedule of Compensation shall be inclusive of all direct and indirect salary costs, overhead, fringe benefits, profit, and other costs, and shall reflect the total hourly charge for each listed job category. Other direct non-salary expenses for the performance of work authorized under the Time-and-Expense Payment Method shall be all identifiable costs directly chargeable to each RFS including, but not limited to: travel and subsistence expenses; work subcontracted to others; reproduction of plans, specifications, reports and other documents; equipment rental; and, drafting and stenographic supplies used in the work. The chargeable rate for automobile mileage for the work to be performed under this Agreement shall be stated in the RFS. Direct non-salary expenses shall be compensated for at their actual cost, unless otherwise stated in the RFS, providing they have been authorized in advance by WATERMASTER. A Total Price, which may not be exceeded without WATERMASTER’s prior written approval, will be established for each specific RFS for which this payment method will be used.

F. Terms of Payment - PROFESSIONAL shall invoice WATERMASTER monthly for work completed during the previous month, unless a different invoicing frequency is agreed to by both parties to this Agreement. All invoices shall be due and payable within thirty (30) days of the date of receipt by WATERMASTER, provided all costs included in the invoice are adequately supported by documentation accompanying the invoice. If payment is not made within sixty (60) days of the date of receipt by WATERMASTER, interest on the unpaid balance will accrue beginning with the sixty-first day at the rate of 1.0 percent per month, or the maximum interest rate permitted by law, whichever is the lesser. Such interest shall become due and payable at the time said overdue payment is made.

G. Penalty for Late Performance - The PROFESSIONAL is not responsible for delays in the schedule caused by events outside PROFESSIONAL’s reasonable control. However, in the event PROFESSIONAL fails to properly complete work within thirty (30) days of the date such work is due (pursuant to schedules developed in accordance with Section IV of this Agreement), because of events within PROFESSIONAL’s reasonable control, WATERMASTER SHALL reduce the total compensation established for the work of that RFS by ten percent (10%). Said reduction shall be deemed
liquidated damages for the untimely performance of work required by this Agreement. PROFESSIONAL shall be deemed to have waived any claim for such amount by reason of his failure to perform in a timely fashion.

SECTION VI: TERMINATION

Notwithstanding the above, WATERMASTER reserves the right to terminate any RFS to this Agreement at any time prior to the completion of the services to be furnished by PROFESSIONAL under said RFS by giving a written Notice of Termination to PROFESSIONAL, in which event WATERMASTER shall pay PROFESSIONAL only for work done and direct costs incurred by PROFESSIONAL under said RFS prior to receipt of such notice of termination. Such costs will include reasonable costs to bring the work to a halt, and costs to deliver to WATERMASTER the documentation described in the following paragraph. Termination of a particular RFS will not affect any other operative RFS.

Upon receipt of a Notice of Termination, PROFESSIONAL shall (1) promptly discontinue all services affected (unless the notice directs otherwise), and (2) deliver to WATERMASTER all data, drawings, specifications, reports, estimates, summaries, and such other information and materials as may have been accumulated by PROFESSIONAL in performing work under this Agreement, whether completed or in process.

Upon termination WATERMASTER may take over the work and prosecute the same to completion by agreement with another party or otherwise. Any work taken over by WATERMASTER for completion will be completed at WATERMASTER’s risk, and WATERMASTER will hold harmless PROFESSIONAL from all claims and damages arising out of improper use of PROFESSIONAL’s work.

SECTION VII: WATERMASTER LIABILITY

PROFESSIONAL understands that this Agreement is with WATERMASTER alone, and that none of the members of WATERMASTER are liable for any sums which may be payable hereunder, or for any debts of WATERMASTER.

SECTION VIII: CHANGES

WATERMASTER may, at its discretion and from time to time, revise, correct, or modify the work to be performed under an RFS. All such changes shall be made formally and in writing to PROFESSIONAL. PROFESSIONAL shall comply with such changes.
Should PROFESSIONAL determine that said changes will result in an increase or decrease in costs to PROFESSIONAL, these costs shall be evaluated by WATERMASTER and PROFESSIONAL for negotiation as to adjustment in the compensation due PROFESSIONAL, and written agreement as to said adjustment shall be reached between the parties prior to commencement of any work that will cause an increase or decrease in PROFESSIONAL’s costs. Any increased costs in excess of the Total Price incurred by PROFESSIONAL prior to execution of a written agreement covering said increased costs shall not be compensable.

SECTION IX: DUTIES OF WATERMASTER

WATERMASTER agrees to perform duties in connection with this Agreement and RFS issued under it as follows:

A. To assist PROFESSIONAL in obtaining any available information concerning location and details of facilities under control of WATERMASTER that may affect the work of an RFS, and to render reasonable assistance to PROFESSIONAL;

B. To examine within a reasonable time so as not to delay the work of PROFESSIONAL, all studies, reports, sketches, drawings, specifications, cost estimates, proposals and other documents presented by PROFESSIONAL to WATERMASTER for such purpose;

C. To give prompt written notice to PROFESSIONAL whenever WATERMASTER observes or otherwise becomes aware of any defect in the work of PROFESSIONAL;

SECTION X: DATA FURNISHED BY WATERMASTER

For the purpose of aiding PROFESSIONAL in the performance of its obligations under this Agreement and RFS issued under it, WATERMASTER shall furnish PROFESSIONAL all relevant data in its possession and shall render all reasonable assistance to PROFESSIONAL in connection with its performance hereunder. WATERMASTER is responsible for the reasonable correctness of data so furnished, but it shall likewise be the responsibility of PROFESSIONAL to apply reasonable caution in its use and interpretation of the data and to promptly advise WATERMASTER of any incorrectness or suspected incorrectness in the data furnished.
WATERMASTER shall provide to PROFESSIONAL in a timely manner all materials, decisions, and direction which are necessary to the progress of the work and which are basically the prerogative of WATERMASTER, but which PROFESSIONAL is not required to determine or provide under the terms of this Agreement.

SECTION XI: RESPONSIBILITIES OF PROFESSIONAL

PROFESSIONAL is employed to render a professional service only, and any payments made to him are compensation solely for such services as he may render and recommendations he may make in carrying out the work. PROFESSIONAL shall follow professional practices to make findings, opinions, factual presentations, and professional advice and recommendations.

PROFESSIONAL’s review or supervision of work prepared or performed by other individuals or firms employed directly by WATERMASTER shall not relieve those individuals or firms of complete responsibility for the adequacy of their work.

PROFESSIONAL shall be responsible for the professional quality, technical accuracy, timely completion, and the coordination of all designs, drawings, specifications, reports and other services furnished by PROFESSIONAL under this Agreement. PROFESSIONAL shall, without additional compensation, correct or revise any errors, omissions or other deficiencies in his designs, drawings, specifications, reports and other services.

PROFESSIONAL shall perform such professional services as may be necessary to accomplish the work required to be performed under this Agreement and in accordance with this Agreement.

Approval by WATERMASTER of drawings, designs, specifications, reports, and incidental engineering work or materials furnished hereunder shall not in any way relieve PROFESSIONAL of responsibility for the technical adequacy of his work. Neither WATERMASTER’s review, approval or acceptance of, nor payment for, any of the services rendered under this Agreement shall be construed to operate as a waiver of any rights under this Agreement or of any cause of action arising out of the performance of this Agreement.

PROFESSIONAL shall be and remain liable in accordance with applicable law for all damages to WATERMASTER caused by PROFESSIONAL’s negligent performance of any of the services furnished under this Agreement. The only exception in this regard will
be for errors, omissions or other deficiencies to the extent attributable to WATERMASTER, WATERMASTER-furnished data or any third party not under the control of PROFESSIONAL. PROFESSIONAL shall not be responsible for any time delays in the project caused by circumstances beyond PROFESSIONAL’s control.

SECTION XII: SUBCONTRACT

WATERMASTER has entered into this Agreement in order to receive the professional services of PROFESSIONAL. PROFESSIONAL will therefore not make an assignment to a third party of all or any portion of the services required of PROFESSIONAL under this Agreement and RFSs thereto without first obtaining the written consent of WATERMASTER. PROFESSIONAL may, however, make use of the part-time assistance of other experts possessing unique skills, the utilization of which will, in the opinion of PROFESSIONAL, enhance the quality of its service to WATERMASTER under this Agreement provided, however, that any such additional assistants, part-time or otherwise, shall be considered employees of PROFESSIONAL or of PROFESSIONAL’s subcontractor(s), and the responsibility for same shall rest with PROFESSIONAL.

SECTION XIII: INDEPENDENT PROFESSIONAL

PROFESSIONAL shall perform the services hereunder as an independent contractor, and nothing herein contained shall be construed to be inconsistent with this relationship or status. The employees of PROFESSIONAL shall not be deemed to be the employees of WATERMASTER, and WATERMASTER shall have no right to control the physical conduct of PROFESSIONAL’s employees.

SECTION XIV: USE OF DOCUMENTS

For all work performed under this Agreement and all RFSs thereto, PROFESSIONAL shall provide to WATERMASTER copies of all plans, drawings, specifications, studies, reports, analyses, calculations, and all other work products and supporting documentation developed in the course of performing the work authorized by these agreements. The costs for reproducing, assembling, and delivering said copies of these documents to WATERMASTER shall be considered to have been included in the price for performing each RFS, whether or not specifically stated therein. Unless stated otherwise in the RFS, one paper copy, and the electronic file on disc or on CD (e.g. in MS Word, MS Excel, etc.), of each document shall be provided by PROFESSIONAL to WATERMASTER. WATERMASTER shall have the right, and permission of PROFESSIONAL, to use any such document for any purpose which WATERMASTER
deems appropriate. Use of documents for other than their intended purpose shall be at
WATERMASTER's risk. WATERMASTER shall hold PROFESSIONAL harmless from all
claims and damages arising out of improper use of said documents.

SECTION XV: AMENDMENTS AND SCOPE OF AGREEMENT

WATERMASTER hereby reserves the right to amend the provisions of this
Agreement from time to time as may be in the best interest of WATERMASTER. Such
amendments, upon acceptance by PROFESSIONAL and by WATERMASTER, shall
become and be considered as part of this Agreement, and all provisions herein shall apply
to such amendments.

This Agreement constitutes the entire agreement between the parties relative to the
subject matters hereof, and no modifications thereof shall be effective unless and until
such modifications are evidenced by written amendments, signed by both parties, to this
Agreement. There are no understandings, agreements, conditions, representations,
warranties, or promises with respect to the subject matter of this Agreement which are not
actually contained in the Agreement, except those expressly contained in such written
amendments.

SECTION XVI: SUCCESSORS AND ASSIGNS

This Agreement and all amendments thereto shall be binding upon and inure to the
benefit of any successors and assigns of the respective parties hereto.

SECTION XVII: ATTORNEYS' FEES

If any legal action is necessary to enforce or interpret the terms or provisions of this
Agreement and all amendments thereto, and the respective rights and duties of the parties
hereunder, the prevailing party shall be entitled to reasonable attorneys' fees in addition to
any other relief to which he may be entitled.

SECTION XVIII: JURISDICTION

This Agreement shall be administered and interpreted under the laws of the State
of California. Jurisdiction of litigation arising from this Agreement shall be in this state. If
any part of this Agreement is found to be in conflict with applicable laws, such part shall be
inoperative, null and void insofar as it is in conflict with said laws, but the remainder of the
Agreement shall be in full force and effect.
SECTION XIX: INSURANCE

PROFESSIONAL shall procure and maintain for the duration of this Agreement insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by PROFESSIONAL, his agents, representatives, employees or subcontractors.

A. Minimum Scope and Limits of Insurance

PROFESSIONAL shall maintain the types of insurance with limits no less than those set forth below, and having no deductibles, except as noted.

The coverage shall be at least as broad as:
1. Insurance Services Office Commercial General Liability coverage (occurrence Form CG 0001).
2. Insurance Services Office Form No. CA 0001 covering Automobile Liability, Code 1 (any auto).
3. Workers Compensation insurance as required by the State of California and Employer’s Liability Insurance.
4. Errors and Omissions Liability insurance appropriate to the consultant’s profession. For architects and engineers this coverage shall be endorsed to include contractual liability.

Required coverage:
1. General Liability Insurance: Combined single limit of $1,000,000 per occurrence and $2,000,000 annual aggregate for bodily injury, personal injury, and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this project/location, or the general aggregate limit shall be twice the required occurrence limit.

2. Automobile Liability Insurance: $1,000,000 per accident for bodily injury and property damage.

3. Employer’s Liability Insurance: $1,000,000 per accident for bodily injury or disease. If PROFESSIONAL has no employees, this coverage is not required.
4. **Workers' Compensation Insurance:** As required by the State of California.

5. **Errors and Omissions Insurance:** PROFESSIONAL shall procure and maintain errors and omissions liability insurance appropriate to the type of professional services that PROFESSIONAL will be providing under this Agreement. The minimum coverage shall be $1,000,000 per claim and in the aggregate.

B. **Deductibles and Self-Insured Retentions**

Any deductibles or self-insured retentions must be declared to and approved by WATERMASTER before any work under this Agreement is performed.

C. **Other Insurance Provisions**

The general liability and automobile liability policies are to contain, or be endorsed to contain, the following provisions:

1. **WATERMASTER, its officers, officials, employees, and volunteers are to be covered as insureds as respects:** liability arising out of activities performed by or on behalf of PROFESSIONAL; products and completed operations of PROFESSIONAL; premises owned, occupied or used by PROFESSIONAL; or, automobiles owned, leased, hired or borrowed by PROFESSIONAL. The coverage shall contain no special limitations on the scope of protection afforded to WATERMASTER, its officers, officials and employees.

2. For any claims related to this project, PROFESSIONAL's insurance coverage shall be primary insurance as respects WATERMASTER, its officers, officials, employees, and volunteers. Any insurance or self-insurance maintained by WATERMASTER, its officers, officials, employees, or volunteers shall be excess of PROFESSIONAL's insurance and shall not contribute with it.

3. Any failure to comply with reporting or other provisions of the policies including breaches of warranties shall not affect coverage provided to WATERMASTER, its officers, officials and employees.

4. PROFESSIONAL's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the
insurer's liability.

5. Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, canceled by either party, reduced in coverage or in limits except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to WATERMASTER.

6. Coverage shall not extend to any indemnity coverage for the active negligence of the additional insured in any case where an agreement to indemnify the additional insured would be invalid under Subdivision (b) of Section 2782 of the Civil Code.

E. Acceptability of Insurers

Insurance is to be placed with insurers with a current A. M. Best's rating of no less than A:VII, unless otherwise acceptable to WATERMASTER.

F. Verification of Coverage

PROFESSIONAL shall furnish WATERMASTER with original certificates and amendatory endorsements effecting coverage required by this section. The endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. All endorsements are to be received and approved by WATERMASTER before work commences. If this is not possible due to time constraints prior to commencement of work, PROFESSIONAL may initially furnish Certificates of Insurance in lieu of endorsements, as long as the endorsements are provided within forty-five (45) days from the date of execution of this Agreement.

G. Subcontractors

PROFESSIONAL shall include all subcontractors as insureds under its policies or shall furnish separate evidence of coverage and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

SECTION XX: INDEMNIFICATION

PROFESSIONAL shall indemnify and hold harmless WATERMASTER and its officers, officials, employees and agents from and against all losses, claims, demands,
payments, suits, actions, recoveries, and judgments of every nature and description brought or recoverable against it or them by reason of any negligent act, negligent error, or negligent omission of PROFESSIONAL, his agents, or employees for work performed under this Master Agreement. The only exception in this regard will be for errors, omissions or other deficiencies to the extent attributable to WATERMASTER, WATERMASTER-furnished data or any third party not under the control of PROFESSIONAL.

SECTION XXI: WRITTEN NOTICE

Written notice shall be deemed to have been duly served if delivered in person or by mail to the individuals and at the addresses listed below:

A. WATERMASTER:  Technical Program Manager
        Seaside Basin Watermaster
        83 Via Encanto
        Monterey, CA 93940

B. PROFESSIONAL:  Martin Feeney
        1825 San Pascual St.
        Santa Barbara CA 93101

IN WITNESS WHEREOF, the parties hereto have executed this Agreement consisting of fifteen (15) pages and one (1) Attachment in duplicate on the date hereinabove written.
WATERMASTER

SEASIDE BASIN WATERMASTER

By __________________________
Robert S. Jaques
Technical Program Manager

PROFESSIONAL

MARTIN BLAIR FEENEY

By __________________________
Martin Feeney
SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: December 8, 2016 RFS NO. 2017-01
(To be filled in by WATERMASTER)

TO: Martin Feeney FROM: Robert Jaques
Martin Feeney WATERMASTER
PROFESSIONAL

Services Needed and Purpose:
Perform certain Tasks contained within the Watermaster’s Monitoring and Management Plan for 2017 (See detailed Scope of Work in Attachment 1).

Completion Date: The work of this RFS No. 2017-01 shall be completed in accordance with the schedule described in Attachment 1.

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

Total Price Authorized by this RFS: $25,685.56 (See Attachment 3 for a Breakdown of this Total Price. Cost is authorized only when evidenced by signature below.)

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

Authorized by: ___________________________ Date: __________.
WATERMASTER Technical Program Manager

Agreed to by: ___________________________ Date: __________.
PROFESSIONAL
ATTACHMENT 1

Detailed Scope of Work for RFS No. 2017-01

Background:
The Watermaster Board approved the Budget for the 2017 Management and Monitoring Program Work Plan (hereinafter referred to as the “2017 M&MP Work Plan”) at its meeting of October 5, 2017. The work and cost authorized by this RFS No. 2017-01 is slightly revised from the work and cost originally described under Task 1.2.b.3 of the 2017 M&MP Work Plan when it was approved by the Board. The revision consists of performing semi-annual, rather than annual, water quality sampling of well SBWM-2.

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

The first step listed in the Watermaster’s Seawater Intrusion Response Plan (SIRP) is to resample, as soon as possible, any well which is found to have water quality that may be indicative of seawater intrusion. Therefore, in accordance with the SIRP resampling of well SBWM-2, by having it analyzed in the January 2017 sampling event (or earlier if possible), has been included in the scope and cost of this RFS. The increase in cost for this revision is $1,000, and will be funded from the Contingency line item in the Watermaster’s approved M&MP Operations Budget for 2017.

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

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

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

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

Water Quality Analyses
The water quality constituents that will be measured in these analyses are: Specific Conductance (micromhos/cm), Bicarbonate (as HCO₃⁻), pH, Chloride, Sulfate, Nitrate Nitrogen (as NO₃⁻), Calcium, Sodium, Magnesium, Potassium, Iron, Manganese, Orthophosphate, Total Dissolved Solids, Boron, Bromide, Barium, Iodide, and Fluoride. The samples collected for analysis will be submitted to a State-certified analytical laboratory for analysis.

FEENEY RFS No. 2017-01 Page 2
Schedule
Well SBWM-3 will be sampled annually (nominally in July) for water quality. Wells SBWM-1, SBWM-2, and SBWM-4 will be sampled twice during the year (nominally in January and July) for water quality. This will constitute a total of 14 water quality samples taken during the year.

PROFESSIONAL will transmit the digital water level and water quality data to the WATERMASTER and to the Monterey Peninsula Water Management District (MPWMD) promptly after the data is acquired, so MPWMD can use that data in preparing its reports to the WATERMASTER. Digital induction data will be provided to MPWMD. Digital induction data will also be reduced and presented graphically and provided to HydroMetrics WRI for use by HydroMetrics WRI in preparing reports for WATERMASTER.
November 9, 2016

Seaside Basin Watermaster
PO Box 51302
Pacific Grove CA.
93950

Attention: Bob Jaques, PE

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

Dear Bob:

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

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

The components of this program are as follows:

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

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

Annual costs for the data collection program are estimated at $25,685.56 (Say $25,700) inclusive of outside services. A breakdown of costs is presented in the table below.
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<th>Service</th>
<th>Unit Cost</th>
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<th>Semi-Annual Cost</th>
<th># per annum</th>
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<td>E-file generation/transmittal</td>
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<tr>
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<td></td>
<td></td>
<td>$15575.56</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Lab Costs                            |           |        |                  |             |             |
| General Mineral Analysis plus Ba and I | $225.00   | 14     | $3150.00         | 1           | $3150.00    |

| Professional Services                |           |        |                  |             |             |
| Supervise Logging/Download Data Loggers | $150.00   | 14     | $2100.00         | 2           | $4200.00    |
| Process Induction Data               | $150.00   | 4      | $780.00          | 2           | $1560.00    |
| Transmit Water Level Data            | $150.00   | 2      | $390.00          | 2           | $780.00     |
| **Total**                            |           |        | $6960.00         |             |             |
| **Total**                            |           |        | **$25,685.56**   |             |             |

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

Sincerely,

[Signature]

Martin B. Feeney

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

FEENEY RFS No. 2017-01 Page 6
SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: December 8, 2016

RFS NO: 2015-01 Amendment No. 1
(To be filled in by WATERMASTER)

TO: Gus Yates
Todd Groundwater
PROFESSIONAL

FROM: Robert Jaques
WATERMASTER

Services Needed and Purpose:
In order to extend the time period over which PROFESSIONAL may provide consulting services to WATERMASTER, the Completion Date of RFS No. 2015-01 is revised by this Amendment No. 1. Neither the Scope of Work nor the Total Price of RFS No. 2015-01 is revised by this Amendment No. 1.

Completion Date: This Amendment No. 1 changes the Completion Date for RFS No. 2015-01 from December 31, 2015 to December 31, 2018.

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

Total Price: The Total Price for RFS No. 2015-01 is not changed as a result of this Amendment No. 1, and remains at the originally authorized Total Price of $6,000.00.

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

Authorized by: ___________________________________________ Date: ___________
WATERMASTER Technical Program Manager

Agreed to by: ___________________________________________ Date: ___________
PROFESSIONAL
December 7, 2016

VIA ELECTRONIC MAIL

Mayor Ralph Rubio
Chairman of the Board
Seaside Groundwater Basin Watermaster
PO Box 51502
Pacific Grove, CA 93950
watermasterseaside@sbcglobal.net

RE: Agreement for Legal Services

Dear Mayor Rubio:

Thank you for retaining Brownstein Hyatt Farber Schreck, LLP ("Brownstein"), to represent the Seaside Groundwater Basin Watermaster ("Watermaster") to prepare, file, and appear at a motion before the Monterey County Superior Court in the Seaside Basin Adjudication (California American Water v. City of Seaside, et al., Case No. M66343) (the "Motion"). The Motion would: (1) update the Court concerning recent water supply developments pertinent to the Seaside Basin, including progress on the Monterey Peninsula Water Supply Project ("MPWSP"); (2) request appropriate relief from the Operating Yield reductions to assist the community in meeting water supply demands until the MPWSP is online without harm to the Seaside Basin; and (3) update the court concerning the recent modeling results and findings concerning the Laguna Seca Subbasin and Watermaster's intended work plan to address long-term water reliability for the subbasin. Upon Watermaster's request, we may provide additional legal representation to Watermaster concerning follow-up actions and future court proceedings concerning any of the matters addressed in the Motion. In our representation of Watermaster regarding the Motion and any further related representation, we are representing Watermaster and not its member agencies. We will take direction from Mr. Evans and other employees of Watermaster regarding the Motion.

This letter and the enclosed Terms and Conditions constitute the Legal Services Agreement ("Agreement") between Brownstein and Watermaster. This Agreement will also apply to other services that we may provide you from time to time, at your request, unless we execute a separate agreement. When we refer to "you" in this Agreement, we are referring to you in your representative capacity for Watermaster.

We cannot predict with certainty the amount of fees and costs that may be incurred, but we will prepare budgets for particular tasks and discuss each budget with you. Our hourly rates are based upon the experience, reputation and ability of the professional performing the required service, and we will assign to your matter the personnel who, in our judgment, are best suited to represent you. My current hourly rate is $525; however my hourly rate will be discounted to $450 for Watermaster. I will be assisted by Jena Shoaf whose current hourly rate is $290. Unless you request otherwise, we will bill you for services rendered and disbursements and charges on a monthly basis. Subject to the Terms and Conditions, you agree to pay those statements upon receipt, and no later than the last day of the month in which you receive the statement. We are not requesting a retainer.
If you agree with the provisions of this letter and with the Standard Terms and Conditions, please sign the enclosed copy where indicated and return it to us. If you do not understand any portion of this letter, or the attached Standard Terms and Conditions, or if you have any questions, please call us at your earliest convenience. If you require advice about your decision to engage us, you should confer with independent counsel before signing this agreement. We cannot give you advice about that decision.

We look forward to a long and productive relationship with you, and thank you for the opportunity to represent you.

Sincerely,

Russell M. McGlothlin

RMM:mm

Enclosures: Standard Terms and Conditions
            Disclosure of Relationship, and Waiver of Potential Conflict of Interest

ACCEPTED AND AGREED TO:

SEASIDE GROUNDWATER BASIN WATERMASTER

By: Ralph Rubio, Chairman of the Board
    Seaside Groundwater Basin Watermaster

ACCEPTED AND AGREED TO:

BROWNSTEIN HYATT FARBER SCHRECK, LLP

By: Robert J. Saperstein
    Managing Shareholder, California
DATE: January 1, 2016

TO: Russ McGlothlin
Brownstein Hyatt Farber Schreck, LLP
1020 State Street
Santa Barbara, CA 93101-2711

FROM: Laura Dadiw
Brownstein Hyatt Farber Schreck, LLP
Watermaster
PO Box 51502
Pacific Grove, CA 93950

Services Needed and Purpose: Provide legal services to prepare and file a motion, and appear on March 17, 2017 at a status conference hearing with Judge Nichols of the Superior Court; assist as may be requested with filing the Watermaster Annual Report to Court by December 15, 2017; and provide miscellaneous legal consultation as may be needed by Watermaster.

Completion Date: All work under this RFS will be completed no later than December 31, 2017.

Method of Compensation: Time and Expense Payment Method. Hourly rates and costs for Other Direct Costs and Expenses are described in Attachment I.

Total Price Authorized by this RFS: $14,000.00 (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: Not Applicable to this RFS

Authorized by: _______________________________  Date: ________________
Ralph Rubio
WATERMASTER Chairman of the Board

Agreed to by: _______________________________  Date: ________________
PROFESSIONAL
Scope of Representation: The scope of our representation is set forth in the attached Letter. Our representation of you on any particular matter will end when we have completed our essential work on that matter.

Duties of the Parties: We agree to provide all legal services reasonably required to represent you, consistent with our ethical obligations. It is our intent to provide you with thorough, prompt and cost-efficient legal services, keep you informed of significant developments in the matter, and respond to your inquiries. You agree to fully cooperate with us, be open and truthful and provide us with all information pertaining to the matter, keep us informed of developments, pay our bills in a timely manner, and keep us advised of your address, telephone number and whereabouts. You also agree to appear at any proceeding we deem necessary and to cooperate fully with us on all matters related to the investigation, preparation and presentation of your matter.

Fees: We review all billing statements before they are issued to ensure that the amount charged is appropriate. The statement for fees is simply the product of the hours worked multiplied by the hourly rates for the attorneys and legal assistants who did the work. The current range of hourly rates for our professional services is:

- Partners: From $350 to $1025 per hour
- Of Counsel: From $300 to $1075 per hour
- Associates: From $212 to $400 per hour
- Land Use Planners: From $150 to $265 per hour
- Paralegals: From $150 to $265 per hour
- Legal Assistants: From $130 to $150 per hour

We adjust our rate structure at the beginning of each calendar year. You agree to pay all fees billed at the then-current rate.

Outside Contract Attorneys and Legal Assistants: You agree that we may utilize specialized contract attorneys and legal assistants as necessary. You agree to pay the reasonable hourly rate for these legal services.

In-House Costs and External Expenses: Fees such as computer-assisted legal research and third party vendor fees, including document copying, transcript production, overnight delivery service charges, travel, meals and hotel accommodations will be itemized and billed separately at cost.

Other in-house costs and expenses include, but are not limited to, secretarial overtime, extraordinary administrative, technical or accounting support; computer legal research; messenger and other delivery fees; mileage, and the cost of licensing and other installation of special computer programming to manage your case. These are directly billed to you at our cost.

External expenses are also charged at cost. These include, but are not limited to, the following. Notary fees, consultant costs, investigative costs, professional mediator, arbitrator and/or special master fees, travel costs, including parking, transportation, meals and hotels. External expenses will either be passed through to you for direct payment to the vendor or included on your statement. We may select experts, consultants, and investigators who in our judgment are necessary to aid in the preparation of your matter and will inform you of the persons selected and their charges. You authorize us to incur all reasonable costs and to hire such experts, consultants and investigators. We will not incur any major external expenses on your behalf without your prior approval.

Billing Period and Payments: We will bill you for services rendered and disbursements and charges on a monthly, or such other periodic basis as we may determine. If you require additional statements, you agree to request them at intervals of no less than 30 days and we agree to respond within 10 days.

You agree to inform us of any dispute you may have with respect to a statement within 10 days of the statement date. If you do not object, the statement will be deemed correct. If you do object, we will consider our right to the fees and costs set forth on that statement as "disputed." Absent a dispute, you agree to pay all statements upon receipt, and no later than the last day of the month in which you receive the statement. Even if you dispute a portion of a statement, you agree to pay the undisputed portion not later than the last day of the month in which you receive the statement. If payment is not timely received, we may assess a monthly delinquency charge of 1.25% (15% per year) of the amount not paid until paid in full. Payments will be applied to the longest outstanding charges in the following order: first, costs; then delinquency charges; and then fees.

Retention: If required, you agree to pay an advance fee retainer upon execution of this agreement and agree that we may, at our discretion, withdraw the undisputed amount of any statement, whether fees or costs, from any retainer you have on deposit. You agree to replenish the retainer monthly to maintain a credit toward fees. That means that, even though you have a retainer on account, you still must pay your statements as they become due. If we expect significant additional expenses, you agree to provide a further retainer within 15 days of our request.

Your retainer will be held on your behalf in our trust account without interest to you, because California law requires all interest earned on such funds to be forwarded to the California State Bar for its Legal Services Trust Fund Program. If you prefer, you may request that we hold your funds in a non-interest bearing account, or in an interest bearing account for your benefit. If you make such a request, you agree to pay administrative costs of a one-time $75 set-up charge and a $25 per month service charge. At the conclusion of our representation, we will return any unearned retainer to you.

As an additional retainer and as security for the payment of our fees, costs and expenses, you agree that we have a first priority lien on all claims and causes of action that are the subject of our representation under this Agreement and on all proceeds or property obtained or recovered, whether by agreement, settlement, mediation, arbitration award, court judgment, cost or fee award or otherwise resulting from our representation.

No Guarantee: Our comments about the potential outcome of your matter or any phase thereof are expressions of opinion only. We cannot guarantee the outcome or make any promises in that regard.
Discharge: Our goal is to maintain at all times a constructive and positive relationship with you, to the conclusion of this matter and in future matters. However, you have the right to discharge us as your lawyers at any time, and we have the right to withdraw from your representation at any time, consistent with our ethical obligations. If you discharge us or we elect to withdraw, you agree to immediately secure new counsel. If we are your attorneys of record in any proceeding, you agree to compensate fully in substituting such new counsel as your attorneys of record. At the time of discharge or withdrawal, you agree to immediately pay us for all services rendered to you and for all costs and expenses paid or incurred by us on your behalf.

Files: At the conclusion of our services, your files will be transferred to you upon request. You agree to pay the cost of accessing, copying and delivering the file to you. If you do not request the return of your files, within five (5) years from either the completion of our essential work on the matter or the termination of our relationship by discharge or withdrawal, we have the right, but not the obligation, to destroy any files created and maintained by us with respect to the matter.

Disputes: Any controversy or claim arising out of or relating to fees and/or costs incurred under this Agreement shall be resolved pursuant to Business and Professions Code section 2000 et seq. All other disputes arising out of or relating to this Agreement or the professional services rendered under this Agreement, shall be determined in accordance with the laws of the State of California. The arbitration shall be administered by JAMS pursuant to its Comprehensive Arbitration Rules and Procedures. A judgment on the Award may be entered in any court having jurisdiction. Each side shall bear its own costs and attorney fees in said arbitration.

Miscellaneous: Unless you instruct us to the contrary in writing, we will utilize facsimile, e-mail, cellular phone, FAX and similar communication methods, and we disclaim any liability for unauthorized third-party interception of communications. You agree that we may use your name and information generally available to the public in our marketing efforts.

Interpretation and Effective Date: This agreement is our entire and only agreement and is governed by California law. If any provision is found unenforceable, the remainder of the agreement will remain in effect. This agreement will not take effect until you sign and return the enclosed copy of the letter with these terms and conditions attached and until the agreement has been countersigned by the firm’s Managing Partner. This agreement will then be retroactive to the date services were first provided. If this agreement does not take effect, you will still be required to pay us the reasonable value of any services we have performed for you.
TO: Board of Directors

FROM: Robert S. Jaques, Technical Program Manager

DATE: December 7, 2016

SUBJECT: Consider Approving the Seawater Intrusion Analysis Report (SIAR) for WY 2016

RECOMMENDATIONS:
It is recommended that the Board approve the Seawater Intrusion Analysis Report for WY 2016.

BACKGROUND:
HydroMetrics has prepared the Seawater Intrusion Analysis Report (SIAR) for Water Year 2016. The Executive Summary from the WY 2016 SIAR is attached. The complete SIAR is lengthy, so rather than including it in this agenda packet it has been posted on the Watermaster’s website so Board members and members of the public wishing to review the entire document can do so.

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 16, 2016 meeting the TAC reviewed a Draft version of the 2016 SIAR and recommended some revisions to it before it was sent to the Board for approval. The Final version that is posted on the Watermaster’s website, and the Executive Summary that is attached, reflect these revisions.

DISCUSSION
Previous SIARs have stated 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 previous SIARs stated that neither the Piper nor the Stiff Diagrams nor any of the other parameters indicated the presence of seawater intrusion in the existing monitoring wells.

This year for the first time HydroMetrics has reported that the potential onset of seawater intrusion has been detected in the July 2016 water quality samples taken from two of the coastal monitoring wells. However, there is also data taken at that same time that indicates seawater intrusion is not occurring. Because of the conflicting data no conclusions with regard to the initial onset of seawater intrusion can be drawn at this time.

The 2016 SIAR contains a number of recommendations pertaining to this finding, as well as other recommendations pertaining to other basin management issues. These are contained in the attachment to this agenda item. The first of the recommendations, to perform verification water quality sampling and analysis for Sentinel Well SBWM-2, Sentinel Well SBWM-4, and the Ord Terrace Shallow Monitoring Well, has been added to the scope of work and costs for the Martin Feeney and MPWMD RFSs for 2017 which are contained in Agenda Item No. VI. D.
From discussions with Mr. Feeney, who will be the contractor that will obtain and analyze the verification samples from the two Sentinel Wells, the verification sampling of those wells will be performed on December 14, 2016 and induction logging will also be performed on that date. From discussions with Mr. Lear of MPWMD, who will be the contractor that will obtain and analyze the verification sample from the Ord Terrace Wells, the verification sampling of that well will also be performed in December. Expedited laboratory processing of the water quality samples will be requested in the hope that the data will be available for review by the TAC at its January 11, 2017 meeting. A report from the TAC to the Board could then be made on this issue at the Board’s first meeting after that date.

Recommendation number 6 in the 2016 SIAR, to install a datalogger in Monitoring Well PCA-West Shallow, has been included in the scope of RFS No. 2017-01 for MPWMD.

As in last year’s SIAR, recommendation number 7 in the 2016 SIAR is to continue close monitoring of the declining water levels in the Laguna Seca Subarea, although not for seawater intrusion detection purposes but for general basin management purposes. This work is included in the scope of RFS No. 2017-01 for MPWMD.

**ATTACHMENTS:**

Executive Summary of the WY 2016 Seawater Intrusion Analysis Report. The complete SIAR is posted on the Watermaster’s website at [http://www.seasidebasinwatermaster.org/](http://www.seasidebasinwatermaster.org/), for review by those 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, coastal groundwater levels well below sea level, and ongoing seawater intrusion in the nearby Salinas Valley all suggest that seawater intrusion could occur in the Seaside Groundwater Basin.

Up until this water year, all of the monitoring data from the existing monitoring and production wells in the Seaside Basin have indicated that seawater intrusion has not occurred. This year for the first time there is conflicting data from two of the Watermaster’s sentinel wells. Some of the data are suggestive of the initial onset of seawater intrusion, while other data indicate seawater intrusion is not occurring.

The data which are suggestive of the initial onset of seawater intrusion is described in the bulleted items below. It is important to note that all of these data are based on the same two discrete groundwater quality samples taken from wells SBWM-2 (1,470 ft depth) and SBWM-4 (900 ft depth).

- Water samples for sentinel wells SBWM-2 (1,470 ft) and SBWM-4 (900 ft) experienced a shift in water chemistry that plots closer to seawater on Piper diagrams than historical samples.
- Stiff diagrams for sentinel wells SBWM-2 (1,470 ft) and SBWM-4 (900 ft) show a chloride spike somewhat similar to Stiff diagrams of seawater intruded wells in the Salinas Valley.
- July 2016 chloride concentrations in sentinel wells SBWM-2 (1,470 ft) and SBWM-4 (900 ft) are at 178 and 284 mg/L respectively. This is an increase of 112 mg/L for sentinel well SBWM-2 (1,470 ft) over the past water year and 26 mg/L for sentinel well SBWM-4 (900 ft) from February 2016 to July 2016.
- The sodium/chloride molar ratios of both SBWM-2 (1,470 ft) and SBWM-4 (900 ft) have dropped, but are not below 0.86.
- Groundwater elevations in sentinel wells SBWM-2 (1,470 ft) and SBWM-4 (900 ft) are at historical lows.
- Maps of chloride concentrations for the deep aquifer show chlorides increasing towards the coast.
Data which are indicative of seawater intrusion not occurring is described in the bulleted items below:

- Maps of chloride concentrations for the shallow aquifer do not show chlorides increasing towards the coast.
- Induction logging data at the coastal sentinel wells does not show changes indicative of seawater intrusion.
- Other than the sentinel wells SBWM-2 (1,470 ft) and SBWM-4 (900 ft) samples, no other monitoring or production wells in the basin have water quality that is indicative of seawater intrusion.

Because of the conflicting data no conclusions with regard to the initial onset of seawater intrusion can be drawn at this time. Verification resampling, as contained in the Recommendations section of this report, will be necessary in order to reach a conclusion.

The following groundwater level and production data suggest that conditions in the basin continue to provide a potential for seawater intrusion:

- Northern Coastal subarea groundwater levels in the deep aquifer remain below sea level (Figure 29 and Figure 31). The 4th quarter deep aquifer groundwater levels along the coast are in some cases greater than 30 feet below sea level and are at historical lows.
- Groundwater levels remain below protective elevations in all deep target monitoring wells (MSC deep, PCA-W, and sentinel well SBWM-3). Two of the three shallow wells’ groundwater levels are above protective elevations: PCA-W shallow and CDM-MW4. The MSC shallow well remains below protective elevations.
- Groundwater production in the Seaside Groundwater Basin for Water Year 2016 was 2,913.5 acre-feet, which is 848.5 acre-feet less than Water Year 2015. This amount is less than the Court-mandated operating yield of 3,920 acre-feet per year that is required between October 1, 2014 and September 30, 2017, and the current safe yield of 3,000 acre-feet. Although pumping in Water Year 2016 was below the current safe yield, many groundwater elevations in deep monitoring wells continue to decline. It seems likely that the long-term effects of pumping over the safe yield and the dry climatic conditions of the past five years have a greater impact on groundwater levels than one year of reduced pumping.
Due to its long distance from the coast, seawater intrusion is not an issue of concern in the Laguna Seca subarea. However, groundwater levels in the Laguna Seca subarea are continuing to decline at the same rate since 2001 despite triennial reductions in allowable pumping. The shallow groundwater levels are declining at a rate of approximately 0.6 feet per year, while the deep groundwater levels in the eastern portion of the subarea are declining at a much faster rate of between two and three feet per year. The cause of this decline is due in part to the safe yield of the subarea being incorrect and in part due to the influence of wells to the east of the groundwater basin. The rate of decline in groundwater levels in the western portion of the subarea is between one and two feet per year.

Based on the findings of this report, the following recommendations should be implemented to continue to monitor and track potential seawater intrusion, and to verify recent results in sentinel wells SBWM-2 and SBWM-4.


Analysis of two samples, one from sentinel well SBWM-2 (1,470 ft) and one from SBWM-4 (900 ft), provided data that are in conflict with other types of data from these wells and from other wells in the vicinity in terms of drawing any conclusions regarding seawater intrusion. Additionally, increasing chlorides have been observed at the Ord Terrace Shallow well, although other geochemical evidence suggests this may not be incipient seawater intrusion. In accordance with the Watermaster’s Seawater Intrusion Response Plan (SIARP), these wells should be resampled immediately to determine if the data from these two samples are valid, or whether the July 2016 samples experienced analytical errors or were not representative samples. Re-sampling should include the full suite of major cations and anions, which will allow all of the indicators used in this SIAR to be verified. Laboratory analyses should be conducted with an expedited turnaround time.

2. Potentially Analyze Additional Water Quality Constituents for Seawater Intrusion

Depending on the results of the verification sampling, the Watermaster may wish to begin to regularly analyze additional water quality constituents: iodide, bromide, boron, and barium in wells that indicate incipient seawater intrusion.

3. Increase Water Quality Sampling and Analysis for Sentinel Well SBWM-2
Currently sentinel wells SBWM-1 and SBWM-4 are sampled twice a year, in the 2\textsuperscript{nd} and 4\textsuperscript{th} quarters. If verification sampling shows the sentinel well SBWM-2 has elevated chloride concentrations, at the very least this well should be sampled twice a year, in the 2\textsuperscript{nd} and 4\textsuperscript{th} quarters.

4. Potentially Increase Water Quality Sampling and Analysis for Sentinel Well SBWM-2 and SBWM-4

Depending on the results of verification sampling, the Watermaster may wish to increase the sampling frequency of SBWM-2 and SBWM-4 to more frequently than twice a year. If indeed the chloride concentrations at these wells are increasing rapidly, monthly sampling may be needed.

5. Potentially Implement Follow up Actions Outlined in the Seawater Intrusion Response Plan

If verification sampling indicates that incipient seawater intrusion is occurring along the coast, additional actions that are outlined in the SIRP will need to be implemented. These actions need not be implemented if verification sampling does not indicate incipient seawater intrusion.

6. Install a Data Logger in the monitoring well, PCA West Shallow

The PCA West Shallow well is a coastal monitoring well that is an important part of the monitoring system for the basin and is one of the wells used to monitor protective groundwater elevations. Because of limited access to this well site, groundwater levels were not measured this water year. A dedicated logger, like that installed in PCA West Deep, at this well will continuously record groundwater levels much more reliably.

7. Continue to Document Declining Groundwater Levels in the Laguna Seca Subarea

Although this recommendation is not one that is related to seawater intrusion because of the inland location of the wells, it is important for the sustainability of the groundwater basin. The state of groundwater levels in monitoring wells in the Laguna Seca subarea needs to be reported at least annually to the Watermaster. The current rate of decline, particularly in the eastern portion of the subarea, is not acceptable. For the sustainability of the subarea, the Watermaster should consider options in the next water year to address the situation.
TO: Board of Directors
FROM: Laura Dadiw, Administrative Officer
DATE: December 7, 2016
SUBJECT: Watermaster Declaration of NO Replenishment Water Available for Water Year 2017

PURPOSE:
To notify all Seaside Groundwater Basin producers that the Watermaster has declared for Water Year 2017 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 2017.

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 2017. As ordered by the Court at the January 12, 2007 hearing, a fourth full triennial 10% reduction in Operating Yield will be in effect for the entire Water Year 2017. (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 2017, 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 2017 and limits on production.
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 2017 Artificial Replenishment Water is not available to offset Operating Yield Over-Production and producers are limited in production to the following quantities of water:

<table>
<thead>
<tr>
<th>Coastal Subarea Alternative Producers:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Seaside (Golf)</td>
<td>540.00 acre-feet</td>
</tr>
<tr>
<td>SNG</td>
<td>149.00 acre-feet</td>
</tr>
<tr>
<td>Cypress (Calabrese)</td>
<td>6.00 acre-feet</td>
</tr>
<tr>
<td>Mission Memorial (Alderwood)</td>
<td>31.00 acre-feet</td>
</tr>
<tr>
<td>Sand City</td>
<td>9.00 acre-feet</td>
</tr>
</tbody>
</table>
**Laguna Seca Subarea Alternative Producers:**

<table>
<thead>
<tr>
<th>Producer</th>
<th>Water Rights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nicklaus Club Monterey</td>
<td>251.00 acre-feet</td>
</tr>
<tr>
<td>Bishop</td>
<td>320.00 acre-feet</td>
</tr>
<tr>
<td>York School</td>
<td>32.00 acre-feet</td>
</tr>
<tr>
<td>Laguna Seca County Park</td>
<td>41.00 acre-feet</td>
</tr>
</tbody>
</table>

**Coastal Subarea Standard Producers:**

<table>
<thead>
<tr>
<th>Producer</th>
<th>Water Rights</th>
</tr>
</thead>
<tbody>
<tr>
<td>California American Water</td>
<td>2,685.39 acre-feet*</td>
</tr>
<tr>
<td>Seaside (Municipal)</td>
<td>184.96 acre-feet**</td>
</tr>
<tr>
<td>Granite Rock</td>
<td>252.77 acre-feet***</td>
</tr>
<tr>
<td>D.B.O. Development 30</td>
<td>486.38 acre-feet****</td>
</tr>
<tr>
<td>Cypress (Calabrese)</td>
<td>12.72 acre-feet*****</td>
</tr>
</tbody>
</table>

**Laguna Seca Subarea Standard Producers:**

<table>
<thead>
<tr>
<th>Producer</th>
<th>Water Rights</th>
</tr>
</thead>
<tbody>
<tr>
<td>California American Water</td>
<td>48.30 acre-feet</td>
</tr>
</tbody>
</table>

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* Total includes 430.99 acre-feet of “not free” carryover credit from the previous water year, plus the 2017 base allocation of 2,254.40 acre-feet plus. California American Water has a negative balance of 19.85 acre-feet of stored water credit at WY-end 2016 from Basin extractions exceeding injections since WY 2010 under the CAW/MPWMD ASR Program, formalized through a Storage Agreement in 2012.

** Total is the 2017 base allocation of 184.96 acre-feet.

*** Total includes 151.43 acre-feet of “free” carryover and 83.89 acre-feet of “not-free” carryover credit from previous water years, plus the 2017 base allocation of 17.45 acre-feet.

**** Total includes 293.06 acre-feet of “free” carryover and 161.66 acre-feet of “not-free” carryover credit from previous water years, plus the 2017 base allocation of 31.66 acre-feet.

***** Cypress (Calabrese) converted 8 acre-feet of APA to SPA in January 2015; total includes 7.26 acre-feet of “free” carryover and 1.22 acre-feet of “not-free” carryover credit from water year 2016, plus the 2017 base allocation of 4.24 acre-feet.
TO: Board of Directors

FROM: Robert S. Jaques, Technical Program Manager

DATE: December 7, 2016

SUBJECT: Discussion/Consider Approving Watermaster Annual Report for WY 2016 due to be filed with the Court on or before December 15, 2016

RECOMMENDATIONS:
It is recommended that the Board approve the Watermaster Annual Report for WY 2016.

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
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 16, 2016 meeting. Attached is the body of the Draft 2016 Annual Report, which reflects the TAC’s input on the Preliminary Draft Annual Report. The complete Draft version is posted on the Watermaster’s website at http://www.seasidebasinwatermaster.org/.

Of particular note to the Board is that this year for the first time the Seawater Intrusion Analysis Report (SIAR) reports that there is conflicting data regarding the onset of seawater intrusion. Some of the data indicates that seawater intrusion may be starting to occur close to the coastline, while other data indicates that seawater intrusion is not occurring.
No conclusions regarding seawater intrusion can be drawn at this point. It will take verification resampling to provide data to draw a conclusion on this. After the verification resampling has been done and the data from that is available, a presentation will be made to the Board to provide findings and recommendations on this matter.

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 not later than the December 15, 2016 submittal deadline established by 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:
SEASIDE BASIN WATERMASTER

DRAFT

ANNUAL REPORT – 2016

December 9, 2016
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SEASIDE BASIN WATERMASTER

ANNUAL REPORT – 2016

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 2016 Annual Report is being filed on or before December 15, 2016, 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 2016 (WY 2016) 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 2016.” For the purposes of this Annual Report Water Year 2016 is defined as beginning October 1, 2015 and ending on September 30, 2016.

B. Groundwater Storage
Monterey Peninsula Water Management District (MPWMD), in cooperation with California American Water (CAW), operates the Seaside Basin Aquifer Storage and Recovery (ASR) program. Under the ASR program, CAW diverts water from its Carmel River sources during periods of flow in excess of NOAA-Fisheries’ bypass flow requirements, and transports the water 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. During WY 2016, 699 AF was diverted and stored in the Seaside Basin under the ASR program. Rainfall in the area was about 105% of normal, but due to the rainfall distribution pattern throughout the season, Carmel River flow was only 67% of normal. WY 2016 was classified as “Below Normal” by MPWMD.

Based upon production reported for WY 2016, the following Standard Producers are entitled to Free and Not-Free Carryover Credits to 2017 in accordance with the Decision, Section III. H. 5:

<table>
<thead>
<tr>
<th>Producer</th>
<th>Free Carryover Credit (Acre-feet)</th>
<th>Not-Free Carryover Credit (Acre-feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Granite Rock</td>
<td>151.43</td>
<td>83.89</td>
</tr>
<tr>
<td>DBO Development</td>
<td>293.06</td>
<td>161.66</td>
</tr>
<tr>
<td>Calabrese (Cypress)</td>
<td>7.26</td>
<td>1.22</td>
</tr>
<tr>
<td>CAW</td>
<td>0.00</td>
<td>430.99</td>
</tr>
<tr>
<td>City of Seaside Muni</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>
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 2016 the Watermaster indirectly engaged in In-lieu Replenishment of the Basin. A minimal amount (0.06 acre-feet) of non-native water was made available to the Basin during Water Year 2016 under the 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. Currently, the City of Seaside is working to reconcile with Marina Coast Water District the balance remaining of the 2,500 acre-feet to be delivered under the program, estimated by the City of Seaside to be 89.94 acre-feet. Once reconciled, Watermaster will make any necessary adjustments to the acre-feet credited to the City of Seaside by the Watermaster under the terms of the Memorandum of Understanding and Agreement referred to above.

As reported in the 2014 Annual Report, this in-lieu replenishment program was extended by the Board in 2013 and made retroactive to January 1, 2013. 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. The extended MOU 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 was contained in Attachment 13 of the 2013 Annual Report.

D. Leases or Sales of Production Allocation and Administrative Actions

The City of Seaside transferred/assigned seven and one half acre-feet (7.50 AF) of its Standard Production Allocation within the Seaside Groundwater Basin to California American Water Company for the Water Year ending 2015 applied to Water Year 2016. The purpose of this transfer of water allocation was to offset the transfer of 7.50 AF of water from California American Water Company to the City due to the city’s well failure that occurred within the Seaside Groundwater Basin between June 25, 2015 and July 20, 2015. Attachment 11 contains a copy of the notice from the City of Seaside of the requested transfer/assignment of water allocation via letter correspondence dated March 29, 2016.

During WY 2016 the Watermaster Board did not make any revisions to its Rules and Regulations.
During WY 2016 the Watermaster Board was comprised of the following Members and Alternates:

<table>
<thead>
<tr>
<th>MEMBER</th>
<th>ALTERNATE</th>
<th>REPRESENTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director Paul Bruno</td>
<td>N/A</td>
<td>Coastal Subarea Landowner</td>
</tr>
<tr>
<td>Eric Sabolsice</td>
<td>Roger Hulbert</td>
<td>California American Water</td>
</tr>
<tr>
<td>Director Bob Costa</td>
<td>N/A</td>
<td>Laguna Seca Subarea Landowner</td>
</tr>
<tr>
<td>Director Bob Brower</td>
<td>Jeanne Byrne</td>
<td>MPWMD</td>
</tr>
<tr>
<td>Mayor Dave Pendergrass</td>
<td>Todd Boden</td>
<td>City of Sand City</td>
</tr>
<tr>
<td>Supervisor Dave Potter</td>
<td>Jane Parker</td>
<td>Monterey County (MCWRA)</td>
</tr>
<tr>
<td>Mayor Jerry Edelen</td>
<td>Kristin Clark</td>
<td>City of Del Rey Oaks</td>
</tr>
<tr>
<td>Vice Mayor Libby Downey</td>
<td>Mayor Clyde Roberson</td>
<td>City of Monterey</td>
</tr>
<tr>
<td>Mayor Ralph Rubio</td>
<td>Dennis Alexander</td>
<td>City of Seaside</td>
</tr>
</tbody>
</table>

In January of 2016 the Watermaster received notice from the Court that the Honorable Leslie C. Nichols had been assigned to replace the Honorable Roger D. Randall who had previously been assigned to the Seaside Groundwater Basin Adjudication case. At its May 4, 2016 meeting the Board approved having Mr. Russ McGlothlin of the law firm of Brownstein, Hyatt, Farber, and Schreck file a Motion with the Court requesting a status conference to provide background information on the Adjudication Decision (for the benefit of the new Judge that had been assigned this Case) and to discuss several issues. These issues were (1) Updating the Court concerning recent regional water supply developments pertinent to the Seaside Basin, (2) Potentially at some future date requesting a stay of the 2018 Operating Yield reduction, and (3) Updating the Court concerning the modeling results and findings concerning the Laguna Seca Subarea (LSSA) and the Watermaster’s intended work plan to address long-term water reliability for the subbasin. The motion was granted and a Status Conference with the Court was held on June 17, 2016. The transcript of the Status Conference Hearing is available for viewing on the Watermaster web site at http://www.seasidebasinwatermaster.org/ under Postings and Records on the June 16, 2016 date line in the Court Docs column.

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 operated in WY 2016 and accordingly 699 acre-feet of water was injected into the Basin as Stored Water Credits and 609 acre-feet was extracted.
During WY 2016 0.06 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.

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 2017 at its Board meeting of December 7, 2016. A copy of this declaration is contained in Attachment 2. In WY 2016 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 2016.

Total pumping for WY 2016 did not exceed the Operating Yield (OY) or the Natural Safe Yield (NSY) of the Basin.

The City of Seaside reported annual pumping quantities that exceeded their Standard Production NSY allocation by 37.87 acre-feet, and reported annual pumping quantities that exceeded Operating Yield allocation by 17.70 acre-feet. The City of Seaside did not exceed its Alternative Production NSY. The Watermaster will assess 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 2016 amounted to $80,000 including a $25,000 dedicated reserve. Costs include the Chief Executive Officer and Administrative Officer salaries, and legal counsel fees. The “Fiscal Year 2016 Administrative Fund Report” is provided as Attachment 3.

H. Replenishment Assessments
At its meeting of October 5, 2016 the Watermaster Board determined that, based on updated cost information for the water supply projects used in calculating it, a new Replenishment Assessment unit cost of $2,872 per acre-foot should be adopted for use beginning in WY 2017. This replaces the unit cost of $2,702 which had been used since WY 2014. 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 2016, the City of Seaside’s Replenishment Assessment for its Municipal System for Overproduction in excess of its share of the Natural Safe Yield is $102,330.46, and for overproduction in excess of its share of the Operating Yield is $11,959.38. The City of Seaside did not exceed its Alternative Production Allocation for its Golf Course System production. A summary of the calculations for Replenishment Assessments for WY 2016 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 budgets for Fiscal Year 2017 are contained in Attachment 6. The Fiscal Year 2017 Monitoring & Management Plan Operations Budget contained in Attachment 6 reflects December 2016 budget revisions associated with carrying out the recommendations in the 2016 SIAR for verification resampling and associated work. The 2016 SIAR was received after the budget was originally adopted in October 2016. The recommendations in the 2016 SIAR are discussed below in Section J.

The Watermaster Board is provided monthly financial status reports on all financial activities for each month with year-to-date totals.

J. 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 2016 from the enhanced network of monitoring wells. The low-flow sampling method implemented in 2009 continued to be used in 2016 and is expected to continue to be used in the future to improve the efficiency of sample collection. As discussed in the 2013 Annual Report, the Watermaster reduced the frequency of water quality sampling at SBWM-MW5 to once every 3 years.

No modifications to the quarterly data collection frequency from the enhanced network of monitoring wells were made during WY 2016. One modification is being made for WY 2017. This is to revert back to sampling the Sand City Public Works well on an annual basis rather than a quarterly basis. The rationale for making this modification is described below under Task I.2.b.3 in the section titled “Management and Monitoring Program Work Plan,” and is discussed in detail in Attachment 10.

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 2016, and will be continued in WY 2017, 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 the report in Attachment 7.

Management and Monitoring Program Work Plan
The Management and Monitoring Program (M&MP) 2017 Work Plan contained in Attachment 9 includes the types of basin management activities conducted in prior years as well as revisions approved by the Board at its October 5, 2016 meeting. The major changes from the 2017 M&MP Work Plan are:

The major changes from the 2016 M&MP Work Plan are:

Task M.I.e (Peer Review of Documents and Reports): This Task has not been used in recent years. Its budget amount was reduced, but not eliminated, in case some work of this type is necessary in 2017.

Task M.I.g (Prepare Documents for SGMA Reporting): This Task is new this year and is a result of the implementation by the State of the Sustainable Groundwater Management Act.

Task I.2.a.2 (Verify Accuracy of Production Well Meters): This task was completed in 2015 and no further work on this Task is expected to be required in 2017.

Task I.2.b.3 (Collect Quarterly Water Quality Samples): In 2012 a concern was identified through monitoring data that there was something different about the City of Sand City’s Public Works Well that was causing it to exhibit different water quality characteristics than other wells in the same general vicinity within the Seaside Basin. As a result the Watermaster had MPWMD perform an analysis to try to determine the cause of these differences, and also increased the water quality sampling frequency of this well from annually to quarterly.

Due to a lack of historical data, MPWMD was not able to reach a definitive conclusion as to the cause of the differences. However, several years of quarterly data on this well have now been acquired. The well does not appear to be showing any indications of seawater intrusion, and its water quality is generally staying within a reasonable range of variation. This is confirmed in the 2015 Seawater Intrusion Analysis Report. Task I.2.b.3 reflects reverting the monitoring frequency for the Sand City Public Works Well back to annually beginning in 2017.

In WY 2017 the BLM monitoring well site (SBWM-5) is to again be sampled. It was previously determined that this site would be sampled every 3 years, and WY 2014 was the last year it was sampled it. The cost for this sampling work is included under Task I.2.b.3.

MPWMD recommended that the Watermaster directly contract with the contractor that performs induction logging to obtain some of the water quality data under this Task. This recommendation was made due to a reduction in available staff at MPWMD to manage that work, and because it would result in a cost savings to the Watermaster. The Watermaster contacted the induction logging contractor and his cost for performing this
work under a contract directly with the Watermaster is included in this Task. This Task also reflects a reduced cost by MPWMD due to not having to manage the contract for that portion of the work.

Comprehensive review and evaluation of the water quality and water level monitoring data that is collected and compiled by MPWMD is now being performed by HydroMetrics and is reported upon in the annual Seawater Intrusion Analysis Reports which they prepare for the Watermaster. To minimize duplication of effort and expense associated with analysis and interpretation of the collected data by MPWMD, MPWMD will no longer prepare Q1/Q2 and Q3/Q4 reports on water quality and water levels, and will instead have all of that data summarized and reported on in a single annual report that will be provided to the Watermaster by MPWMD in November. During the course of the year, MPWMD will promptly notify the Watermaster if its review of the quarterly data identifies any issues of concern.

In its annual report MPWMD will include summaries of all of the data and a brief cover letter report describing any missing data or data collection irregularities that are encountered during the reporting period. These data summaries will be in a format suitable for posting to the Watermaster’s website for the public’s access, similar to the previous water quality and water level reports.

The 2016 SIAR recommended some verification resampling of certain wells, and also the installation of a datalogger in one of the wells.

The net result in these changes is a small increase in the budget for this Task in 2017.

**Task 1.2.b.6 (Reports):** MPWMD reported they no longer have the staff to prepare one of the reports that was originally listed under this Task in the 2016 M&MP Budget. That report was described as follows: “One report containing a compilation of the available water level records for monitor wells that are part of the Seaside Basin Monitoring & Management Plan (M&MP) in a format to allow assessment of the long-term trends in water levels in each of the wells. This report will contain a table showing pertinent well construction data, existing average annual water level changes, and projected future water level changes. This will be accompanied by a brief description and recommendations regarding those monitor wells for which future monitoring complications may arise due to falling water levels.”

In view of this situation the Watermaster decided not perform this work at all. This would have been a “nice to do” evaluation to provide a “heads-up” on the possible need to purchase new higher head sampling pumps if some more wells had their levels drop too far. However, $2,000 has already been included in this Task to purchase one new sample pump if necessary. If more are found to be needed during the year, funding the purchase of additional pumps can be done from the Contingency line-item that is set up in the M&MP Operations Budget. Handling this matter in this way will avoid the expense of having one of the Watermaster’s other consultants perform this evaluation.

This results in a decrease in the budget for this Task in 2017.
Task 1.2.b.7 (CASMEM Data Submitted): Submitting groundwater data to the State’s California Statewide Groundwater Elevation Monitoring (CASMEM) Program is a new Task this year and is a result of the implementation by the State of the Sustainable Groundwater Management Act.

Task 1.3.a.1 (Update the Existing Model Groundwater Model of the Seaside Basin): Updating of the Watermaster’s groundwater model of the Seaside Basin is not expected to be necessary in 2017.

Task 1.4.e (Annual Report- Seawater Intrusion Analysis): In 2016 the amount budgeted for this Task was $28,678. However, when the cost for HydroMetrics to prepare the 2016 Seawater Intrusion Analysis Report (SIAR) was being negotiated they found that they always had considerable unspent budget left over in prior years. Consequently, their 2016 RFS was reduced accordingly and the actual amount spent on this Task in 2016 was considerably lower than the budgeted amount.

For 2017 the budget for this Task was increased slightly to reflect an increase in the hourly rate for one of HydroMetrics’ staff members who works on this assignment. However, the budget was also decreased to reflect (1) fewer hours needed by MPWMD to interface with HydroMetrics in the preparation of the SIAR, and (2) needing fewer hard copies of the SIAR than previously budgeted. Thus, the overall result is a reduction in the budget for this Task compared to 2016.

Contingency: The Contingency line items in the 2017 and 2018 M&MP Operations Budgets reflect a reduction from 20% to approximately 10% as recommended by the Budget and Finance Committee.

The 2017 Budget is $57,657 lower than the 2016 Budget, for the reasons described above.

No new monitoring wells are planned for installation in 2017. Consequently no monies are budgeted in the M&MP Capital Budget for 2017.

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 2017.

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:

11
- 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 2017, 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 2017.

Seawater Intrusion Analysis Report
The Watermaster retained HydroMetrics LLC to prepare the WY 2016 Seawater Intrusion Analysis Report (SIAR) required by the M&MP. The WY 2016 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. Previous SIARs have stated 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, up until this water year, all of the monitoring data from the existing monitoring and production wells in the Seaside Basin have indicated that seawater intrusion has not occurred. This year for the first time there is conflicting data from two of the Watermaster’s sentinel wells. Some of the data are suggestive of the initial onset of seawater intrusion, while other data indicate seawater intrusion is not occurring.
Because of the conflicting data no conclusions with regard to the initial onset of seawater intrusion can be drawn at this time. Verification resampling, as contained in the Recommendations section of the SIAR, will be necessary in order to reach a conclusion.

The SIAR is lengthy, but the full Executive Summary Section from it is provided in Attachment 8. A complete copy of the document is posted for viewing and downloading from the Watermaster’s website at: http://www.seasidebasinwatermaster.org/. All recommendations contained in the SIAR are being or will be carried out and are included in the budgeted activities contained in Attachment 6 and described in Attachment 9.

The 2016 SIAR contains recommendations pertaining to the conflicting seawater intrusion data in some of the coastal monitoring wells, as well as other recommendations pertaining to other basin management issues. The first of the recommendations, to perform verification water quality sampling and analysis for Sentinel Well SBWM-2, Sentinel Well SBWM-4, and the Ord Terrace Shallow Monitoring Well, have been included in the scopes of work and costs for the contractors who will be performing work for the Watermaster (under Task 1.2.b.3 in Attachment 9). It is anticipated that the verification sampling of those wells will be performed in December 2016. After the data from the verification sampling has been received the Watermaster will determine what additional steps, if any, should be taken.

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.

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.

Updating and Evaluating the Accuracy of the Groundwater Model
Evaluating the accuracy of the Groundwater Model was performed in 2015 and is reported on in the 2015 Annual Report. That evaluation concluded that the model is a reasonable representation of the Seaside Basin groundwater flow system, and that it should be used for estimating the operational safe yield of the basin and subareas, and for simulating the effects of possible management measures. Therefore, updating of the model was not necessary in 2016.

Modeling of the Laguna Seca Subarea
As reported in the 2015 Annual Report, in response to questions and concerns raised about the steady decline in water levels in the Laguna Seca Subarea (LSSA) in 2014 the Watermaster Board performed modeling of the LSSA relating to the natural safe yield and operating yield of the LSSA. Although there appeared to be no indication of any immediate substantial adverse physical impact to the Basin or the LSSA, the initial results of the modeling work indicated the natural safe yield and operating yield of the
LSSA may be significantly less than that set forth in the Decision. A copy of the draft Technical Memorandum describing the modeling work and initial results was contained in Attachment 11 of the 2014 Annual Report. Because of the significance of these initial results, in December 2014 the Watermaster had a technical peer review of the modeling work performed in order to ensure that the modeling and final results were as accurate as possible. The Peer Review Technical Memorandum is contained in Attachment 11 of the 2015 Annual Report. The peer review concluded that the Groundwater Model is satisfactory for estimating the operational safe yield of the basin and its subareas, and for simulating the effects of groundwater management measures that might be considered in the future.

As a result of the peer review and recommendations from its Technical Advisory Committee, the Watermaster Board made several determinations which are discussed in the 2015 Annual Report. One of those was that it would be desirable to more accurately determine the location of the southeastern boundary of the Seaside Groundwater Basin. In mid-2015 the Watermaster authorized having HydroMetrics use the Groundwater Model to try to establish the location of the flow divide between the LSSA and the El Toro Subarea. This is discussed in the section below.

*Estimation of Flow Divide Locations Near the Easterly Adjudication Boundary of the Laguna Seca Subarea*

Subsequent to receiving a presentation on the Laguna Seca modeling Peer Review, the Watermaster Board concluded it would be beneficial to perform modeling in order to determine the locations of the hydrogeologic flow divides between the Laguna Seca Subarea (LSSA) and the areas to the east of the Adjudication Decision boundary of the Seaside Basin. This work was started in 2015 and finished in 2016.

The principle conclusions from that work were:

- Under anticipated future pumping conditions, groundwater elevations in the LSSA will continue to decline. The eastern portion of the LSSA will suffer the greatest and most persistent declines. Pumping groundwater elevations are predicted to fall below the top of the well screens prior to 2041 in 3 of the wells in this part of the LSSA.
- The locations of the groundwater flow divides will remain relatively stable under currently anticipated pumping conditions out to 2041, which is the end of the modeling period.
- Groundwater flow through the eastern portion of the LSSA is both westwards towards the Southern Coastal Subarea and northward into the Northern Inland Subarea. The Laguna Seca Anticline is a structural feature that causes groundwater flow to split into these directions.
- Under a hypothetical scenario, if pumping within the LSSA were to be discontinued the groundwater flow divide located in the eastern portion of the LSSA would migrate westward. This movement would be caused by relative increases in groundwater elevations in the LSSA due to this reduction in pumping, compared to east of the LSSA where pumping was assumed not to be reduced. Under this hypothetical scenario the groundwater flow direction in the easterly portion of the LSSA would shift towards the
northeast and east by 2041 of the scenario, resulting in groundwater flowing out of the LSSA and into the Corral de Tierra subbasin.

- In all of the modeled scenarios, groundwater in the Santa Margarita Aquifer in the most northeastern portion of the LSSA flows north and northeast out of the LSSA and into the Northern Inland Subarea and Corral de Tierra subbasin. This northeastern portion of the LSSA is more heavily influenced by pumping outside of the LSSA than by pumping within the subarea, and this part of the LSSA is hydrogeologically connected to the Corral de Tierra subbasin, as well as the Northern Inland Subarea.

- Cal Am’s Toro-1 and Toro-2 production wells draw water directly from the LSSA in the Paso Robles Aquifer, and thus have a direct influence on groundwater levels within the LSSA. The impact of these two wells was not compared to the cumulative impact of the other production wells located further east. Those more easterly wells indirectly affect the LSSA by withdrawing groundwater which would otherwise flow into, and thus recharge, the LSSA. This results in lowering groundwater levels in the LSSA.

- The net flow of groundwater across the eastern LSSA boundary for the aggregation of the Paso Robles and Santa Margarita aquifers is currently from the Corral de Tierra subbasin into the LSSA. However, the model predicts that under anticipated pumping conditions there will be a net flow of groundwater out of the LSSA into the Corral de Tierra subbasin by around 2030. Under a hypothetical scenario, if pumping within the LSSA were to have been discontinued in 2009 (the start of the modeling period), flow would have begun to go out of the LSSA and into the Corral de Tierra subbasin much earlier (by around 2012).

- The groundwater model results are based upon an incomplete understanding of the hydrogeologic conditions in the Corral de Tierra subbasin, and it would be beneficial to improve the geologic and hydrogeologic understanding of this area. A typical hydrogeological study to improve hydrogeologic understanding would involve first examining existing well data and studies, followed by, if necessary, field work to drill new wells and determine aquifer properties to provide data where hydrogeological data does not exist.

A copy of the Technical Memorandum describing this work is contained in Attachment 12.

Coordination of Watermaster’s Seaside Groundwater Model with Salinas River Basin Model

As reported in the 2015 Annual Report, in May 2015 the Monterey County Resource Management Agency convened a Technical Advisory Committee (TAC) to develop a new Salinas River Basin model, and asked the Watermaster to join their TAC for this work. The County asked for information regarding the Watermaster’s model of the Seaside Basin to ensure that the Salinas River Basin model coordinates properly with the Watermaster’s model, and the Watermaster provided its model to the County.

In late 2015 because of problems encountered with its original consultant on this work (Brown and Caldwell) the County switched to having the work performed by the United States Geological Survey (USGS), representatives of which had already been participating in the TAC meetings and were intimately familiar with issues involving the
Salinas River Basin. This change in consultants resulted in some delay in the work, but work resumed in early 2016, and during 2016 there were several meetings of the County’s TAC.

At the time of preparation of this 2016 Annual Report the status of the new Salinas River Basin model, termed the Salinas Valley Integrated Hydraulic Model (SVIHM), was as follows:
- Model construction was ongoing throughout most of the year and continued into late 2016.
- Calibration was performed in October and November.
- Model analysis and integration of the reservoir operations module was expected to occur in December.
- Agricultural stakeholder meetings were held and more meetings are planned to get additional input and data.
- The County will be running the Watermaster’s model for the Seaside Basin portion of the SVIHM model area. The Seaside Basin will not be included in the SVIHM. Rather, the SVIHM will use the Watermaster model’s findings to interface with the new SVIHM, so it will not be necessary to “remodel” the adjudicated Seaside Basin area that has already been modeled by the Watermaster. The objective is to have the SVIHM and the Watermaster’s model match as closely as possible along the boundary between the two models.
- There will be ongoing meetings of the TAC to discuss progress on the development of the model.

Sustainable Groundwater Management Act
As reported in the 2015 Annual Report the Watermaster Board determined that the Watermaster should monitor the development of the Salinas Valley Groundwater Basin Sustainability Agency and the State Department of Water Resources’ (DWR) development of regulations pertaining to requesting boundary revisions, with the intent to collaborate with these entities as appropriate.

At the State Level
In late 2016 DWR released the final 2016 modifications to California’s groundwater basin boundaries. Of the 54 requests for changes to basin boundaries, DWR approved 39, denied 12, and three were deemed incomplete. Most of the modifications were made to basins in the Central Valley and included refinements reflecting waterways, county lines and geologic information. The boundary modification request submitted by the Monterey Peninsula Water Management District (MPWMD) to remove some areas near Monterey from the Salinas Valley Groundwater Basin, and to recognize the boundaries of the Adjudicated Seaside Basin, was approved. These modifications are reflected in the basin boundary map that is now posted on the DWR website.

DWR will include the new basin boundaries in its interim update of Bulletin 118, which is due out by January 1, 2017. Another basin boundary modification request period may be held in 2018 based on demand from local agencies and/or GSAs. Other important upcoming dates on the SGMA timeline include:
• December 31, 2016 – DWR will post a report on Water Available for Replenishment on its website.
• January 1, 2017 – DWR will post Best Management Practices on its website.
• June 30, 2017 – Date by which local agencies in high- and medium-priority basins must form Groundwater Sustainability Agencies (GSAs) that cover the entire basin in order to avoid potential intervention by the State Water Resources Control Board.

At the Monterey County level:
Meetings of Monterey County’s Collaborative Work Group (CWG) and Stakeholders Groups began in March of 2016. Several Stakeholder Group meetings were held in 2016, and in 2016 the CWG met on a generally semi-monthly basis. Watermaster staff attended the May 19, 2016 meeting of the CWG to become familiar with the makeup of the group and the types of issues the group was discussing. Most of the group’s focus at that point in time was on building consensus on how to form a GSA, how its governing body should be made up, voting issues, and other very preliminary and general topics. Although more meetings of the CWG have been held since then, it does not appear that the group will start getting into issues of direct interest or concern to the Watermaster for some months to come. Watermaster staff continues monitoring the progress of the group and provides regular ongoing updates to the Watermaster TAC and Board. At an appropriate point in time Watermaster staff will resume attending the CWG meetings to provide input on issues of concern to the Watermaster.

It appears that by the June 2017 DWR deadline for the establishment of GSAs, Monterey County is hopeful of establishing one or more GSAs for the portions of the Salinas Valley Groundwater Basin that do not lie within the Adjudicated Seaside Basin. However, on September 15, 2016 Marina Coast Water District (MCWD) filed a Notification with DWR that it wished to serve as the GSA for the portion of the Salinas Valley Groundwater Basin that lies within their service area, and which does not lie within the Adjudicated Seaside Basin. If by December 28, 2016 no other entity applies to be the GSA for that same portion of the Salinas Valley Basin, DWR will approve MCWD’s Notification and MCWD will become the exclusive GSA for that portion of the basin. As of the date of preparation of this 2016 Annual Report Monterey County had not indicated whether it, too, would file a notification to become the GSA for these same areas, in which case DWR would apparently work with those two entities to make a determination as to which entity should be the GSA.

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 5, 2016 the Board adopted the FY 2017 budgets contained in Attachment 6, which support carrying out all elements of the “Seaside Groundwater Basin Management and Monitoring Program Anticipated 2017 Work Plan.”
That Work Plan describes the M&MP activities that will be conducted during Fiscal Year 2017. 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.

In March of 2017 the Watermaster anticipates holding another status conference with the Court to provide an update on certain of the Watermaster’s activities.
TO: Board of Directors

FROM: Robert S. Jaques, Technical Program Manager

DATE: December 7, 2016

SUBJECT: Discuss Marina Coast Water District's (MCWD's) Notification to the Department of Water Resources (DWR) to become a Groundwater Sustainability Agency (GSA) under the Sustainable Groundwater Management Act.

RECOMMENDATIONS:
There are no recommendations for this item. It is presented for Board discussion and possible action and/or direction to staff.

BACKGROUND:
Under the “Informational Reports” section of its October 5, 2016 meeting agenda the Board briefly discussed the topic of Marina Coast Water District's (MCWD's) Notification to the Department of Water Resources (DWR) to become a Groundwater Sustainability Agency (GSA) under the Sustainable Groundwater Management Act. The Board indicated its desire to agendize this topic for discussion and possible action at today’s meeting.

DISCUSSION:
The TAC discussed this matter at its September 14, 2016 meeting and had the General Manager of MCWD in attendance to answer questions. The TAC found the MCWD proposed action to pose no problems for the Watermaster. Refer to the minutes of the September 14, 2016 TAC meeting for that discussion.

At the direction of the Board the Technical Program Manager researched the DWR procedure for selecting GSAs, and provided this information to Board members via email on October 6, 2016:

At your October 5, 2016 there was a brief discussion under Agenda Item X.I.e, pertaining to Marina Coast Water District's (MCWD's) Notification to the Department of Water Resources (DWR) to become a Groundwater Sustainability Agency (GSA) under the Sustainable Groundwater Management Act. I indicated it was my expectation that the Department of Water Resources would accept comments on that Notification before making its determination on it. I have since been informed by DWR that there actually is no “comment period” for Notifications. Rather, if, within 90 days after a Notification to become a GSA is filed, no other entity applies to be the GSA for the same basin (or portion thereof) then DWR approves the Notification and the filing entity becomes the exclusive GSA for that basin (or portion thereof).

It appears that there only two other entities that might logically apply to become the GSA for the two portions of the Salinas Valley Groundwater Basin for which MCWD is seeking to become the GSA (the area north of, and the area northeast of, the adjudicated Seaside Basin). Those other entities are the Monterey Peninsula Water Management District (MPWMD) and Monterey County.
MPWMD has formally notified DWR that it is opting out of being the GSA for either of those areas. Thus far Monterey County has not filed an application to become the GSA of either of those areas, but has not notified DWR that it is opting out. I inquired as to the County’s intentions in this regard. The County responded to say they have this matter under consideration but have not at this point determined what, if any, action they will take.

So in summary, while the Watermaster Board can certainly agendize this topic for discussion at its next meeting, there is no opportunity to submit comments to DWR on MCWD’s Notification. It appears that at most the Watermaster could ask the County to submit a GSA Notification to DWR for either or both of these same two areas, and that would apparently lead DWR to hold off on designating the GSAs until the conflict between the two notifying entities is resolved.

In any event there is no immediate urgency in meeting to discuss this topic, since the 90-day period before DWR will act on MCWD’s Notification will not run out until December 28, 2016. Therefore, this topic can be placed on the Board’s agenda at either its November or its December meetings.

ATTACHMENTS:
Letter from Marina Coast Water District regarding formation of GSAs.
September 21, 2016

Seaside Groundwater Basin Watermaster
Chair Ralph Rubio
P.O. Box 51502
Pacific Grove, CA 93950

Re: Groundwater Sustainability Agency

Dear Chair Rubio;

After many months of research, study and discussion, the Marina Coast Water District (MCWD) Board of Directors on September 6, 2016 conducted a public hearing on whether to form one or two Exclusive Groundwater Sustainability Agencies (GSAs) for the Seaside Area and Corral de Tierra Subbasins within our service area. At that hearing, the Board voted unanimously to proceed with the formation of a GSA for each of the aforementioned areas. The Board did not form a third GSA for its service area within the 180-400 Foot Aquifer Subbasin, which has been designated by the State as a Critically Overdrafted Subbasin, but reserves the right to do so if necessary to protect MCWD’s groundwater rights. Attached are the exhibit maps for the proposed MCWD GSA areas that were submitted to the Department of Water Resources.

I think it is important that you, as a regional leader and stakeholder, understand MCWD’s motivations to pursue this path to avoid any misunderstanding.

The 2014 State Groundwater Management Act defines “basin” as subbasin or basin and the Department of Water Resources’ staff have further explained that in multi-subbasin groundwater basins, SGMA GSA and Groundwater Sustainability Plan (GS Plan) requirements apply to each subbasin and not to the larger basin as a whole. It’s fundamental to the implementation of SGMA that each subbasin be viewed as the individual building block for effective sustainable groundwater management. Under SGMA, each subbasin is required to have one or more GSAs and a GS Plan or coordinated GS Plans. While it’s still early in this process and the eventual outcomes are unknown at this time, I can assure you that MCWD will approach the development of GS Plans for the respective GSA areas in a collaborative fashion with other GSAs serving the Salinas Valley Groundwater Basin (SVGB).

MCWD has a unique profile of customers. Our approximately 33,000 customers are almost exclusively residential users with a diverse socio-economic demographic profile. Formation of GSAs within the MCWD service areas ensures that our ratepayers have a voice in the management of their only water source. In a recent survey of our ratepayers, we learned of their strong desire for MCWD to focus on regional collaboration to secure future water supplies and to keep rates affordable. We view formation of GSAs very much in keeping with the desires of the ratepayers to whom we are ultimately accountable.
MCWD has proven its commitment to collaboratively identify regional solutions to secure future water supplies for the Monterey Region. Examples include the recent completion of the Urban Water Management Plan; water facility master planning; implementing the Regional Urban Water Augmentation Plan (RUWAP); securing 1,427 acre-feet per year of advanced treated water (Pure Water Monterey) for the Ord Community; entering into an agreement with MRWPCA to design, finance, construct, own and operate the Pure Water Monterey transmission pipeline; entering into a three-party agreement with FORA and MRWPCA to identify 973 acre-feet of water to satisfy the vision established via the Fort Ord Base Reuse Plan. Implementation of SGMA will require that the GS Plan be consistent and complimentary with these efforts. Establishing GSAs as MCWD has proposed will also allow us the flexibility to pursue the most cost effective solutions.

For nearly 60 years, MCWD has effectively and responsibly managed its water supply and defended its rights while collaborating with organizations and leaders such as yourself. We have given the formation of GSAs a great deal of study and thought and do not take this policy decision lightly. If you have any questions or require any additional information, I am happy to meet at a mutually convenient time.

Sincerely,
MARINA COAST WATER DISTRICT

Keith Van Der Maaten,
General Manager

Attachments:

Attachment 1: “Exhibit 5: MCWD GSA Map- Seaside Area Subbasin”
Attachment 2: “Exhibit 3: MCWD GSA Map-Corral De Tierra Subbasin”
Attachment 2

Exhibit 3: MCWD GSA Map - Corral de Tierra Subbasin

- Marina Coast Water District service area
- Proposed MCWD GSA Area - Corral de Tierra Subbasin
- Adjudicated Seaside Groundwater Basin
- Bulletin 118 Groundwater Basin boundary

Map Date: September 2016

1 inch = 2 miles
### Annual Milestones

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<td>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.</td>
<td>27-Mar-06</td>
<td>30-Sep-07</td>
<td>APA to SPA election amended to in-perpetuity 12/12/2009</td>
<td>Cypress converted 8 of its 14 AF APA to SPA 1/21/15</td>
<td>75% of the Operating Yield of 5,600 decreased 10% Jan 1, 2009; and 100% of 5,600 acre feet decreased 10/1/09</td>
<td>100% of the Operating Yield of 5,040 decreased another 10% of 5,600 on Oct 1, 2011, again on October 1, 2014</td>
<td>Revised calculation method adopted 30-Nov</td>
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<td>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.</td>
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<td>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.</td>
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<td>Water level monitoring - monthly data collection from all members for inclusion in the consolidated database.</td>
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### Summary Project Schedule

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### Watermaster Board Regular Meeting Schedule 2016

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<tbody>
<tr>
<td>Complete or deferred =</td>
</tr>
<tr>
<td>Yet to be completed =</td>
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<tr>
<td>Imminent Critical Deadline =</td>
</tr>
</tbody>
</table>

### Status Conference and Report to Court

<table>
<thead>
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<th>June 17, 2016</th>
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<tbody>
<tr>
<td>Complete or deferred =</td>
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<tr>
<td>Yet to be completed =</td>
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<tr>
<td>Imminent Critical Deadline =</td>
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</tbody>
</table>
The meeting was convened at 1:34 p.m. after a quorum had been established.

1. Public Comments
There were no public comments.

2. Administrative Matters:
   A. Approve Minutes from the August 10, 2016 Meeting
On a motion by Mr. Lear, seconded by Mr. Franklin, the minutes from this meeting were unanimously approved as presented.

   B. Election of New Vice Chairperson
Mr. Jaques summarized the agenda packet materials for this item. Mr. Lear said he would be willing to serve as Vice Chair. Mr. Franklin nominated Mr. Lear to fill the position of Vice Chair and Mr. Sabolsice seconded that nomination. Mr. Sabolsice asked if there were any other nominations. Hearing no other nominations Mr. Sabolsice closed the nomination process. On a unanimous vote the TAC elected Mr. Lear to serve as Vice Chair.

   C. Report on MRWPCA’s Public Hearing for its Title 22 Engineering Report for the Pure Water Monterey Groundwater Replenishment Project
Mr. Jaques summarized the agenda packet materials for this item.
The question was asked about what the next steps will be in this process. Mr. Jaques said it was his understanding that the State Department of Drinking Water would review the comments and MRWPCA’s responses to them, and determine if the Final version of the Title 22 Engineering Report was acceptable. If it is acceptable, DDW would approve the Title 22 Engineering Report. Thereafter, the RWQCB would prepare a permit for the Project, incorporating any requirements proposed by DDW.

Ms. Stanin (who is serving as a consultant to MRWPCA on the Pure Water Monterey Project) responded that comments were received up until the comment deadline of September 2, 2016, and that no comments after that date would be considered. MRWPCA is in the process of preparing responses to comments, in a prioritized sequence, responding to the more critical comments first. Responses will be posted to the Pure Water Monterey Project’s website. Mr. Jaques asked if commenters would be notified by MRWPCA when the response to their comments had been posted. Ms. Stanin said she would see that the Watermaster and the City of Seaside were notified when the responses to their comments had been posted.

Mr. Riedl asked about the land use restrictions described in the Title 22 Engineering Report, and what area was included in those restrictions. Mr. Jaques responded that Title 22 requires that a zone of controlled well construction (control zone) be delineated around the Project injection wells based on the Response Retention Time travel time. The RRT is specified in the Title 22 Engineering Report. Ms. Stanin went on to describe the Buffer Zone that is also required around the ASR wells by Title 22.

D. Sustainable Groundwater Management Act (SGMA) Update
Mr. Jaques summarized the agenda packet materials for this item. There were no questions or discussion of the item.

3. Discussion of Marina Coast Water District’s Plans to Form a Groundwater Sustainability Agency
Mr. Jaques summarized the agenda packet materials for this item, and Mr. Van Der Maaten elaborated on Mr. Jaques comments.

Mr. Sabolsice asked Mr. Van Der Maaten if MCWD’s proposed GAS boundary included any of California Water Service’s service area. Mr. Van Der Maaten responded that the proposed boundary is only within MCWD’s service area. He added that MCWD will continue to participate in the County’s Collaborative Work Group that is working on developing the GSA for the other portions of the Salinas Valley Basin. He went on to say that MCWD plans to submit its GSA request to DWR this week, and that DWR has 90 days to respond to the request. If there are no objections, it is expected that DWR would then approve the request.

Mr. Sabolsice asked Mr. Jaques how coordination between the Watermaster and the GSA(s) of the subbasins adjoining the Adjudicated Seaside Basin boundary would be accomplished. Mr. Jaques responded that DWR does not lay out any requirements or guidelines on that matter, but he said he envisioned the Watermaster and the GSA(s) would meet to discuss issues of mutual interest and/or concern and try to come to agreement on the actions that these parties could take to address those issues. In any event SGMA does require that the GSAs develop Groundwater Sustainability Plans that will ensure that the subbasins that are covered by those GSAs are managed in a sustainable manner.

4. Revise Sampling Frequency for Sand City Public Works Well
Mr. Jaques summarized the agenda packet materials for this item.

Mr. Lear asked Mr. Jaques how the Court would be notified of the revised sampling frequency. Mr. Jaques responded that the topic would be included in the Watermaster’s 2016 Annual Report.

Mr. Riedl asked how the conclusion was drawn regarding seawater intrusion in the Public Works Well. Mr. Lear provided an explanation, since he had been involved in preparing MPWMD’s report on this topic. He explained that unlike most other wells in this part of the Seaside Basin, the Public Works Well is perforated in a shallow dune formation that contains brackish water. The brackish water has shown variations in water quality that are different from the variations in seawater itself, thus indicating that the variations are not due to seawater intrusion.

On a motion by Mr. Sabolsice, seconded by Mr. Lear, the proposal to reduce the water quality monitoring frequency for the Public Works Well from quarterly to annually was unanimously approved. Mr. Lear added that MPWMD takes monthly conductivity readings at this well when it is there to get water level measurements, and is thereby monitoring the salinity of the well on a regular basis.

5. Approve Work Plan for FY 2017 Management and Monitoring Program (M&MP) and FY 2017 and 2018 M&MP Operations and Capital Budgets
Mr. Jaques summarized the agenda packet materials for this item.

Mr. Riedl asked if the Watermaster’s Budget and Finance Committee would be considering these documents at its September 16 meeting and Mr. Jaques said yes.

On a motion by Mr. Riedl, seconded by Mr. Sabolsice, the Work Plan for the FY 2017 Management and Monitoring Program (M&MP) and the FY 2017 and 2018 M&MP Operations and Capital Budgets were unanimously approved.

6. Schedule
Mr. Jaques highlighted that there will not be a need for the TAC to meet in October, and that the next TAC meeting would be in November, probably on November 16 which is the 3rd, not the 2nd, Wednesday in November. However, an email will be sent out in early November confirming the meeting date.

7. Other Business
There was no other business to discuss.

8. Set Next Meeting Date
There will be no TAC meeting in October. The next regular meeting date will be in November, tentatively set for November 16. However, the date will be confirmed via email to TAC members in early November. The meeting will be held on a Wednesday at 1:30 p.m. at the MRWPCA Board Room.

The meeting adjourned at 2:16 p.m.
The meeting was convened at 1:36 p.m. after a quorum had been established.

1. Public Comments
There were no public comments.

2. Administrative Matters:
   A. Approve Minutes from the September 14, 2016 Meeting
   On a motion by Mr. Lear, seconded by Mr. Franklin, the minutes from this meeting were unanimously approved as presented.

   B. Update on MRWPCA’s Title 22 Engineering Report for the Pure Water Monterey Groundwater Replenishment Project
   Mr. Jaques summarized the agenda packet materials for this item. Mr. Riedl asked how long it would take water that is injected into the vadose zone wells to reach the Santa Margarita aquifer. Mr. Jaques responded that it was his understanding that because of the aquacludes separating the Paso Robles aquifer from the Santa Margarita aquifer that little if any of the water injected into the vadose zone wells would get into the Santa Margarita aquifer.

   C. Sustainable Groundwater Management Act (SGMA) Update
   Mr. Jaques summarized the agenda packet materials for this item. There were no questions or discussion of the item.
D. Progress Update on Salinas River Groundwater Basin Investigation Model TAC
Mr. Jaques summarized the agenda packet materials for this item. There were no questions or
discussion of the item.

3. Approve PSA for Martin Feeney and Initial RFSs for MPWMD, HydroMetrics, and Martin
Feeney for 2017
Mr. Jaques summarized the agenda packet materials for this item.

Mr. Sabolsice asked why Mr. Feeney was being proposed for performing the induction logging and
water quality sampling from the Sentinel Wells. Mr. Jaques and Mr. Lear responded that MWPMD had
suggested it would be more cost-effective for the Watermaster to contract directly with Mr. Feeney
rather than having him contract with MPWMD. Also, MPWMD no longer has the staff resources to
manage the contract with Mr. Feeney. There is a cost saving to the Watermaster by contracting directly
with Mr. Feeney and the cost of that work was deleted from the contract with MPWMD.

On a motion by Mr. Lear, seconded by Mr. Bodem, these contracts were unanimously approved as
presented.

4. Discuss and Provide Input on the Draft 2016 Seawater Intrusion Analysis Report (SIAR)
Mr. Jaques introduced this item, and Ms. King made a Power Point presentation on it. Copies of the
PowerPoint slides are attached.

In her presentation Ms. King noted:
- Some of the near-coastal monitoring wells showed increases in chloride levels.
- Well SBWM-2 also had a significant drop in the Na:Cl molar ratio.
- Verification resampling is recommended in accordance with the Seawater Intrusion Response
  Plan.
- Both the Ord Terrace wells (shallow and deep) are actually in the deep (Santa Margarita) aquifer.
- Wells SBWM-2 and 4 Piper diagrams are starting to show movement toward seawater quality.
- Wells SBWM-2 and 4 Stiff diagrams are showing a change toward Stiff diagrams of known
  seawater intruded Salinas Basin wells.
- The second quarter SBWM-4 Piper diagram also showed a change in shape from its previous
  ones.
- The induction logging does not show any indication of seawater intrusion, so it may be that the
  water quality samples were not representative or there was an error in the lab analysis.
- Shallow groundwater elevations are relatively stable, but the deep groundwater elevations are
  continuing to drop as they have for many years.
- Wells SBWM-2 and 4 have the lowest groundwater elevations they have ever had in prior years.
- The Laguna Seca groundwater level rate of decline has slowed a little, but the levels are still
  falling.
- In the coastal area groundwater levels in the deep aquifer (Santa Margarita) dropped more this
  year than in prior years, even though production pumping was considerably less than in prior
  years.
- Wells SBWM-2 and 4 are showing some indications of seawater intrusion in the deeper aquifer,
  but the induction logs do not show this. In the shallow aquifer there are no such indications.
- Mr. Feeney may be able to resample these wells in mid-December.
- Whether or not to undertake Recommendations 2 through 5 in the SIAR will depend on the
  results of the verification resampling.
Mr. Hulbert asked some questions about the water quality data and the Piper and Stiff diagrams and Ms. King responded to them.

Mr. Hulbert said the first order of business is to resample.

Mr. Lear said that dataloggers cost about $600 apiece. He recommended getting two dataloggers, one to install and one to keep on hand in case one fails.

Mr. Sabolsice said this could be a serious finding. Submitting the report to the Board without knowing the results of the verification resampling would leave the Board uncertain about what to do.

There was discussion about the sampling methodology and some alternative protocols that could be used. Mr. Franklin said using a different methodology introduces the potential for data inconsistency with historical data. Ms. King concurred.

Ms. King said it would be desirable to expedite the lab analyses of the verification samples.

Mr. Hulbert led a further discussion of what should be reported to the Board. Mr. Franklin said he felt the reported findings should be moved forward to the Board, but also that efforts should be taken with regard to sampling procedures, chain of custody, quality assurance/quality control, duplicate samples, etc. to ensure there is no chance of lab error.

Mr. Sabolsice noted that the induction logs are not showing seawater intrusion which raises the question of how useful/valid the induction logging data is. He went on to ask if the resampling and the lab analysis of the samples could be done any sooner. Mr. Jaques and Mr. Lear responded they did not believe so. However, Mr. Lear said it is possible to pay extra to have the lab work expedited.

Mr. Lear wondered if Mr. Feeney could find a different contractor to get the water quality sampling done sooner. Mr. Jaques asked Mr. Lear if he could resample the Ord Terrace well sooner. Mr. Lear and Ms. King said they did not consider that well to be an indicator of seawater intrusion.

Mr. Franklin said he concurred with doing the resampling as quickly as possible.

Mr. Sabolsice said he would like to get the lab reports on the July 2016 well sampling for review. Mr. Lear said he would try to obtain them and would provide them to Cal Am if he is able to obtain them.

Mr. Lear provided a brief description with regard to the suite of constituents that are sampled.

Ms. King will talk with Mr. Feeney about what might be the cause of the induction logs and the water quality samples not showing the same findings.

Mr. Hulbert recommended moving forward with the verification resampling.

Mr. Sabolsice said he was concerned that the SIAR gives the impression that seawater intrusion is already occurring. He recommended that the conclusions in the SIAR be revised to emphasize that there is no conclusion that seawater is occurring at this point in time, rather some of the parameters that are measured indicate seawater intrusion might be starting to be observed, while other measured parameters indicate that seawater intrusion is not occurring.
Mr. Riedl asked Mr. Lear if the Ord Terrace well could be improved to avoid the potential for contamination from surface water leaking in. Mr. Lear said that MPWMD is working on getting the monitoring wells upgraded as necessary to prevent this from happening.

A motion by Mr. Franklin, seconded by Mr. Lear, to forward the SIAR to the Board with recommendations for follow-up verification resampling, and with editing to clarify that there is conflicting data at this point which prevents drawing any conclusions regarding the possible onset of seawater intrusion, passed unanimously.

Mr. Jaques asked Ms. King if she would please get him a draft copy of the PowerPoint slides that Mr. Williams will be using for his SIAR presentation to the Board, so these can be sent to the TAC for their review before the Board meeting.

5. Discuss and Provide Input on the Preliminary Draft Watermaster 2016 Annual Report
Mr. Jaques briefly summarized the agenda packet materials for this item and invited questions/comments from the TAC regarding the content of the Draft Report.

Mr. Hulbert said he had reviewed the wording on page 93 with regard to the SIAR and that he felt it made clear that the data at this point only indicates the potential for seawater intrusion, but it is not conclusive that seawater intrusion is occurring. He also questioned whether there was an error in the next-to-last bullet on page 95 of the agenda packet regarding the 2012 date. Mr. Jaques said he would discuss that with Ms. King and see if any correction or clarification needs to be made.

On a motion by Mr. Lear, seconded by Mr. Bodem, the Preliminary Draft 2016 Annual Report was unanimously approved as presented, with a possible revision to be made on page 95 as noted above.

6. Set Next Meeting Date
Mr. Jaques explained that there was no TAC business that needed to be conducted in December, and therefore no December TAC meeting would be necessary. The next TAC meeting would therefore be in January 2017.

A motion by Ms. Williamson, seconded by Mr. Lear, to skip having a December TAC meeting and to have the next TAC meeting on January 11, 2017 was approved unanimously.

7. Schedule
Mr. Jaques briefly reviewed the agenda packet material for this item as contained on page 100 of the agenda packet. There was no other discussion of this item.

8. Other Business
There was no other business to discuss.

The meeting adjourned at 4:01 p.m.
Reported Quarterly and Annual Water Production From the Seaside Groundwater Basin
For All Producers Included in the Seaside Basin Adjudication -- Water Year 2016
(All Values in Acre-Feet [AF])

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<th>Type</th>
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<th>Nov</th>
<th>Dec</th>
<th>Oct-Dec 15</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Jan-Mar 16</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Apr-Jun 16</th>
<th>Jul</th>
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<th>Sep</th>
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<th>Reported Total</th>
<th>Yield Allocation</th>
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<th>Dec</th>
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City of Seaside Golf Courses In-Lieu (MCWD source water)

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<th>Dec</th>
<th>Oct-Dec 15</th>
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<th>Feb</th>
<th>Mar</th>
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<th>Jul-Sep 16</th>
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</table>

Notes:
1. The Water Year (WY) begins October 1 and ends September 30 of the following calendar year. For example, WY 2016 begins on October 1, 2015, and ends on September 30, 2016.
2. “Type” refers to water right as described in Seaside Basin Adjudication decision as amended, signed February 9, 2007 (Monterey County Superior Court Case No. M66343).
3. Values shown in the table are based on reports to the Watermaster as received by MPWMD by January 15, 2016.
4. All values are rounded to the nearest hundredth of an acre-foot. Where required, reported data were converted to acre-feet utilizing the relationships: 325,851 gallons = 43,560 cubic feet = 1 acre-foot.
5. “Base Operating Yield Allocation” values are based on Seaside Basin Adjudication decision. These values are consistent with the Watermaster Producer Allocations Water Year 2016 (see Item IX B. in 12/2/2015 Board packet).
6. Any minor discrepancies in totals are attributable to rounding.
8. It should be noted that CAW/MPWMD ASR “Injection” and “Recovery” amounts are not expected to “balance” within each Water Year. This is due to the injection recovery “rules” that are part of SWRCB water rights permits and/or separate agreements with state and federal...
### CALCULATION OF REPLENISHMENT ASSESSMENTS WATER YEAR 2016

Using the Basin-wide methodology approved by the Court on January 12, 2007, and as shown in detail on the spreadsheet contained in this attachment, Watermaster calculated the Water Year (WY) (October 1st through September 30th) 2016 Replenishment Assessments as follows:

| 2016 Replenishment Assessment NSYO Unit Charge | $2,702.00 |
| 2016 Replenishment Assessment OSYO Unit Charge | $675.50 |
| 2016 Natural Safe Yield (NSY) Available to Standard Producers | 2,160.90 AF (3,000 AF NSY - 839.10 Alternative Producers 2016 Production) |

#### Standard Producers

<table>
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<tr>
<th>Standard Producers</th>
<th>WY 2016 Production (AF)</th>
<th>% of NSY Available</th>
<th>Volume of NSY Available (AF)</th>
<th>NSY Overproduction (AF)</th>
<th>NSY Overproduction Assessment</th>
<th>Operating Yield Available (AF)</th>
<th>Operating Yield Overproduction (AF)</th>
<th>Total Assessment</th>
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<td>-</td>
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<td>Seaside (Municipal)</td>
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<td>157.29</td>
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<td>-</td>
<td>0.17%</td>
<td>3.61</td>
<td>-</td>
<td>-</td>
<td>8.48</td>
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<tr>
<td><strong>Total Production</strong></td>
<td>2,071.21</td>
<td>100.00%</td>
<td>2,160.90</td>
<td>37.87</td>
<td>$102,330.46</td>
<td>3,186.17</td>
<td>17.70</td>
<td>$11,959.38</td>
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</table>

#### Alternative Producers

<table>
<thead>
<tr>
<th>Alternative Producers</th>
<th>WY 2016 Production (AF)</th>
<th>% of NSY Available</th>
<th>Volume of NSY Available (AF)</th>
<th>NSY Overproduction (AF)</th>
<th>NSY Overproduction Assessment</th>
<th>Operating Yield Available (AF)</th>
<th>Operating Yield Overproduction Assessment</th>
<th>Total Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Seaside (Golf Courses)</td>
<td>458.44</td>
<td>N/A</td>
<td>540.00</td>
<td>0.00</td>
<td>$</td>
<td>-</td>
<td>540.00</td>
<td>0.00</td>
</tr>
<tr>
<td>City of Sand City</td>
<td>0.58</td>
<td>N/A</td>
<td>9.00</td>
<td>0.00</td>
<td>-</td>
<td>9.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Security National Guaranty</td>
<td>-</td>
<td>N/A</td>
<td>149.00</td>
<td>0.00</td>
<td>-</td>
<td>149.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Calabrese (Cypress Pacific Inv.)</td>
<td>0.19</td>
<td>N/A</td>
<td>6.00</td>
<td>0.00</td>
<td>-</td>
<td>6.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Mission Memorial (Alderwoods)</td>
<td>13.67</td>
<td>N/A</td>
<td>31.00</td>
<td>0.00</td>
<td>-</td>
<td>31.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Nicklaus Club Monterey</td>
<td>111.57</td>
<td>N/A</td>
<td>251.00</td>
<td>0.00</td>
<td>-</td>
<td>251.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Laguna Seca Golf Resort (Bishop)</td>
<td>223.82</td>
<td>N/A</td>
<td>320.00</td>
<td>0.00</td>
<td>-</td>
<td>320.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>York School</td>
<td>13.89</td>
<td>N/A</td>
<td>32.00</td>
<td>0.00</td>
<td>-</td>
<td>32.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Laguna Seca County Park</td>
<td>16.94</td>
<td>N/A</td>
<td>41.00</td>
<td>0.00</td>
<td>-</td>
<td>41.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total Production</strong></td>
<td>839.10</td>
<td>N/A</td>
<td>1,379.00</td>
<td>0.00</td>
<td>$</td>
<td>-</td>
<td>1,379.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>
### WATERMASTER PRODUCER ALLOCATIONS WATER YEAR 2016 IN ACRE-FEET (AF)

**Including a 10% Triennial Reduction for 100% of this Water Year**

**Initial Basin-Wide Operating Yield** (1) 3920.00 Coastal Operating Yield (1) 3227.70

**Natural Safe Yield (NSY)** (2) 3000.00 Laguna Seca Operating Yield (1) 692.30

### ALTERNATIVE PRODUCER ALLOCATIONS

<table>
<thead>
<tr>
<th>Coastal Subarea(3)</th>
<th>AF</th>
<th>Laguna Seca Subarea(3)</th>
<th>AF</th>
<th>Coastal Subarea(3)</th>
<th>AF</th>
<th>Laguna Seca Subarea(3)</th>
<th>AF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seaside (Golf)</td>
<td>540.00</td>
<td>Nicklaus Club Monterey</td>
<td>251.00</td>
<td>Seaside (Golf)</td>
<td>458.44</td>
<td>Nicklaus Club Monterey</td>
<td>111.57</td>
</tr>
<tr>
<td>SNG</td>
<td>149.00</td>
<td>Bishop</td>
<td>320.00</td>
<td>SNG</td>
<td>0.00</td>
<td>Bishop</td>
<td>223.82</td>
</tr>
<tr>
<td>Calabrese</td>
<td>6.00</td>
<td>York School</td>
<td>32.00</td>
<td>Calabrese</td>
<td>0.19</td>
<td>York School</td>
<td>13.89</td>
</tr>
<tr>
<td>Mission Memorial (Alderwood)</td>
<td>31.00</td>
<td>Laguna Seca County Park</td>
<td>41.00</td>
<td>Mission Memorial (Alderwood)</td>
<td>13.67</td>
<td>Laguna Seca County Park</td>
<td>16.94</td>
</tr>
<tr>
<td>Sand City</td>
<td>9.05</td>
<td>Sand City</td>
<td>0.58</td>
<td>0.58</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong>(1)</td>
<td>735.00</td>
<td><strong>Total</strong>(1)</td>
<td>644.00</td>
<td><strong>Total</strong>(1)</td>
<td>472.88</td>
<td><strong>Total</strong>(1)</td>
<td>366.22</td>
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### ALTERNATIVE PRODUCER AMOUNT PUMPED WY 2016

<table>
<thead>
<tr>
<th>Coastal Subarea(3)</th>
<th>AF</th>
<th>Laguna Seca Subarea(3)</th>
<th>AF</th>
<th>Coastal Subarea(3)</th>
<th>AF</th>
<th>Laguna Seca Subarea(3)</th>
<th>AF</th>
</tr>
</thead>
<tbody>
<tr>
<td>California American Water (CAW)</td>
<td>77.55%</td>
<td>90.44%</td>
<td>2254.40</td>
<td>CAW</td>
<td>45.13%</td>
<td>100.00%</td>
<td>48.30</td>
</tr>
<tr>
<td>Seaside (Municipal)</td>
<td>6.36%</td>
<td>7.42%</td>
<td>184.96</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Granite Rock</td>
<td>0.60%</td>
<td>0.70%</td>
<td>17.45</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D.B.O. Development No. 30</td>
<td>1.09%</td>
<td>1.27%</td>
<td>31.66</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calabrese (Cypress Pacific Investors LLC)</td>
<td>0.15%</td>
<td>0.17%</td>
<td>4.24</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>85.75%</td>
<td>100.0%</td>
<td>2492.70</td>
<td><strong>Total</strong></td>
<td>45.13%</td>
<td>100.0%</td>
<td>48.30</td>
</tr>
</tbody>
</table>

### STANDARD PRODUCER ALLOCATIONS

| Coastal Subarea | AF Available to This Producer | Laguna Seca Subarea | Total | Allocation of Available Operating Yield Among Standard Producers | AF Available to this Producer | Base Water Right % | Weighted % | NSY to SPA % | 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) | Actual AF Pumped by Producer in WY 2016 | Free Carryover Credits to WY 2017 | Not-Free Carryover Credits to WY 2017 | Stored Water Credits to WY 2017 |
|-----------------|-----------------------------|---------------------|-------|---------------------------------------------------------------|-----------------------------|-------------------|-------------|-------------|-----------------------------------------------|---------------------------------------------|-----------------------------------------------|---------------------------------------------|-----------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|
| Coastal Subarea | AF Available to This Producer | Laguna Seca Subarea | Total | Allocation of Available Operating Yield Among Standard Producers | AF Available to this Producer | Base Water Right % | Weighted % | NSY to SPA % | 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) | Actual AF Pumped by Producer in WY 2016 | Free Carryover Credits to WY 2017 | Not-Free Carryover Credits to WY 2017 | Stored Water Credits to WY 2017 |
| California American Water (CAW) | 77.55% | 90.44% | 2254.40 | CAW | 45.13% | 100.00% | 48.30 |
| Seaside (Municipal) | 6.36% | 7.42% | 184.96 | | | | | |
| Granite Rock | 0.60% | 0.70% | 17.45 | | | | | |
| D.B.O. Development No. 30 | 1.09% | 1.27% | 31.66 | | | | | |
| Calabrese (Cypress Pacific Investors LLC) | 0.15% | 0.17% | 4.24 | | | | | |
| **Total** | 85.75% | 100.0% | 2492.70 | **Total** | 45.13% | 100.0% | 48.30 |

**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 = 2016 Production Allocation (see 2016 Declaration from 12/2/2015 Watermaster board meeting).

Note: Calabrese (Cypress Pacific Investors LLC) opted to convert 8AF of its 144 AF Alternative Production Allocation to Standard Production Allocation on January 22, 2015 (notice filed by Cypress with Superior Court).