I. CALL TO ORDER

II. ROLL CALL

III. MINUTES
The minutes of the Regular Board meeting of August 1, 2012 are attached to this agenda. The Board is requested to consider approving the minutes.

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

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

VI. CONSENT CALENDAR
A. Consider Approval of Summary for Payments made during August and September, 2012 totaling $34,050.43
B. Consider Approving Fiscal Year Financial Reports through September 30, 2012

VII. ORAL PRESENTATION
None Scheduled
VIII. OLD BUSINESS

A. COMMITTEE REPORTS

1. TECHNICAL ADVISORY COMMITTEE (TAC)

   a). Discuss and direct staff to either seek approval, or not, from the Court to temporarily suspend pumping reductions that are currently required under the Adjudication Decision, and:

      1). If so would the temporary suspension apply only to California American Water or would it apply to the City of Seaside also, and finally;

      2). Should the request to the Court be made in the 2012 Annual Report or by making a separate filing with the Court?

Derrik Williams from HydroMetrics Water Resources, Inc. will provide an overview of the Results Regarding Effects of Temporary Suspension of Triennial Pumping Reductions.

IX. NEW BUSINESS

A. COMMITTEE REPORTS

1. TECHNICAL ADVISORY COMMITTEE (TAC)

   a). Consider/Approving a Request for Watermaster to Issue a Letter of No Objection for a Proposed New Housing Development (the Wang Subdivision) Along Highway 68

   b). Consider/Approving Adding Destroyed Well Records to the Seaside Basin Watermaster’s Database

   c). Consider/Approving Revisions to the Watermaster Rules and Regulations Regarding Committee Chairpersons and any other officers

   d). Consider Directing Staff to Work with Legal Counsel and California American Water to Revise the Language in the Memorandum of Understanding, (MOU) between the California American Water (CAW) and the Watermaster to clarify the Schedule of Repayment by CAW of Artificial or in-lieu Replenishment Water to the Basin

   e). Discuss and Consider Cancelling the Regular Board Meeting date of November 7, 2012 and scheduling a Special Board Meeting on Wednesday, November 28, 2012.

2. BUDGET AND FINANCE COMMITTEE with input from TECHNICAL ADVISORY COMMITTEE

   a). Discuss and Consider Approval of Proposed Unit Cost of Water Year 2012-2013 Over-Production Replenishment Assessment Amount

   b). Discuss and Consider Adoption of Fiscal Year 2013 Annual Budgets

       Administrative Fund

       Monitoring and Management Fund—Operations

       Monitoring and Management Fund—Capital

       Replenishment Fund
X. INFORMATIONAL REPORTS (No Action Required)

A. Timeline Schedule of Milestone Dates (Critical date monitoring)
B. Technical Advisory Committee (TAC) minutes from August 8th and September 12, 2012 meetings

XI. DIRECTOR’S REPORTS

XII. EXECUTIVE OFFICER COMMENTS

XIII. NEXT REGULAR MEETING DATE—NOVEMBER 7, 2012 (MRWPCA-Board Room) 2:00 P.M.

XIV. ADJOURNMENT

This agenda was forwarded via e-mail to the City Clerks of Seaside, Monterey, Sand City and Del Rey Oaks; the Clerk of the Monterey Board of Supervisors, the Clerk to the Monterey Peninsula Water Management District; the Clerk at the Monterey County Water Resources Agency, Monterey Regional Water Pollution Control Agency and the California American Water Company for posting on September 28, 2012 per the Ralph M. Brown Act, Government Code Section 54954.2(a).
ITEM NO. III.

MINUTES
I. CALL TO ORDER
Chairman Bruno called the meeting to order at 2:00 p.m.

II. ROLL CALL
Coastal Subarea Landowner – Director Paul Bruno, Chair
California American Water (“CAW”) – Brian Bruce, Alternate for Director Eric Sabolsice
City of Seaside – Dennis Alexander, Alternate for Mayor Felix Bachofner
City of Del Rey Oaks – Mayor Jerry Edele
Laguna Seca Subarea Landowner – Director Bob Costa
City of Monterey – Mayor Charles “Chuck” Della Sala
City of Sand City – Mayor David Pendergrass
Monterey Peninsula Water Management District (“MPWMD”) – Director Bob Brower
Monterey County/Monterey County Water Resources Agency (“MCWRA”) – Supervisor Dave Potter
Absent: None

III. APPROVAL OF MINUTES
Moved by Supervisor Potter, seconded by Mayor Pendergrass, and unanimously carried, to approve the minutes of the June 6, 2012 Watermaster regular meeting.

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

V. PUBLIC PARTICIPATION/ORAL COMMUNICATIONS
There were no public communications.

VI. CONSENT CALENDAR
A. Consider approval of Summary for Payments made during June and July 2012 totaling $40,008.75
B. Consider approving fiscal year financial reports through July 31, 2012.

Moved by Director Brower, seconded by Alternate Alexander, and unanimously carried, to approve the consent calendar as presented.

X. ORAL PRESENTATION: None scheduled.

XI. OLD BUSINESS: None

XI. NEW BUSINESS
A. Consider approving staff’s response to the Court Minute Order request for more information on two items within the Watermaster 2011 Annual Report. CEO Evans submitted to the board updated Minute Order responses prepared by staff regarding use and investment of the Replenishment Fund, and the results and analysis of the re-sampling of the Sand City well. CAW counsel, Lori Girard stated she had made non-substantive changes to the order of the information and minor edits. City of Seaside counsel, Don Freeman approved of the revisions.
Moved by Supervisor Potter, seconded by Mayor Edelen, and unanimously carried, to approve responses to Court Minute Order on Seaside Groundwater Basin Watermaster 2011 Annual Report, due to be submitted to Court by August 11, 2012.

X. INFORMATIONAL REPORTS (No Action Required)
   A. Timeline Schedule of Milestone Dates (Critical date monitoring)
   B. Third Quarter Water Year 2012 Production Report for all producers within the Seaside Basin

XI. DIRECTORS’ REPORTS
Mayor Pendergrass noted that due to a League of California Cities meeting scheduled for October 3rd, neither he nor his alternate would be attending the Watermaster board meeting that day.

XII. EXECUTIVE OFFICER COMMENTS
The next scheduled TAC meeting: Wednesday, August 8, 2012 at 1:30 p.m. in the MRWPCA conference room. An item on the Wang Subdivision was scheduled.
The TAC meeting scheduled for Wednesday, September 12, 2012 would cover 2013 budgetary issues.
A Budget and Finance Committee meeting would be scheduled to review proposed 2013 budgets prior to the October 3, 2012 board meeting when the budgets are to be adopted.

XIII. NEXT MEETING DATE – It was agreed that the next meeting would be a Regular Meeting held on Wednesday, September 5, 2012, at the Monterey Regional Water Pollution Control Agency (MRWPCA) Board meeting room at 5 Harris Court, Building "D" on Ryan Ranch in Monterey at 2:00 p.m.

XIV. There being no further business, Chairman Bruno adjourned the meeting at 2:16 p.m.
ITEM NO. VI.

CONSENT CALENDAR
ITEM VI.A.
10-3-2012

SEASIDE GROUNDWATER BASIN
WATERMASTER

TO: Board of Directors

FROM: Dewey D Evans, CEO

DATE: October 3, 2012

SUBJECT: Summary of Payments Authorized to be paid during the months of August and September, 2012

PURPOSE:

To advise the Board of payments authorized to be paid during the months of August and September, 2012

RECOMMENDATIONS:

Consider approving the payment of bills submitted and authorized to be paid during the months of August and September, 2012

COMMENTS and FISCAL IMPACT:

AUGUST, 2012

DDEvans Consulting (Professional Services Agreement—CEO)—July 24, 2012 through August 19, 2012 worked on Watermaster business a total of 56.5 hours at $100.00 per hour or $5,650.00. Responded to telephone inquiries, e-mail, and other correspondence as needed regarding the Seaside Basin. Received and reviewed production reports from producers. Worked on court order with Laura. Received and reviewed TAC meeting notice. Worked on August 1, Board meeting packet. Sent out posting notice to public agencies for August 1st Board meeting. Sent out August 1st Board meeting packet to Board and others as appropriate. Prepared for and attended regular Board meeting on August 1st. Sent out notice to Wang’s subdivision request to Wang’s attorney. Prepared and sent Watermaster CEO job description to Mayor Della Sala and Interim City Manager John Dunn. Prepared for and attended TAC meeting on August 8, 2012. Spent considerable time on Wang subdivision request talking with Wang’s attorney, Bob Jaques and others as appropriate. Sent out request for Board agenda items for September 5, 2012 regular Board meeting. Sent out cancellation posting notice to public agencies involved with copies to Board and others as appropriate.

Robert “Bob” Jaques (Technical Program Manager)—July 25, 2012 through August 27, 2012 worked on Watermaster business a total of 23.5 hours at $100.00 per hour or $2,350.00. Responding to email messages, telephone calls, etc. on Watermaster issues during the month. Prepared and emailed out the TAC agenda and posting page. Approved HydrMetrics invoice; prepared and sent out TAC agenda packet; prepared for and attended the TAC meeting on August 8th. Reviewed documents on Wang subdivision proposal; telecon re: same. Received and reviewed draft HydroMetrics Technical Memo on Groundwater Modeling and email edits to back to HydroMetrics. Worked on August 8th TAC meeting minutes; begin work on September 12th TAC agenda packet. Received and reviewed Technical Memo from J. Lear at MPWMD regarding Cross Aquifer Contamination Investigation and emailed requested edits back to J. Lear on TAC issues.
HydroMetrics Water Resources, Inc.—one invoice submitted for payment totaling $3,187.65 for 18.75 hours of work performing groundwater modeling scenarios of the Seaside Basin as outlined in the Request for Services in RFS 2012-03 and reimbursing for 230 miles of traveling for modeling assumption meeting.

Total for August, 2012

$11,187.65

SEPTEMBER, 2012

DDEvans Consulting Professional Services Agreement—CEO)—August 20, 2012 through September 23, 2012 worked on Watermaster business a total of 52.0 hours at $100.00 per hour or $5,200.00. Responded to telephone inquiries, email, and other correspondence as needed regarding the Seaside Groundwater Basin. Sent out request for September 5th regular Board meeting; began having a series of discussions on the FY2013 Budgets. Received and reviewed summary of HydroMetrics Modeling assumptions; sent out a summary of things that need to be done for the rest of FY 2012 for Watermaster. Sent out September 5, 2012 Board meeting cancellation notice for posting to public agencies; received and reviewed TAC meeting minutes for August 8, 2012. Received and reviewed California American Water’s letter request to destroy and close down four wells; received and reviewed Aquifer Cross-Contamination Report from MPWMD. Calls to Lori Girard, Heidi Quinn, Joe Oliver, John Lear and Eric Sabolsice regarding CAW request to destroy and close down wells. Prepared and hand carried letter asking CAW to hold off destroying wells until the Board can be properly notified; setup Budget and Finance Committee meeting to discuss FY2013 Watermaster budgets and unit cost of replenishment water. Received and reviewed seawater intrusion annual monitoring report from CAW; received and reviewed September 12th TAC meeting minutes; sent out Budget and Finance posting notice. Prepared for and met Watermaster Budget and Finance Committee.

Robert “Bob” Jaques (Technical Program Manager)—August 28, 2012 through September 26, 2012 worked on Watermaster business a total of 59.5 hours at $100.00 per hour or $5,950.00. Responded to email, telephone inquiries and other correspondence on a variety of Watermaster issues. Review/edit Groundwater Modeling Memo form HydroMetrices; worked on TAC agenda and agenda packet; began review of 2012/2013 MMPWMD documents for August 30th meeting regarding RFSs and budgets for FY 2013; met with Joe Oliver on 2013 budget and RFSs. Reviewed D. Abbott’s report on Wang Subdivision and telecom with him regarding questions on report. Prepared for and attended TAC meeting and prepared minutes from this meeting; research Decision boundary map re: Wang Subdivision; worked on Board meeting agenda items. Prepared for and attended Budget and Finance Committee meeting at Seaside City Hall.

HydroMetrics Water Resources, Inc.—Two invoices submitted for payment totaling $11,712.78; The first invoice for $665.00 was to cover the general consulting and preparing and participating by telephone at the August 8th Technical Advisory Committee meeting. The second invoice for $11,047.78 was for 69.5 hours of work preparing groundwater modeling scenarios of the Seaside Basin as outlined in Request for Services RFS

Total for September, 2012

$22,862.78

Total for August and September, 2012

$34,050.43
Seaside Groundwater Basin Watermaster

Budget vs. Actual Administrative Fund
Fiscal Year (January 1 - December 31, 2012)
Balance through September 30, 2012

<table>
<thead>
<tr>
<th>Available Balances &amp; Assessments</th>
<th>2012 Adopted Budget</th>
<th>Contract Amount</th>
<th>Year to Date Revenue / Expenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dedicated Reserve</td>
<td>25,000.00</td>
<td>25,000.00</td>
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<tr>
<td>FY (Rollover)</td>
<td>60,000.00</td>
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<th>Expenses</th>
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<td>Legal Advisor</td>
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<td>Total Expenses</td>
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<td>60,000.00</td>
<td>45,200.00</td>
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<tr>
<td>Total Available</td>
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<tr>
<td>Dedicated Reserve</td>
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<tr>
<td>Net Available</td>
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</table>
# Seaside Groundwater Basin Watermaster

## Budget vs. Actual Monitoring & Management - Operations Fund

**Fiscal Year (January 1 - December 31, 2012)**  
**Balance through September 30, 2012**

<table>
<thead>
<tr>
<th>Available Balances &amp; Assessments</th>
<th>2012 Budget</th>
<th>Contract Encumbrance</th>
<th>Year to Date Revenue/Expenses</th>
</tr>
</thead>
<tbody>
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<td>Monitoring &amp; Management - Ops Fund</td>
<td>$ -</td>
<td>$ -</td>
<td>$ 26,462.94</td>
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<tr>
<td>FY 2011 Rollover</td>
<td>337,954.00</td>
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<td>372,996.00</td>
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<td>Total Available</td>
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<td>$ 399,458.94</td>
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<thead>
<tr>
<th>Appropriations &amp; Expenses</th>
<th>GENERAL</th>
<th>CONSULTANTS (Hydrometrics; Web Site Database)</th>
<th>MPWMD</th>
<th>Reserve</th>
<th>Transfer Out to Capital Fund</th>
<th>Total Appropriations &amp; Expenses</th>
<th>Total Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Project Manager</td>
<td>$ 60,000.00</td>
<td>$ 60,000.00</td>
<td>$ 21,800.00</td>
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<tr>
<td>Contingency @ 20% (not including TPM )</td>
<td>$ 39,584.00</td>
<td>$ 39,584.00</td>
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<tr>
<td>Total General</td>
<td>$ 99,584.00</td>
<td>$ 99,584.00</td>
<td>$ 21,800.00</td>
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<tr>
<td>CONSULTANTS (Hydrometrics; Web Site Database)</td>
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<td>Program Administration</td>
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<td>$ 42,780.00</td>
<td>$ 16,620.43</td>
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<tr>
<td>Production/Lvl/Qlty Monitoring</td>
<td>$ 3,450.00</td>
<td>$ 63,330.00</td>
<td>$ 26,658.75</td>
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<tr>
<td>Basin Management Action Plan</td>
<td>50,780.00</td>
<td>4,140.00</td>
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<td>Seawater Intrusion Analysis Report</td>
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<td>3,600.00</td>
<td>300.00</td>
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<td>Total Consultants</td>
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<td>$ 16,620.43</td>
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<td>MPWMD</td>
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<tr>
<td>Production/Lvl/Qlty Monitoring</td>
<td>$ 74,720.00</td>
<td>$ 63,330.00</td>
<td>$ 26,658.75</td>
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<tr>
<td>Basin Management</td>
<td>5,000.00</td>
<td>4,140.00</td>
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<tr>
<td>Seawater Intrusion</td>
<td>3,700.00</td>
<td>3,600.00</td>
<td>300.00</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>
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<tr>
<td>Reserve</td>
<td>$ 24,220.00</td>
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<tr>
<td>Transfer Out to Capital Fund</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Total Appropriations &amp; Expenses</td>
<td>$ 297,504.00</td>
<td>$ 235,524.00</td>
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<td>Total Available</td>
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</tbody>
</table>
Seaside Groundwater Basin Watermaster
Budget vs. Actual Monitoring and Management - Capital Fund
Fiscal Year (January 1 - December 31, 2012)
Balance through September 30, 2012

<table>
<thead>
<tr>
<th>Available Balances and Assessments:</th>
<th>2012 Adopted Budget</th>
<th>Contract Encumbrance</th>
<th>Year to Date Revenue / Expense</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitoring &amp; Management Fund - Capital</td>
<td>$ -</td>
<td>$ -</td>
<td>-</td>
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<tr>
<td>FY 2007-2011 Rollover to 2012</td>
<td>5,499</td>
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<tr>
<td>Transfer in from Operations Fund</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Subtotal</td>
<td>5,499</td>
<td>5,499</td>
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<th>Appropriations &amp; Expenses:</th>
<th>2012 Adopted Budget</th>
<th>Contract Encumbrance</th>
<th>Year to Date Revenue / Expense</th>
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<tbody>
<tr>
<td>Professional Services</td>
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<tr>
<td>Project Management</td>
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<tr>
<td>Subtotal</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Direct Costs</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Well Drilling -</td>
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</tr>
<tr>
<td>Subtotal</td>
<td>-</td>
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</tr>
<tr>
<td>Total Appropriations and Expenses</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
</tr>
</tbody>
</table>

| Total Available                     | $ -                 |                      |                               |

Capital Fund Assessments owed by City of Seaside

| FY 2009 (including 5% penalty)       | 16,538               |
| Total                               | $ 16,538             |
### Replenishment Fund

**Replenishment Fund**  
**Water Year 2012 (October 1 - September 30) / Fiscal Year 2012 (January 1 - December 31)**  
**January 1 - September 30, 2012**

<table>
<thead>
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<td><strong>Assessments:</strong></td>
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<tr>
<td>WY 05/06</td>
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<td>$1,132</td>
<td>$2,485</td>
<td>$3,040</td>
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<td>WY 07/08</td>
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<td>WY 10/11</td>
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</tr>
<tr>
<td><strong>California American Water Balance Forward</strong></td>
<td>$ -</td>
<td>$ 1,641,004</td>
<td>$ 4,206,475</td>
<td>$ (2,900,435)</td>
<td>$ (2,868,685)</td>
<td>$ (3,850,964)</td>
<td>$ (6,088,910)</td>
<td>$ 24,149,725</td>
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</tr>
<tr>
<td><strong>Operating Yield Overproduction Replenishment</strong></td>
<td>$ -</td>
<td>$ 80,938</td>
<td>$ 34,045</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>$ 114,983</td>
<td>-</td>
<td>$ 114,983</td>
</tr>
<tr>
<td><strong>CAW Credit Against Assessment</strong></td>
<td>(465,648)</td>
<td>(12,305,924)</td>
<td>(3,741,714)</td>
<td>(5,095,213)</td>
<td>(5,425,799)</td>
<td>(27,034,298)</td>
<td>-</td>
<td>(27,034,298)</td>
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</tr>
<tr>
<td><strong>CAW Unpaid Balance</strong></td>
<td>$ 1,641,004</td>
<td>$ 4,206,475</td>
<td>$ (2,900,435)</td>
<td>$ (2,868,685)</td>
<td>$ (3,850,964)</td>
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<td>$ -</td>
<td>$ 230,671</td>
<td>$ 413,454</td>
<td>$ 1,106,116</td>
<td>$ 1,737,569</td>
<td>$ 988,414</td>
<td>$ (13,109)</td>
<td>$ (13,109)</td>
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<td>$ 465,300</td>
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<td>$ 131,705</td>
<td>$ 69,701</td>
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<td>$ 201,406</td>
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<td><strong>In-lieu Credit Against Assessment</strong></td>
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<td>-</td>
<td>$ -</td>
<td>(1,079,613)</td>
<td>-(1,142,858)</td>
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<td>(2,222,471)</td>
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* 2010 = 319.55 AF golf course in-lieu replenishment and 68.8 AF 4-party agmt in-lieu replenishment

2011 = 411.1 AF golf course in-lieu replenishment
ITEM NO. VIII.

OLD BUSINESS
ITEM VIII. A.

COMMITTEE REPORTS
ITEM NO. VIII.A.1.

TECHNICAL ADVISORY COMMITTEE (TAC)
TO: Board of Directors

FROM: Robert S. Jaques, Technical Program Manager

MODIFIED AND APPROVED BY: Dewey D Evans, CEO

DATE: October 3, 2012

SUBJECT: HydroMetrics Basin Modeling Results Regarding Effects of Temporary Suspension of Triennial Pumping Reductions

PURPOSE:
To seek direction from the Board on whether or not to seek approval from the Court to temporarily suspend pumping reductions that are currently required under the Adjudication Decision, and:

1. If so would the temporary suspension apply only to California American Water or would it apply to the City of Seaside also, and finally;
2. Should the request to the Court be made in the 2012 Annual Report or by making a separate filing with the Court?

RECOMMENDATIONS:
The groundwater modeling was performed at the Board’s direction to help the Board decide whether or not to seek approval from the Court to temporarily suspend pumping reductions that are currently required under the Adjudication Decision. This is a matter for determination by the Board. It is not within the purview of the TAC to make a recommendation on this matter. However, the information below provides the Board with the technical findings and conclusions from the modeling work, and also states that the TAC has reviewed the modeling work and finds it to have been satisfactorily performed using appropriate modeling parameters.

If the Board decides to seek the Court’s approval to temporarily suspend pumping reductions, the Board is requested to provide the following direction to Staff:
1. Would the temporary suspension in pumping reductions apply only to Cal-Am, or would it also apply to the City of Seaside?
2. How should the request to the Court be made, i.e. by including it in the December 2012 Annual Report or by making a separate filing with the Court?

BACKGROUND:
At its meeting of June 6, 2012 the Board approved making a request to the Court to seek a temporary suspension of the 2011 and 2014 Triennial Pumping Reductions, subsequent to performing groundwater modeling that shows that doing so would have negligible adverse impacts on the Seaside Groundwater Basin.

At that same meeting the Board also approved a contract with HydroMetrics to perform groundwater modeling to support the request to the Court to consider a temporary suspension of the triennial pumping reductions.
The rationale for making such a request to the Court was that to date no evidence of seawater intrusion, or even the imminent onset of seawater intrusion, has been detected in the Seaside Basin, whereas there exists a current condition in the Carmel River Basin which requires that water diversions be reduced. Temporarily suspending the 10% pumping reductions in the Seaside Basin until Water Year 2018 (which begins on October 1, 2017) would help to reduce the adverse impacts of water rationing and water conservation measures that may have to be imposed while CAW implements a project to reduce its Carmel River Basin diversions to comply with the State-imposed Cease and Desist Order.

The TAC received a presentation from Mr. Derrick Williams of HydroMetrics on the modeling work at its September 12, 2012 meeting. The TAC was satisfied with the parameters that were used to perform the modeling, and with the results of the modeling.

**DISCUSSION:**

A complete copy of the modeling report prepared by HydroMetrics is lengthy and is therefore not attached to this Agenda transmittal. It will be, however, available for review and downloading from the Watermaster’s website under the “Postings and Records” tab, starting in the afternoon of Friday September 28, at: http://www.seasidebasinwatermaster.org/. Below is a description of the modeling work and its findings.

Because there was some difference of opinion between TAC members as to what parameters should be used in the modeling, HydroMetrics performed two sets of simulations (model runs) to address two sets of criteria TAC members felt should be considered. Results from both sets of modeling runs were similar, so to simplify its presentation HydroMetrics will report the results from only one of the model run sets at the Board meeting. The simulation set consists of a Baseline simulation and a Project simulation. The Baseline simulation included measured pumping through 2011, and Court-ordered pumping reductions after 2011. The Project simulation included both Cal-Am and the City of Seaside’s pumping at pre-2011 levels, without the 2011 and 2014 pumping reductions required by the Court, starting in the upcoming water year (beginning October, 2012). The simulations were compared to the 2009 Baseline, which is the original simulation prepared by HydroMetrics several years ago when the model was first developed.

The modeling indicates that all simulations (2009 Baseline, New Baseline, and Project) show about the same groundwater levels at the end of the simulation time period, which is 2031.

In order to compare the differences between the simulations, two forms of measurements were developed: (1) Percent Recovery and (2) Potential Seawater Intrusion Rate. Percent Recovery is an indicator of how much water levels recover from their lowest levels compared to the protective water level elevations developed by HydroMetrics in 2009. These protective elevations are the groundwater elevations needed to prevent seawater intrusion from occurring. Potential Seawater Intrusion Rate is an indicator of the speed with which the seawater-freshwater interface might be moving toward the Basin from Monterey Bay.

The modeling showed that water levels under both the Project simulation were at their lowest during the 2013-2017 time frame, and that because of the rollbacks of pumping reductions, water levels stayed lower longer than they did under the Baselines. However, the Percent Recovery comparison indicated that all of the scenarios recovered to about the same water levels by the end of the simulations. The modeling also indicated that it is not possible to get up to protective water levels in all parts of the Basin without an outside source of water to recharge the Basin.

The Seawater Intrusion Rate comparison indicates that over the 22 year time period of the model runs, the average intrusion rate between the Baselines and the Projects differed by less than 1%.
In summary, the modeling indicates that compared to the Baselines the Project result in lower water levels within the Basin for a short period of time. This implies a somewhat increased risk for seawater intrusion during that time period, but by the end of the modeling period (year 2031) the impact is very small.

**FISCAL IMPACT:**
None at this time, the modeling work performed by HydroMetrics was previously approved by the Board at the regular Board meeting of June 6, 2012.

**ATTACHMENTS:**
(1) A short description of the modeling work that was done.
(A full copy of modeling report is accessible starting Friday afternoon, September 28, on the Watermaster’s website: [http://www.seasidebasinwatermaster.org/](http://www.seasidebasinwatermaster.org/) under the “Postings and Records” tab at the top of the webpage.)
Description of the Modeling Work

The modeling was done to determine the effects on groundwater levels in the Seaside Basin if Standard Producers’ pumping rates were allowed to continue at 2011 pumping rates from Water Year 2012 through Water Year 2017, rather than being reduced in 10% triennial increments in 2011 and again in 2014, as required by the Adjudication Decision.

To make this assessment two Revised Baseline Scenarios and two New “Project” Scenarios were modeled, and compared to the 2009 Baseline scenario that was previously modeled. The differences between the two Revised Baseline and New “Project” Scenarios are in the pumping rates that were used, and the selection of Producers that would have their triennial pumping reductions temporarily suspended. The two Revised Baseline and New “Project” Scenarios were developed through discussions with the TAC and HydroMetrics.

The 2009 Baseline Scenario assumed that producers with water rights who were not currently pumping at those levels would exercise their right to pump at their full water rights levels in the future. The Revised Baseline Scenarios reflect historical actual pumping rates, based on reported pumping data for all producers in the groundwater basin from 2009 through 2012, rather than the maximum amount any water rights holder would be allowed to pump, with triennial 10% pumping reductions as required by the Decision.

The two New “Project” Scenarios assume that certain Standard Producers will continue to pump at their 2011 pumping rates through Water Year 2017, with no triennial pumping reductions during that period of time. After this date, pumping reverts back to triennial reductions for all Standard Producers. The New “Project” Scenarios also assume that all other producers will continue pumping at their 2011 Decision-mandated rates for the full modeling period, which goes to 2031.

The HydroMetrics Report compares the Revised Baseline Scenarios and the New “Project” Scenarios against the 2009 Baseline Scenario to assess differences in groundwater elevations between these scenarios.
ITEM IX.

NEW BUSINESS
ITEM IX. A.

COMMITTEE REPORTS
ITEM NO. IX.A.1.

TECHNICAL ADVISORY COMMITTEE (TAC)
TO: Board of Directors

FROM: Robert S. Jaques, Technical Program Manager

MODIFIED AND APPROVED BY: Dewey D Evans, CEO

DATE: October 3, 2012

SUBJECT: Review Request for Watermaster’s Issuance of a Letter of No Objection for a Proposed New Housing Development (the Wang Subdivision) Along Highway 68

PURPOSE:
To make a determination of whether or not the four wells from the proposed Wang Subdivision are part of the Adjudicated Seaside Groundwater Basin and/or connected hydrologically to the Basin.

RECOMMENDATIONS:
The request being made by the Wang family is that the Watermaster provide a letter stating that it has no objection to the Wang subdivision and/or that the proposed subdivision is not within the jurisdiction of the Watermaster. This is a matter for determination by the Board. It is not within the purview of the TAC to make a recommendation on this matter. However, the information below provides the Board with the TAC’s findings and conclusions regarding the location and potential impact of the Wang subdivision wells on the Seaside Basin.

BACKGROUND:
In late May 2012 the Watermaster received the correspondence in Attachment 1 from a law firm representing the Wang family’s proposed subdivision located in the Hidden Hills area of Monterey County. On June 7, 2012 representatives of the Watermaster and MPWMD met to review and discuss these documents. Attachment 2 contains the principle findings and conclusions from that meeting.

At the TAC’s August 8, and September 12, 2012 meetings there was considerable discussion regarding the Wang subdivision wells. A document contained in Attachment 3 was provided to the TAC in response to discussions at the August 8th meeting, and was discussed at the September 12 meeting. Presentations by representatives of the Wang family were made at both of those meetings. Key areas of discussion at the meetings were whether or not the wells were located within the boundaries of the Seaside Basin, and whether they were drawing water from an aquifer that could impact groundwater levels in the Laguna Seca subarea of the Basin, i.e. hydraulically connected to the Basin.

DISCUSSION:
It appears that the wells discussed in the Wang documents are just outside of the Seaside Basin boundary as shown on the map contained in Attachment 4. The Basin boundary line shown on that map was taken from Exhibit “B” of the Adjudication Decision (which was based on a 2004 CH2M Hill Report), and the well locations were taken from a map prepared by Mr. David Abbott, one of the Wang family’s consultants. However, subsequent to the Decision being entered more has been learned about the hydrogeologic boundaries of the Basin. As noted in Attachment 2, the southern Basin boundary in the vicinity of the Wang subdivision is not clearly defined in part because of the complexity of the Chupines fault. Further, the main well for the
proposed subdivision is considered to be drawing from the Santa Margarita aquifer, even though it is slightly outside of the Basin boundary as shown on the map in the Decision.

Following discussions at the August 8 and September 12 meetings, the TAC came to the following conclusions:

- There was unanimous agreement among the TAC members that:
  1. The Wang wells are outside the Basin boundary as shown on the map contained in the Adjudication Decision, which was drawn to represent the Basin boundary as shown in the 2004 CH2M Hill Report.
  2. Based on the available data, it is not possible to determine whether or not hydraulic connectivity exists between the Laguna Seca subarea and the Wang wells.

- Eight of the nine TAC members further agreed that the water level data suggests that the Wang wells are not hydraulically connected to the Laguna Seca subarea.

There appear to be two choices the Watermaster could take in determining what its response to the Wang attorney’s request will be:

1. Simply compare the locations of the Wang subdivision wells with the map used by the Decision to establish the Seaside Basin boundaries, and determine whether or not they are outside of the Basin boundary. If they are outside of the boundary, conclude that they are not subject to the Watermaster’s jurisdiction.

   or

2. Determine whether or not the main well for the Wang subdivision draws from one of the principle aquifers of the Seaside Basin (the Santa Margarita). If it does, conclude that it is hydraulically connected to the Basin, and therefore that production from that well will impact the Basin and should therefore be under the purview of the Watermaster in its Decision-assigned role of managing the Basin.

Taking the first choice would be consistent with the “letter” of the Decision which limits the authority of the Watermaster to those the lands (and wells) which are within the Decision-defined boundaries of the Basin. Based on current hydrogeologic knowledge of the Basin, taking the second choice would be consistent with the “spirit” of the Decision which mandates the Watermaster to manage the groundwater resources of the Basin.

Taking the second choice could lead to drawing a new boundary map of the Basin, based on current hydrogeologic knowledge. A new boundary might impact property owners that were not part of the original adjudication process. This could lead to further court action to enable those property owners to participate in the process of redefining the Basin boundaries. It might also result in a change in the allocations of production rights within the Basin, if more wells are determined to be drawing from the Basin.

**FISCAL IMPACT:**
None known at this time

**ATTACHMENTS:**
(1) Correspondence from the Wang Subdivision’s attorney dated May 16, 2012.
(2) Findings and Conclusions from the Meeting Held June 7, 2012
(3) Correspondence from David Abbott dated September 5, 2012 (less its attachment)
(4) Map showing location of Wang Subdivision wells in relation to the boundary of the Seaside Basin
May 16, 2012

Via Electronic Transmission and Overnight Delivery

Seaside Groundwater Basin Watermaster
2600 Garden Road, Suite 228
Monterey, CA 93940

Attn: Dewey Evans, Secretary

Re: Proposed Vesting Tentative Map Wang Subdivision (Monterey County APN Nos. 416-141-003, 416-151-003, and 416-151-004); Hidden Hills Lots 11, 13, and 20

Ladies and Gentlemen:

This office represents Peter C. and Grace L. Wang (the "Wangs"). The Wangs are the owners of the above-referenced property, which is the subject of a pending tentative map application before the County of Monterey.

Earlier this year I spoke with Dewey Evans concerning this project and provided some preliminary information concerning the project and the apparent lack of potential impact upon the Seaside Groundwater Basin and Laguna Seca Subbasin in particular. Since that time, the Wangs have had hydrogeologic work and analysis performed on the project by Daniel B. Stephens and Associates Inc. and David W. Abbott, Senior Hydrogeologist. I enclose a copy of Mr. Abbott’s report dated May 14, 2012 (the “Report”) for your review. It is the purpose of this correspondence to request that the Seaside Basin Watermaster provide us with a response as to whether it has any objections to the project and whether it believes it has any jurisdiction concerning the project.

THE PROPERTY

The property is currently configured in three 40-acre parcels, proposed for subdivision into a 29-unit project described on a draft tentative map originally prepared by WWD Corporation dated September 20, 2002, revised March 9, 2007.
Seaside Groundwater Basin Watermaster
May 16, 2012
Page 2

California American Water Company has issued a “will serve” letter for lots 11, 13 and 20. The balance of the long-term water supply for the other 26 proposed residential parcels will be supplied from the well system based primarily upon wells 02-071 and 07-11024, with backup proposed from well 03-01132. The bulk of the property lies within the Salinas Valley Basin and the proposed aquifer from which these wells would draw is in the Salinas Valley Basin.

I have reviewed the legal description for the Seaside Groundwater Basin described in the Decision filed March 27, 2006, page 2:12-20, and Exhibit B, and Amended Decision, in California American Water v. City of Seaside, et al., Monterey County Superior Court No. M66343. As generally described in the Decision, the southerly boundary of the Seaside Basin follows Highway 68 and the same is true of the Laguna Seca Subbasin. The primary land area involved in the project lies southerly of this boundary and the subject wells proposed for long-term water supply, in particular, are a significant distance to the south of Highway 68 and the Chupines fault. See, e.g., Report, page 1, and Figure 1.

Based on the description of the Seaside Basin and Laguna Seca Subbasin described in the Decision, there does not appear to be any jurisdiction over this property under the Seaside Basin Decision or the authority assigned to the Seaside Basin Watermaster.

THE PROPOSED WELL SYSTEM

As described in the Report, the primary production wells are Nos. 02-071 and 07-11024, with backup from well 03-01132. Mr. Abbott undertook an analysis of the wells, pumping data, and well-drilling logs, past and current measurements of water elevations in the wells, data from the Laguna Seca Subbasin, the relevant geologic formations including the Monterey formation and Santa Margarita sandstone, and noted significant differences in water elevation and other features, that led to the conclusion that wells 02-071, 07-11024, and 03-01132 are not located in the Laguna Seca Subbasin and that the proposed pumping from these wells to serve the project would not have an effect on the Laguna Seca Subbasin.

I would call your attention to finding C 3 of the Decision, page 10:8-18, that a production of groundwater of “less than five (5) acre feet per year is not likely to significantly contribute to a Material Injury” and that the Decision does not “govern the production of groundwater by any person or entity that produces a total quantity of groundwater that is less than five (5) acre feet per year”. As the Report concludes, there will be no effect upon the Laguna Seca Subbasin and the water balance analysis for the project is favorable, with groundwater recharge at least 200% larger than the planned pumping rate for the project of 25 acre feet per year, or 400% of the
projected net consumptive use of water of approximately 12.5 acre feet per year. The existing three lots and proposed water use would be within the excluded de minimus provisions of the Decision even assuming the project was located in the Laguna Seca Subbasin. The absence of any measurable impact or location in or near the Laguna Seca Subbasin, the de minimus production levels of the Decision support the conclusion that there cannot be potential impacts that would be within the jurisdiction of the Seaside Basin Watermaster.

REQUESTED ACTION

The purpose of this correspondence is to provide information to the Seaside Basin Watermaster. Our office and Daniel B. Stephens and Associates are available to provide further information upon request.

We hereby request that the Seaside Basin Watermaster provide us with a letter stating that it has no objection to the proposed Wang tentative map subdivision project as described in the Report and/or that the proposed project is not within the jurisdiction of the Seaside Basin Watermaster. Such a response should avoid further delay in the pending applications before the County of Monterey in which it is possible that comment from the Seaside Basin Watermaster may be solicited by the County.

Thank you for your attention to the foregoing, and we look forward to receiving your response.

Very truly yours,

Scott A. Sommer

Enclosure: Daniel B. Stephens and Associates Inc. memorandum dated May 14, 2012
MEMORANDUM

May 14, 2012

To: Mr. Scott A. Sommer, Esq.
Pillsbury Winthrop Shaw Pittman LLP
50 Fremont Street
San Francisco, CA 94105-2228

From: David W. Abbott, PG, CHg
Senior Hydrogeologist

Re: Review of existing hydrogeologic information in the vicinity of the Wang proposed Subdivision (PLN #010422) in the Hidden Hills area of Monterey County, CA

Introduction

The Peter C. and Grace L. Wang proposed Subdivision (PLN #010422) located in the Hidden Hills area of Monterey County plans to subdivide and construct 29 houses with an estimated water use of about 25 acre feet per year (AFY) or 15.5 gallons per minute (gpm) which will be offset from the Subdivision groundwater recharge with a net use of 12.5 AFY (7.75 gpm). The area of the proposed Subdivision is about 120 acres. The primary source of water will be from Well 02-071 which is located within the Subdivision, while a secondary or back-up source (Well 07-11024) is located 30 feet from the primary well; both wells have been installed and tested for quantity and water quality. In addition, Wells 03-01132 and 02-072 are located on the property and could also serve as back-up water supplies. Wells 03-01132 and 02-072 are located about 800 and 3,400 feet west of Well 02-071, respectively. The property and wells are located between 1,700 and 3,200 feet south of Canyon Del Rey or the central portion of the Laguna Seca Subarea. The Chupines Fault delineates the southern edge of the Laguna Seca Subarea (Yates et al., 2005). Most of the proposed Subdivision is south of the Chupines Fault. Hence, the proposed Subdivision is not located in the Laguna Seca Subarea. Figure 1 shows the location of the wells, Chupines Fault, Canyon Del Rey, and the proposed Subdivision boundaries.

The purpose this memorandum is to summarize the hydrogeologic information that has been collected recently from various sources and review of that data. Information collected for this study is from the following:

- Previous proposals and published reports (included in reference list).
- Access to the Seaside Groundwater Basin Watermaster website which allowed download and review of key documents, water levels, and water quality data of the Laguna Seca Subarea.
- Contact with two drilling contractors (Maggiore Brothers Drilling, Inc. and Salinas Pump Company) to request copies of permits, well installation and construction details, California Department of Water Resources (CDWR) Well Completion Reports, geophysical logs, water levels, pumping tests, and water quality records.
One site visit was conducted by me on February 28, 2012 to become familiar with the property and well locations. In addition, on March 22, 2012, Carmel Lahaina Utility Services, Inc. from Carmel, CA visited the site and collected the following data for the four wells located on the property: global positioning satellite (GPS) coordinates, ground surface elevations, water levels, water meter readings, and casing diameters.

The focus of this investigation was to assess the potential impact on the Laguna Seca Subarea, which is downstream of this project, from one or more wells (Wells 02-071; 02-072; 03-01132; and 07-11024) located in the Subdivision. Water level data and a preliminary watershed budget analysis were used to estimate the impact of the planned pumping (25 AFY) and net consumptive use (12.5 AFY) at the Subdivision on the Laguna Seca Subarea.

The property straddles the southern part of Section 5 and northern portion of Section 8, Township 16 South, Range 2 East of the Mount Diablo base and meridian and is situated on north-facing slopes that overlook the Laguna Seca Subarea. Access to the property is from Highway 68. Ground surface elevations on the property range from 400 feet mean sea level (ft msl) near Well 02-072 to 900 ft msl. Canyon Del Rey is located along the base of these north-facing slopes and drains the catchment of the Laguna Seca Subarea. Canyon Del Rey discharges to the Pacific Ocean which is 6 miles to the northwest. Clark, et al. (1974) prepared a preliminary geologic map of the Monterey and Seaside quadrangles. However, the geologic terminology from Muir (1982) has been retained for this discussion.

**Summary of Hydrogeology**

The surface and subsurface geology of the Laguna Seca Subarea and the area between Canyon Del Rey and the proposed Subdivision includes Tertiary and younger consolidated to un-consolidated marine and continental formations. The Monterey Formation (shale and dolomite) is the oldest unit, underlying most of the Subdivision, and is locally known as a low-yield aquifer with poor to good water quality that can supply sufficient water (less than 30 gpm) for small water systems. The Monterey Formation underlies the Seaside Groundwater Basin and the Laguna Seca Subarea but is not used as a source of water because (1) well yields are typically small; (2) it occurs at deep depths; and (3) the water quality is generally poor. Overlying the Monterey Formation are the consolidated to friable marine-deposited Santa Margarita Sandstone (SS) and the early Quaternary continental-deposited Paso Robles Formation. Both of the units are tapped by water supply wells in the Seaside Groundwater Basin and can yield acceptable water quality and economical quantities. A relatively thin layer of recent alluvium has been deposited along the Canyon Del Rey flood plain that also can supply good quality water to wells.

The geologic formations south of the Chupines Fault have been uplifted relative to the Laguna Seca Subarea (Muir, 1982) resulting in the Monterey Formation being encountered at shallower depths and nearly complete erosion of the Paso Robles Formation. The uplifting has also disrupted the continuity and layering of the Santa Margarita SS in this area so that it is not continuous with the Santa Margarita SS beneath the Laguna Seca Subarea.
The onsite wells range in total depth from 755 to 800 feet from ground surface elevations ranging from 370 to 485 ft msl; the total depths range from -273 to -430 ft msl. Geophysical logging was conducted on each well to characterize the geologic formations that were encountered during drilling. All borings penetrated the Monterey Formation and the Santa Margarita SS; only Wells 02-072 and 03-01132 encountered the Paso Robles Formation which was unsaturated at these locations. Wells 02-071 and 07-11024 are screened opposite the Santa Margarita SS. Wells 02-072 and 03-01132 tap the Monterey Formation.

These proposed Subdivision water supply wells are located next to, near, or within the Chupines Fault zone which serves to delineate the southern boundary of the Laguna Seca Subarea (Yates et al., 2005; Clark Geological, 2009). Previously, it has been assumed that if any well was located north of the Chupines Fault then it was connected directly and hydraulically to the Laguna Seca Subarea; if the well was located south of the Chupines Fault then it was not connected to the Laguna Seca Subarea. The specific locations of the Subdivision wells does not clearly delineate the relative position with the fault because of their close proximity to the Chupines Fault zone, the complex geology (Clark Geological, 2009), and local structural disruption of the geologic units.

**Summary and Analysis of Pumping Tests**

Four long-term (greater than 64 hours) pumping tests have been conducted on three of the wells on the property. Two pumping tests were conducted on Well 02-071, one on Well 03-01132, and one on Well 07-11024 while using Well 02-071 as an observation well. The pumping tests were conducted by the drilling contractor. Well yields for the tests range from 35 (Well 02-071) to 140 gpm (Well 07-11024). Drawdowns in the pumping wells range from 65 to 361 feet. The specific capacities (SC) ranged from 0.25 to 1.20 gpm per foot of drawdown after 24-hours of pumping. The SC normalizes hydraulic information to a common reference and is the pumping rate in gpm divided by the drawdown in feet (drawdown should be selected at a consistent elapsed time of pumping - i.e., 24 hours).

The transmissivity (ease at which groundwater flows through the formation) ranged from 1,080 to 6,600 gallons per day per foot (gpd/ft). The estimated well efficiency ranges between 27 and 39 percent and are corroborated with rapid water level recovery responses after the pumping stopped; well efficiencies of about 70 to 80 percent are achievable with properly designed and fully developed wells. The specific yield was estimated to be 0.015 (1.5 percent) from the pumping test conducted on Well 07-11024 in August 2007 from water levels that were measured in the observation well (Well 02-071). The pumping test was conducted at 140 gpm. The observation well was 30 feet from the pumping well. The drawdown in the pumping well was about 120 feet and the drawdown in the observation well was 15 feet. Based on the modified non-equilibrium equation (Cooper-Jacob method), these parameters suggest that the direct impact from pumping the Subdivision wells is limited to a radius of between 260 to 630 feet after pumping 72 hours.

The hydraulic conductivity (permeability coefficient) is the rate of flow in gallons per day through a cross section of one square foot under a unit hydraulic gradient, at the prevailing temperature (AGI, 1984) and is the transmissivity divided by the saturated thickness of the aquifer. The hydraulic conductivity estimated
from the pumping tests ranges between 2 and 28 gallons per day per square foot (gpd/ft²) or 0.30 to 4.26 feet per day (ft/d). This range is consistent with values provided by Freeze and Cherry (1978) for low-permeable silts and sandstone.

Conservative long-term well yields can be estimated by multiplying the SC times the recommended drawdown of 50 feet in consolidated rock aquifers. The recommended long-term well yields are: 15 gpm for Well 03-01132 tapping the Monterey Formation, and 30 (Well 02-071) and 60 gpm (Well 07-11024) tapping the Santa Margarita SS. Pumping tests have not been conducted on Well 02-072. No barrier boundaries were observed during any of the pumping tests. Barrier boundaries can deepen pumping water levels, restrict the aquifer dimensions resulting in groundwater mining, and limit long-term reliable water supplies.

Water Levels

Water level measurements were collected from the four wells on March 22, 2012 by Carmel Lahaina Utility Services Inc. The table below summarizes the water level information.

<table>
<thead>
<tr>
<th>Well</th>
<th>March 22, 2012</th>
<th>GS Elev</th>
<th>DTW</th>
<th>WL Elev</th>
<th>WL Elev. (date)</th>
</tr>
</thead>
<tbody>
<tr>
<td>02-071</td>
<td>02-072</td>
<td>07-11024</td>
<td>03-01132</td>
<td>07-11024</td>
<td>03-01132</td>
</tr>
<tr>
<td>482</td>
<td>399</td>
<td>83</td>
<td>104</td>
<td>Sept-2002</td>
<td></td>
</tr>
<tr>
<td>485</td>
<td>401</td>
<td>85</td>
<td>87</td>
<td>Aug-2007</td>
<td></td>
</tr>
<tr>
<td>429</td>
<td>322</td>
<td>107</td>
<td>115</td>
<td>Jul-2003</td>
<td></td>
</tr>
<tr>
<td>370</td>
<td>117</td>
<td>253</td>
<td>not available</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

GS Elev - ground surface elevation in ft msl.
DTW - depth to water below ground surface in feet.
WL Elev - water level elevation in ft msl.

The right-most column lists the non-pumping water level elevations collected during the pumping tests and their respective dates. Wells 02-071, 07-11024, and 03-01132 have similar water elevations ranging from 83 to 107 ft msl, while Well 02-072 is over 150 feet higher in elevation. Water level declines for these wells average about 1 foot per year for the period 2002 to 2012.

Water level data for 4 wells were downloaded and analyzed from the Seaside Groundwater Basin Watermaster website. The 4 wells are Watermaster Well numbers 142 (LS 1 Subdivision); 144 (Laguna Seca Old 12); 209 (Bishop 1 [west]); and 210 (Bishop 2 [east]). Current (2011) and typical non-pumping water level elevations in the Laguna Seca Subarea range from 140 to 177 ft msl. Water level elevations in Laguna Seca have dropped from about 180 ft msl in 2003 to about 150 ft msl in 2011. The average water level decline for the Laguna Seca Subarea is about 4 feet per year. Note that Well 210 is a pumping well in which water levels reach lower elevations of less than about 125 ft msl during pumping. Regional water table maps suggest that water levels near the edges of the Subarea are between 200 and 220 ft msl (Yates et al., 2005) with localized water level declines in pumping depressions of less than 160 ft msl in the central portion of the Laguna Seca Subarea north of Canyon Del Rey that correspond to Wells 142, 144, 209, and 210.
Combined, these data suggest that only Well 02-072, located north of the Chupines Fault, could be connected to the Laguna Seca Subarea because the water level elevation is higher in the western part of the Subdivision than the Laguna Seca Subarea elevations implying that groundwater would flow from Well 02-072 to the Laguna Seca Subarea. In contrast to the flow direction observed for 02-072 (south to north), Wells 02-071, 07-11024, and 03-01132 (appearing to be located south of the Chupines Fault) indicate a groundwater flow direction from north to south or from the Laguna Seca Subarea to the proposed Subdivision. This reversal in direction (north to south) contradicts the expected groundwater flow direction (south to north) from recharge areas (upland hills) to discharge areas (valleys).

**Initial and Preliminary Watershed Water Balance**

All groundwater in the Laguna Seca Subarea and adjacent upland areas is derived from infiltration and percolation of rainfall on their respective upstream watersheds. It is assumed that the surface watershed divides coincide with the groundwater divides. If conveyed, additional sources of water could be from imported water either from areas outside of the Laguna Seca Subarea (i.e., State Water Project water) or intra-basin transfers (i.e., conveyance of water from the Laguna Seca Subarea to existing subdivisions uphill from the proposed Subdivision). The catchment area upstream from Well 02-072 and the Chupines Fault is about 640 acres and includes an existing subdivision uphill from the Wang proposed Subdivision (PLN #010422). The average rainfall is about 17-inches per year (isohyetal maps are located on the Seaside Basin Watermaster website; Rantz, 1969; and Saah, 1989). This amounts to an average total inflow of water from rainfall to the watershed of about 910 AFY (640 acres × 17 inches ÷ 12 inches per foot). Preliminary groundwater recharge can be estimated using a simplified version of the mass balance for the catchment area or watershed (Heath and Trainer, 1968):

\[
\text{Inflow} = \text{Outflow} + \text{Change in Storage (consistent units of AFY)}
\]

The main Inflow component for this watershed is rainfall (R). The main Outflow components include evapotranspiration (ET), surface water outflow $SW_{\text{out}}$, and groundwater outflow $GW_{\text{out}}$ which may include pumping wells. Change in Storage is assumed to be zero. The mass balance equation can be rewritten as the following:

\[
R = ET + SW_{\text{out}} + GW_{\text{out}} \text{ (consistent units in AFY)}
\]

Evapotranspiration or ET is that portion of precipitation returning to the air through evaporation and transpiration from plants, soils, and surface water (Poehls and Smith, 2009) and is usually a large percentage of the average annual rainfall. The site is situated in the coastal valley and plains Zone 3 of California and has a high reference ET ($ET_0$) of about 46 inches per year (CDWR, 1999). The $ET_0$ is the amount of evaporation-transpiration of a well-watered actively growing closely clipped grass that is completely shading the soil as a reference crop (CDWR, 2012). Since for this location the annual $ET_0$ is much larger than the annual precipitation, the $ET_0$ is adjusted to represent the actual ET (AET) because of temporal and seasonal changes in rainfall, geology, geographic position of the site (north-facing slopes),
topography, soil moisture storage changes, and different native and landscaped vegetation covers (Dunne and Leopold, 1978). If there is ample precipitation then AET is equal to PET. For this analysis AET was assumed to be about 85 percent of the rainfall or about 770 AFY.

There are no stream gauging stations on this small unnamed watershed that is a tributary to Canyon Del Rey. Surface water runoff that contributes to Laguna Seca Subarea has been assigned about 10 percent of the rainfall or about 90 AFY; data provided by Anderson-Nichols/West (1985) suggests a range from 10 to 19 percent of the average annual rainfall. The remaining 5 percent is assigned to groundwater recharge or about 50 AFY. The estimated 50 AFY of groundwater recharge is about 200 percent larger than the planned pumping rate of 25 AFY. In addition, the Subdivision is planning onsite waste disposal systems which would reduce the net consumptive use of water to about 12.5 AFY.

Groundwater captured (15.5 gpm or 25 AFY) by a planned small water supply system that includes Wells 02-071 and 07-11024 will be derived from a combination of natural watershed recharge (about 50 AFY) and return flows from onsite septic systems (about 12.5 AFY). The net water usage will be equivalent to pumping rates of about 7.75 gpm (12.5 AFY). The Laguna Seca Subarea will not be significantly impacted from groundwater pumped beneath the planned Subdivision.

Conclusions

The proposed Subdivision and Wells 02-071, 07-11024, and 03-01132 do not appear to be directly and hydraulically connected to the Laguna Seca Subarea based on the following:

1. Significant groundwater level elevation differences occur between the planned Subdivision (Wells 02-071, 07-11024, and 03-01132) and the Laguna Seca Subarea wells (Watermaster Well numbers 142, 144, 209, 210, and regional groundwater contour maps). Water levels on the proposed Subdivision are between 83 and 107 ft msl while water levels in the Laguna Seca Subarea exceed 150 ft msl. This suggests that groundwater flows southward from Laguna Seca Subarea to the proposed Subdivision. This direction of groundwater flow would not be expected for watershed and foot hill recharge areas that are tributary to Canyon Del Rey and the Laguna Seca Subarea. Groundwater flow would be expected to flow from south to north. The Chupines Fault is responsible for these differences in water levels. Wells 02-071, 07-11024, and 03-01132 are located south of the Chupines Fault and are not located in the Laguna Seca Subarea. In addition, Well 02-072 has a significantly higher water level elevation (253 ft msl) than Laguna Seca Subarea wells which suggests that groundwater flows from Well 02-072 to the Laguna Seca Subarea in that area. Well 02-072 is presumed to be located north of the Chupines Fault and related hydraulically to the Laguna Seca Subarea.

2. All water occurring on the proposed Subdivision is derived from rainfall. The average rainfall is about 17-inches per year. Preliminary estimates suggest that at least 50 AFY is recharged to the underlying aquifer system. The proposed Subdivision plans to have a net water usage of about 12.5 AFY.
3. The transmissivity (between 1,080 and 6,600 gpd/ft) estimated from pumping tests are relatively small. The specific yield was estimated to be about 1.5 percent from a literature review and measurements made in an observation well during the pumping test on Well 07-11024. This suggests that the direct impact from pumping the Subdivision wells is limited to a radius of between 260 to 630 feet after pumping 72 hours.

Closing

If you have any questions, please don’t hesitate to call me at 510.444.1353.

References


*PES Environmental, Inc. 2008a. Letter to Mr. Dale Ellis: Work plan for aquifer testing program, Peter and Grace Wang Subdivision (File No. PLN #010422), Monterey County, California. November 4. 6p.*

*PES Environmental, Inc. 2008b. Letter to Mr. Dale Ellis: Revised work plan for aquifer testing program, Peter and Grace Wang Subdivision (File No. PLN #010422), Monterey County, California. December 4. 7p.*

*PES Environmental, Inc. 2008b. Letter to Mr. Dale Ellis: Work plan for aquifer testing program (Revision 2.0), Peter and Grace Wang Subdivision (File No. PLN #010422), Monterey County, California. January 7. 7p.*


* Used for reference and backup material and not cited in the memorandum.
Principle Findings and Conclusions from the Meeting Held on June 7, 2012 Regarding the Wang Subdivision Request

2. Another map prepared in 2005 with slightly different south and north Basin boundaries is found in the Yates/Feeney/Rosenberg Report dated April 2005. (Known as “The Yates Report”)
3. The Yates Report map contains the Basin boundaries used by Hydrometrics in Basin modeling scenarios. Hydrometrics may or may not have used the Yates report northern boundary, since that was found to have changed as a result of the Feeney monitoring well boring logs.
4. Water production from CAW’s Hidden Hills well is accounted for in the Watermaster’s Production Reports. It falls outside the CH2M Hill 2002 mapped boundaries but is inside the Yates Report 2005 mapped boundaries. It is outside of the boundary established in the Decision.
5. The Chupines Fault is not a vertical plane as it might appear on the surface, but is a complex zone with local disruption of geologic units beneath.
6. Wells south of the Chupines Fault produce limited amounts or have gone dry.
7. The main well of the Wang proposed subdivision draws from the Santa Margarita aquifer.
8. MCWRA recommended in the past that a pump test be performed on the Wang main well to determine what effect, if any, there is on the Seaside Basin. Apparently no such test has been performed. Such a test would be intended to indicate whether the well is drawing from the same aquifer as other wells in the Seaside Basin.
9. The review by the Wang’s independent Senior Hydrologist of existing hydrogeologic information in the vicinity of the Wang proposed subdivision states “These proposed Subdivision water supply wells are next to, near, or within the Chupines Fault zone which serves to delineate the southern boundary of the Laguna Seca Subarea.”
10. In the Decision, the Seaside Groundwater Basin is described in Section I.A as follows: “The boundaries of the Basin are depicted in Exhibit B of this Decision. Generally, the Seaside Basin is bounded by the Pacific Ocean on the west, the Salinas Valley on the north, the Toro Park area on the east, and Highways 68 and 218 on the south. The Seaside Basin consists of subareas, including the Coastal subarea and the Laguna Seca subarea in which geologic features form partial hydrogeologic barriers between the subareas.
11. Section III.O.1.b. of the Decision states: “Any non-party who is Producing or proposes to Produce Groundwater from the Seaside Basin in an amount equal to or greater than five (5) acre feet per year, may seek to become a Party to this Decision through (1) a stipulation for intervention entered into with the Watermaster or (2) any Party or the Watermaster filing a complaint against the non-party requesting that the non-party be joined in and bound by this Decision.”
September 5, 2012

Mr. Joseph W. Oliver
Monterey Peninsula Water Management District
5 Harris Court, Building G
P.O. Box 85
Monterey, CA 93942-0085

Re: Review of existing driller’s logs provided by the Monterey Peninsula Water Management District in the vicinity of the Wang proposed Subdivision (PLN #010422) in the Hidden Hills area of Monterey County, CA

Dear Joe,

The Technical Advisory Committee (TAC) to the Seaside Basin Water Master met in Monterey on August 8, 2012. I attended the meeting on behalf of the Wang proposed Subdivision (PLN #010422) that is located in the Hidden Hills area of Monterey County south of Highway 68. The TAC discussed the planned project and requested that the Monterey Peninsula Water Management District (MPWMD) provide copies of available and existing California Department of Water Resources (DWR) Well Completion Reports (WCRs; also known as driller’s logs) to me for review. In addition, the TAC suggested that cross sections may help to visualize the subsurface geology and hydraulic relationships between the proposed Subdivision wells and the Laguna Seca Subarea of the Seaside Basin.

The proposed Subdivision water supply wells are located south of, next to, or within the Chupines Fault zone which serves to delineate the southern boundary of the Laguna Seca Subarea. It has been assumed that if the wells were located south of the Chupines Fault then the wells are not under the authority of the Seaside Basin Water Master but would be under the jurisdiction of the MPWMD. This letter discusses briefly the review of the WCRs received from the MPWMD and presents three cross sections that were prepared by Clark Geological (2009).

Review of DWR Well Completion Reports

On August 10, 2012, I requested from the MPWMD all well logs in Sections 5 and 8 of Township 16 South, Range 2 East (16S/2E-5 and 8). In addition to the four wells installed for the proposed Subdivision, 17 WCRs were received from the MPWMD on August 17, 2012. All WCRs were for wells located in 16S/2E-5; no driller’s logs were received from 16S/2E-8; and one well log (07-11126) included in the package recorded the repair of an existing well. Hence, I reviewed twenty wells. The driller’s logs that were received varied in completeness and accuracy, both in technical quality and location coordinates. Relevant information and clarification remarks were written, initialed, and dated on the driller’s logs by MPWMD and additional pages were attached to many of the logs. Some of these attachments included: Monterey County drilling permit applications, geophysical logs, well profiles, location maps, DWR Well Data/Well Record sheets, MPWMD Well Data Sheets, and PG&E Pump Test Reports.
On August 24, 2012, I requested from MPWMD a map showing the corresponding well locations. The map from Google Earth was received on August 28, 2012. Figure 1 shows the approximate well locations identified by the MPWMD. The well locations were reviewed and were verified with information provided with the WCRs; no fieldwork was conducted to verify the well locations other than the wells installed for the proposed Subdivision. There were several (14 wells) undocumented wells (i.e., no WCRs) provided on the MPWMD map that are shown (yellow dots) without labels on Figure 1; four of those wells were north of Highway 68, while nine were adjacent to and south of Highway 68.

Table 1 summarizes the well construction information for all the wells (white dots and labels on the map) including the proposed Subdivision wells in red. The labels for each well on the map are either the Well permit number or the unique DWR “page” number (extreme left column of the table). Table 1 is arranged in two groups: (a) logs provided by the MPWMD and (b) wells installed for the proposed Subdivision. The wells are then arranged by the date of construction. Missing data in the table include estimated well head elevations and location coordinates while many of the WCRs do not include the non-pumping or static water levels (SWL) at the time of well construction. Most of the wells (63%) from the MPWMD database were designed, installed, and constructed without conducting a geophysical log which provides an objective geophysical description of the subsurface geology by inference from geophysical properties. The geophysical log for Well 02-051, water quality for all wells, and pumping test data were not included in the package received from the MPWMD.

In contrast, the four proposed Subdivision wells are very well documented including location, geophysical logs, water levels, construction details, pumping tests, and water quality. This information was used to evaluate the subsurface geology in the vicinity of the Chupines Fault. The proposed Subdivision wells exceed depths of 750 feet and were drilled at least to the Santa Margarita Sandstone - Monterey Formation (Tsm-Tm) contact and then some through the Monterey Formation. The Tsm-Tm contact is a critical marker to identify relative displacement and correlation of geologic units on opposite sides of the fracture zone or faults in this area. Well depths from the driller’s logs provided by the MPWMD ranged between 395 and 720 feet. Many of these wells were drilled to shallower depths which does not identify the depth to the key Tsm-Tm contact.

Two faults are recognized in the study area. The major fault is the Chupines Fault which trends at this location in an east-west direction and the minor Ord Terrace Fault or splay which abruptly begins in the vicinity of Well 02-072 and trends in a northwest direction. A splay fault is a minor fault that branches off of a larger fault; commonly major faults terminate in an array of splays (AGI, 2005). Clark Geological (2009) suggests that the structurally complex area may occupy a wide zone in the marginal valley north of the proposed Subdivision.

The MPWMD database included the Saunders Well (W2008 - now destroyed), which is located near the easternmost project wells (Wells 02-071, 03-01132, and 07-11024). Well W2534 (location unknown) is about 1,000 feet north of the western Subdivision well (Well 02-072). The remaining 14 wells are located adjacent to and north of Highway 68 and are too great a distance from the Chupines Fault to evaluate the
subsurface geology between the proposed Subdivision wells and the Laguna Seca Subarea. The closest well (W4722) is 2,850 feet from the eastern wells. Well W2534 is included in the cross sections discussed below.

In summary, the well logs provided by the MPWMD for 16S/2E-5 and 8 provided no additional useful information to evaluate the subsurface hydraulic connection between the proposed Subdivision wells and Laguna Seca Subarea. The wells were either too far from the Chupines Fault near the eastern wells (02-071, 03-01132, and 07-11024) or too shallow for the western well (02-072) to be useful. There is a large area between the Chupines Fault (proposed Subdivision wells) and Highway 68 that contains no wells and correlations between the project site and the Laguna Seca Subarea are, at best, speculative.

Review of Cross Sections

Clark Geological (2009) prepared three cross sections lines for the proposed project using the proposed Subdivision wells, three wells located in the Laguna Seca Subarea (Wells 01-014, 00-259, and W2534), and information from the geologic map. The location for Well W2534 is generally unknown according to the MPWMD. All three Laguna Seca Subarea wells used for the cross sections are too shallow and do not encounter the Tsm-Tm contact. Cross sections A-A’ and C-C’ are generally oblique from the Chupines Fault, while cross section B-B’ parallels the fault. Wells 01-014 and 00-259 are common to cross sections A-A’ and C-C’. Figure 2 shows the geologic map and the location of the cross sections. Figures 3 and 4 reproduce the cross sections (left side) and include cross sections that have been modified (right side) to show clearly that much of the subsurface correlations were speculative. Clark Geological noted these speculative correlations using a dashed and queried contact line but the modified cross sections explicitly show that limited available subsurface information was used to construct the cross sections.

In addition to the limited number of useful wells, Clark Geological used incorrect well head elevations and identified a pumping test on Well 02-072 that was never conducted (see page 3 of the Clark Geological report) - the pumping test data Clark Geological refers to was conducted on 02-071 in March 2003; I was unable to identify any historical water level data for Well 02-072, even on the WCR. The modified cross sections show the corrected water levels. Significantly, the water level for Well 02-071 (see cross section A-A’) is at a lower elevation than shown by Clark Geological which suggests that groundwater flows from Laguna Seca Subarea to the Chupines Fault (north to south) rather than from south to north. Clark Geological cross section C-C’ also shows that groundwater flow is from Well W2534 to Well 02-072 (north to south) while the revised cross section shows that groundwater flow is from south to north. Water level data used by Clark Geological was from existing information including driller’s logs and pumping tests; Water level data used for the modified and revised cross sections were collected in March 22, 2012 with their corresponding x, y, and z location coordinates using global positioning system (GPS) technology. I have included with this letter the original report by Clark Geological (2009) with some of my comments on the Clark Geological report.

In summary, the cross sections constructed by Clark Geological are highly speculative between the Chupines Fault and Highway 68 because of the lack of subsurface data, especially deep geological
information. Clark Geological did not measure water levels nor verified well head elevations but used water
levels from the WCRs and pumping tests.

References

Neuendorf, James P. Mehl, Jr., and Julia A. Jackson. Alexandria, Virginia

Wang property subdivision (PLN #10422) Monterey County, California. 10p. and 5 figures.

Closing

If you have any questions, please don't hesitate to call me at 510.444.1353.

Sincerely yours

[Signature]

David W. Abbott, PG, CHg
Senior Hydrogeologist
Daniel B. Stephens & Associates, Inc.

Attachments: Table 1 and Figures 1 - 4
Clark Geological (2009) report
Attachment 4

SEASIDE BASIN BOUNDARY LINE FROM EXHIBIT “B” OF THE DECISION

LAGUNA SECA

WELL 02-072
WELL 03-01132
WELLS 02-071 & 07-11024

10,000 FEET
SCALE
TO: Board of Directors

FROM: Robert S. Jaques, Technical Program Manager

MODIFIED AND APPROVED BY: Dewey D Evans, CEO

DATE: October 3, 2012

SUBJECT: Seaside Groundwater Basin Cross-Aquifer Contamination Wells Investigation Process and Conclusions

PURPOSE:
For the board to consider consolidation into the Watermaster database well records obtained during well investigations; and to consider ending further work regarding certain old and abandoned wells under Task I.3.d.of Watermaster RFS No. 2011-01 with MPWMD — Evaluate Coastal Wells for Cross-aquifer Contamination Potential.

RECOMMENDATIONS:
1. Add destroyed well records, including lithology, from wells newly identified by this work, to the Seaside Watermaster’s Database, so that an inclusive set of well records will exist in one location.

2. Because field investigations into well status found that it would be difficult to obtain and process these types of data, at this time do not perform any further work to:
   - Verify that seals are correctly installed and structurally sound in multi-completed wells and deep wells.
   - Video log older deep wells for structural integrity.
   - Refine model stratigraphy and interface location between the Santa Margarita Sandstone and Purisima Formation.

If seawater intrusion or some other form of contamination is detected, consider further examining the identified wells that are screened in more than one aquifer at that time.

BACKGROUND:
In 2010 and 2011 contracts executed with the MPWMD included evaluating coastal wells for cross-aquifer contamination potential. This work consisted of the following tasks, where are described in more detail in Attachment 1:

1. Field verifying selected older steel cased wells.
2. Inspecting well logs to assess proper seal placement to isolate aquifers.
4. Investigating video logging of selected wells suspected to be conduits for cross-contamination.
5. Identifying abandoned wells that are screened in the Santa Margarita aquifer.
This work was undertaken because if seawater intrusion were to reach any of the coastal wells in any aquifer, and if a well was constructed without proper seals to prevent cross-aquifer communication, or if deterioration of the well had compromised these seals, it would be possible for the intrusion to flow from one aquifer to another.

**DISCUSSION:**
Seaside Groundwater Basin wells were evaluated for contamination potential between two primary aquifers: the confined Santa Margarita aquifer and unconfined Paso Robles aquifer. The evaluation included reviewing data to assess the potential for contamination due to inadequate well seals. This analysis compiled well log data from multiple sources into a single database to facilitate identifying wells that may pose contamination risks based on screened intervals, age, construction material, and current status (e.g., abandoned).

The primary sources of cross-contamination between the primary aquifers within the Seaside Groundwater basin include: (1) cross-screened wells (i.e., wells screened in both the Paso Robles and Santa Margarita/Purissima aquifers), (2) poorly-constructed wells (i.e., inadequate seals between aquifers), (3) cracked casing due to age and/or deterioration of construction materials, and (4) abandoned or improperly destroyed wells.

In total, 91 additional well records (an increase of 47%) were identified as part of this investigation and merged with 132 wells from the Seaside Watermaster database and 56 from the MPWMD database, resulting in a total of 279 identified wells records. The vast majority of the newly identified wells were located within the Northern and Southern Coastal subareas of the Seaside Basin.

The current status of the identified well records within the basin was categorized as follows:
- 52% - status unknown
- 18% - active
- 10% - inactive
- 15% - destroyed
- 5% - abandoned.

With regard to well age and casing material:
- The reported ages of 33% of the wells are unknown.
- The reported casing material of roughly 56% of the wells is unknown, but wells completed prior to 1970 are likely to be cased with steel.
- Steel casings (susceptible to deterioration over time) line 19% of the wells whereas PVC casings line the remaining 25%.
- Two wells were not cased.

Of the 176 identified wells in the coastal subareas of the basin, roughly 60% (104 wells) are believed to be screened in multiple aquifers. Of these cross-screened wells, 66 are screened in two aquifers and 38 are screened in three aquifers. Twenty six of these cross-screened wells are over 40 years old and have steel casing materials which are susceptible to deterioration.

Site investigations into the status of the cross-screened wells and wells identified that may be susceptible to deterioration, were performed on 59 of these wells. This investigation found that 18 are cross-screened over one or multiple aquifers, 33 were destroyed, and 8 were not locatable.

This work led to the Recommendations described above.
The full Technical Memorandum describing this work is contained in the August 8, 2012 posting on the Watermaster’s website, under the title “Seaside Cross Contamination Memo.”

**FISCAL IMPACT:**
Consolidation of well records as recommended above would be performed within the $4,700 budgeted for Task I.3.d. of the Seaside Basin Management and Monitoring Program FY 2013 Work Plan.

**ATTACHMENTS:**
(1) Scope of Work Pertaining to the Cross Aquifer Contamination Evaluation, taken from the 2011 Management and Monitoring Program.
Scope of Work Pertaining to the Cross Aquifer Contamination Evaluation

1. **Field verifying selected older steel cased wells.** For wells older than 30 years that were constructed with steel casings, land owners were contacted and interviewed, site investigations were conducted using a metal detector (where appropriate), the condition of the well head was documented, total available well depth was determined, and water levels were collected when possible.

2. **Inspecting well logs to assess proper seal placement to isolate aquifers.** For wells that penetrate multiple aquifers but are screened in one, well logs were reviewed to determine if surface and/or transition seals were installed, and assessed as to the risk associated with those that did not contain sufficient seals.

3. **Investigating the Santa Margarita – Purisima interface.** Wells constructed with PVC casings provide the opportunity to collect resistivity information via an induction log. This information could be used to better understand the transition between the Santa Margarita Sandstone and the Purisima Formation. Wells that are candidates for induction logging were identified and field verified, and a list of those wells was prepared for possible future use by the Watermaster.

4. **Investigating video logging of selected wells suspected to be conduits for cross-contamination.** Video logs verify if a well has been compromised and is allowing groundwater flow between aquifer units. A list of wells recommended for video logging was developed for use in the event the Watermaster wishes to pursue this work sometime in the future.

5. **Identifying abandoned wells that are screened in the Santa Margarita aquifer.** The Santa Margarita Sandstone is the primary production aquifer for drinking water in the Seaside Basin and is also the target aquifer currently used for Aquifer Storage and Recovery and potential future aquifer replenishment projects. Abandoned wells screened solely in this aquifer could provide a direct conduit for seawater intrusion. A list of such abandoned wells was prepared for use in the event the Watermaster wishes to pursue further work on this sometime in the future.
TO:        Board of Directors

FROM:     Dewey D Evans, CEO

DATE:     October 3, 2012

SUBJECT: Revise Seaside Groundwater Basin Watermaster Rules and Regulations Section 3.3 Advisory Committees language to allow committee or subcommittee members to appoint the committee or subcommittee Chairperson and any other officers.

PURPOSE: As stated in the Court Decision that created the Watermaster that governs the Seaside Groundwater Basin, the Board of Directors was required to adopt a set of Rules and Regulations to be used to carry out its duties, powers and responsibilities under the provisions of the Court Decision. It is also stated in the Decision that the Rules and Regulations would be amended from time to time as deemed necessary.

RECOMMENDATION: Approve a revision to the board-adopted Watermaster Rules and Regulations Section 3.3 third sentence wording from: “The Watermaster Board shall appoint the Chairperson of any such committee or subcommittee” to read “Committee or subcommittee members shall elect the Chairperson and any other officers of any such committee or subcommittee.”

DISCUSSION: The Watermaster Technical Advisory Committee (TAC) has on occasion encountered challenges in properly chairing meetings over the past several years due to the board-appointed Chair, Diana Ingersoll not being in attendance at TAC meetings. The TAC has an elected Vice Chair that, at times, has also been unable to attend, leaving no designated TAC member to chair meetings.

Although the Budget and Finance Committee has not encountered similar challenges as the TAC regarding the chairing of meetings, the recommended revisions to Section 3.3 of the Rules and Regulations would give all committees the flexibility to install a chairperson and a vice chairperson whose schedules allow attendance at most meetings, and to replace a chairperson that develops meeting schedule conflicts.

Election of a chairperson can be accomplished by having the acting Chair call for nominations from the members of the body at a regularly scheduled meeting, and then deciding by oral vote at that meeting. This is the approach the two standing committees and any subcommittees appointed by the board could take upon approval of the above recommended revisions to the Watermaster Rules and Regulations.

FISCAL IMPACT: None

ATTACHMENTS: 1) Red-line version Watermaster Rules and Regulations, Section 3.3
SECTION 3.3
RULES AND REGULATIONS
OF THE
SEASIDE GROUNDWATER BASIN WATERMASTER

Page 2...

3.3 Advisory Committees

The Watermaster Board may establish such committees and subcommittees as it deems necessary to advise Watermaster Board on specific issues. Persons appointed to such committees or subcommittees need not be a Member. The Watermaster Board shall appoint the Chairperson of any such committee or subcommittee, Committee or subcommittee members shall elect the Chairperson and any other officers for any such committee or subcommittee. No more than five (5) Members or their Alternates shall sit on any individual committee or subcommittee. Each committee member shall be entitled to one (1) vote only.

3.3.1 Standing Committees

The Watermaster Board has established the following standing committees.

A. Technical Advisory Committee

The purpose of the Technical Advisory Committee is to advise the Watermaster Board regarding implementation of the physical solution, and to perform such specific tasks as the Watermaster assigns to the Technical Advisory Committee from time to time. The Technical Advisory Committee shall be made up of one committee member for each voting Member of the Board of Directors and one member of the Public duly voted on by the Board of Directors for a total of ten, (10) committee members. Committee members representing each Board voting member will be chosen by representatives from that Member entity. The individual voted on by the Board must reside within the boundaries of the Seaside Groundwater Basin and will serve for a two year term and could be reappointed if the Board so decides. At its sole discretion the Board may remove and/or replace the Public member at any time. A minimum of 6 members shall be required to constitute a quorum of the Technical Advisory Committee.

B. Budget and Finance Committee

The purpose of the Budget and Finance Committee is to advise the Watermaster Board regarding the funding of implementation of the physical solution, including operations of the Watermaster.
TO: Board of Directors

FROM: Laura Dadiw, Assistant to the CEO
APPROVED BY: Dewey D. Evans, CEO

DATE: October 3, 2012

SUBJECT: Clarification of the schedule of repayment by California American Water (CAW) of artificial or in-lieu replenishment water to the Basin per the terms and conditions of the Memorandum of Understanding (MOU) between Watermaster and CAW executed January 21 & 29, 2009 (copy attached).

------------------------------------------------------------------------------------------------------------------

PURPOSE:
Consider revisions to the language of the MOU between the Watermaster and CAW in order to clarify the schedule of repayment by CAW of artificial or in-lieu replenishment water to the Basin.

RECOMMENDATION:
Consider directing staff to work with legal counsel and CAW to revise the language in Section 2. (a) of the agreement within the MOU between CAW and the Watermaster to clarify the schedule of repayment by CAW of artificial or in-lieu replenishment water to the Basin.

BACKGROUND:
On March 5, 2008 CAW submitted its first credit request to the Watermaster in the amount of $13,469,120.00 for expenditures on the regional water supply project, the credit to be applied against replenishment fees assessed by Watermaster. On May 2, 2008, CAW submitted a “white paper” as augmentation to the initial correspondence with a revised credit request of $12,305,924.00.

The Watermaster Budget/Finance Committee met on May 13, 2008, and again on June 3, 2008 and established a need for examination of the details of costs involved in the Coastal Water Project and other replenishment projects and the degree and assurance of benefit to the Basin. Subsequently, the City of Seaside requested a guaranty from CAW that the Coastal Water Project desalination plant in Moss Landing – the viable regional water supply project at the time – would provide replenishment water in the future to avoid the impact of drought or seawater intrusion to the extent that CAW over-pumped through time under the judgment.

A draft MOU was drawn up by the City of Seaside’s legal counsel and CAW that contained conditions of the extension of credit to ensure replenishment of the Basin by water from CAW projects operational in the years ahead. The MOU was approved with revisions by the Watermaster Board at its December 3, 2008 meeting.

DISCUSSION:
Although the MOU stipulates that CAW will ensure replenishment of the Basin with water from the Coastal Water Project or a comparable alternative project, at no cost to Watermaster, in an amount equivalent to the quantity of water that CAW has overproduced during Basin adjudication, there is
currently no language as to the schedule of repayment by CAW other than “on a schedule that is feasible” per Section 2. (a) of the agreement. There is no language within the Decision itself that clarifies the schedule of repayment.

Director Sabolsice has suggested defining the MOU term "feasible" and detailing a repayment schedule. The timing to do so is opportune as the concept for the latest regional water project is forming and sizing the project to provide the water needed for repayment by CAW to meet the terms of the MOU could be incorporated into project specifications.

**FISCAL IMPACT:**
Anticipated minimal for staff time that may be required to provide data on CAW overproduction and Replenishment Assessment fees incurred through the years; similar data has already been gathered for the recent modeling work and, if sufficient in scope, could be provided at no additional cost.

**ATTACHMENTS:**
MEMORANDUM OF UNDERSTANDING BETWEEN SEASIDE BASIN WATERMASTER AND CALIFORNIA AMERICAN WATER

This Memorandum of Understanding between the Seaside Basin Watermaster (Watermaster) and California American Water (CAW) is entered into pursuant to a motion passed by Watermaster on December 3, 2008 with respect to the following:

RECITALS

A. The Amended Decision in Case No. M66343 filed February 9, 2007 (Decision) provides that Standard Producers that exceed their allocation of Natural Safe Yield are subject to a Replenishment Assessment for each acre foot of Over-Production for each Water Year. Under Section III.M1.d of the Decision, CAW has the right to claim a credit against its Replenishment Assessment (Replenishment Credit) for costs incurred for water supply augmentation that has or will result in replenishment of the Basin.

B. Watermaster has calculated the Replenishment Assessments for CAW for Fiscal Year 2006 (Water Year 05/06), Fiscal Year 2007 (Water Year 06/07) and Fiscal Year 2008 (Water Year 07/08) in the total amount of $10,166,640. Pursuant to Section III.M.1.d of the Decision, CAW applied for a Replenishment Credit for expenditures totaling $12,305,924.00 that CAW has made through calendar year 2006 for water supply augmentation associated with pre-construction expenses for the Coastal Water Project. The request was made on March 5, 2008 and supplemented with further information on May 2, 2008.

C. Watermaster approved CAW's request for a Replenishment Credit in the amount of $12,305,924.00, subject to conditions set forth in the motion which provide that CAW will ensure replenishment of the Basin with water from the Coastal Water Project, or a comparable alternative project, at no cost to Watermaster, in an amount equivalent to the quantity of water that CAW has overproduced, and thus incurred a Replenishment Assessment obligation for Fiscal Years 2006, 2007 and 2008.

D. Watermaster and CAW desire to enter into this Memorandum of Understanding regarding future CAW requests pursuant to Section III.M.1.d of the Decision for Replenishment Credits against future Replenishment Assessment obligations.
AGREEMENT

Watermaster and CAW agree as follows:

1. At the end of each Water Year, Watermaster shall determine the Replenishment Assessments in accord with Section III.L.3.j.iii of the Decision. Within 40 days of CAW's receipt of Watermaster's notice of Replenishment Assessment against CAW for the preceding Water Year, CAW shall provide Watermaster any claim for a Replenishment Credit pursuant to Section III.M.1.d of the Decision. Such claim shall be based upon expenditures for a water supply augmentation project (such as the Coastal Water Project and/or other projects that produce water that can be used to replenish the Seaside Basin (hereinafter "Project(s)") that CAW contends has or will result in replenishment of the Basin.

2. Watermaster agrees that the Project will result in replenishment of the Basin, and therefore:

   (a) Watermaster hereby grants CAW's current request for a Replenishment Credit in the amount of $12,305,924.00. Such Credit shall be immediately applied to CAW's Replenishment Assessments for Fiscal 2006 (Water Year 05/06), Fiscal Year 2007 (Water Year 06/07) and Fiscal Year 2008 (Water Year 07/08), which total $10,166,640, subject to the condition that, upon completion and implementation of a water supply augmentation Project, CAW shall provide Watermaster, at no cost to Watermaster, and on a schedule that is Feasible either (1) water for Artificial Replenishment through direct replenishment and/or (2) cause in-lieu replenishment of the Basin by forbearing to produce water to which CAW is entitled as CAW's share of the Native Safe Yield, in an amount equal to CAW's total acre feet of Over-Production for the Water Years 05-06, 06-07, and 07-08, which total is 6,390.1 acre feet. Future CAW requests for Replenishment Credit shall be granted subject to the same conditions set forth in this Section 2(a).

   (b) In future Water years Watermaster shall address future requests by CAW for a Replenishment Credit as follows:

      i. For years in which Watermaster declares that water for Artificial Replenishment is not available, Watermaster shall grant CAW's request for a Replenishment Credit for that Water year, subject to CAW's obligation to provide future Artificial Replenishment as set forth in Section 2(a) herein.

      ii. For years in which Watermaster declares that water for Artificial Replenishment is available from sources other than a CAW water supply augmentation Project, Watermaster shall have the option of either: (i) requiring CAW to pay all or part of CAW's Replenishment Assessment for that Water Year for the purpose of providing Watermaster with funds to obtain Artificial Replenishment in sufficient quantities to replenish that quantity of Over-Production for which CAW pays a Replenishment Assessment; or (ii) granting CAW's request for a Replenishment Credit subject to CAW's obligation to provide future Artificial Replenishment as provided for in section 2(a) herein. If Watermaster is unable to purchase Replenishment Water equal to CAW's total Over-Production for that Water Year,
the Watermaster shall grant CAW a Replenishment Credit for the balance of 
CAW's Over-Production for that Water year, subject to CAW's obligation to 
provide future Artificial Replenishment as set forth in Section 2(a) herein.

3. The sum of the acre feet of water to be provided to Watermaster for replenishment 
either by direct replenishment and/or in-lieu replenishment for each Water Year shall equal the 
number of acre feet for which CAW is assessed a Replenishment Assessment for the Water Year 
at issue. In no event shall the total amount of direct replenishment and/or forbearance by CAW 
be greater than the cumulative total of acre feet of CAW's Over-Production for all Water Years 
for which CAW is granted Replenishment Credits.

4. Upon completion and implementation of the Project(s), at any stage in CAW's 
direct replenishment and/or in-lieu replenishment pursuant to conditions set by Watermaster 
upon granting of Replenishment Credits, CAW shall have the right to request that the Court 
determine that, based upon principles of the physical solution set forth in the Decision, the Basin 
has been replenished in an amount sufficient to prevent seawater intrusion or the Basin has been 
protected by alternative seawater intrusion preventive measures. Upon such determination by 
the Court, CAW's obligations under conditions set by Watermaster upon granting of 
Replenishment Credits and any obligation under this Memorandum of Understanding to provide 
direct replenishment water and/or in-lieu replenishment at no cost to Watermaster shall be 
deemed fully satisfied.

5. All terms used in this Memorandum of Understanding that are defined terms in 
the Decision shall be defined herein as set forth in Section III.A of the Decision.

IN WITNESS WHEREOF the Parties hereby agree to the full performance of the terms 
set forth herein.

SEASIDE BASIN WATERMASTER                        CALIFORNIA AMERICAN WATER

Chair, Seaside Basin Watermaster                      President, California American Water
Date: January 21, 2009                                 Date: 1-29-2009
TO:        Board of Directors

FROM: Dewey D Evans, CEO

DATE:    October 3, 2012

SUBJECT: Change in the November 2012 Watermaster Board Meeting Date

PURPOSE: Schedule the November 2012 Watermaster Board Meeting at a later date to allow for the Technical Advisory Committee (“TAC”) to meet and develop for board presentation the Annual Report to Court.

RECOMMENDATIONS: Discuss and consider rescheduling its November 7, 2012 Regular Board Meeting to a special meeting to be held on November 28, 2012 at 2:00 p.m. at the MRWPCA board room.

DISCUSSION: Watermaster is required by the Decision to file an Annual Report to Court detailing work performed and actions taken during the fiscal year (January 1 through December 31) and the previous water year (October 1 through September 30). The deadline established by the Court for filing of the report is December 15th.

As the TAC is responsible for developing a major portion of the report, the timing for preparation of the final draft is contingent on the information needed for the report becoming available to the TAC. The TAC holds its meeting regularly the second Wednesday of each month. Due to the timing of the receipt of year end information, the TAC is having a meeting on October 10, 2012: Final production figures for water year 2012 will not be available until mid-October, and the Seawater Intrusion Analysis Report prepared by Watermaster consultant Hydrometrics will not be completed until late October due to Hydrometrics not having the information needed to complete the report until that time. The TAC is scheduled to meet November 14, 2011, to review the draft Annual Report before presentation to the Watermaster board.

Due to there being limited time for changes to be made to the Annual Report, if deemed necessary by the TAC, at its November 14th meeting, and due to November 21st being the day before Thanksgiving, it is recommended that a Watermaster Special Board Meeting be held Wednesday, November 28, 2012 at the regular time and location. The board could consider the Annual Report to Court among other year-end items to be planned to be included in the agenda for action by the Board. A November 28th board meeting would most likely allow for cancellation of the December 2012 regular board meeting.

FISCAL IMPACT: None

ATTACHMENTS: None
ITEM NO. IX.A.2.

BUDGET & FINANCE COMMITTEE
with input from
TECHNICAL ADVISORY COMMITTEE (TAC)
TO:            Board of Directors  
FROM:          Dewey D Evans, CEO  
DATE:          October 3, 2012  
SUBJECT:       Unit Cost for Water Year 2012/13 Over Production Replenishment Assessment Amount  

RECOMMENDATION:

For the last three years the unit cost for over production replenishment assessment has remained at $2,780 per acre foot. Due to the lack of more supportable data the recommendation is to continue using the same $2,780 for the Water Year 2012/2013.
TO: Board of Directors

FROM: Dewey D Evans, CEO

DATE: October 3, 2012

SUBJECT: Proposed Fiscal Year 2013 Annual Administrative Fund

PURPOSE:
To advise the Board of the estimated amount necessary to properly fund the Administrative oversight portion of the Seaside Groundwater Basin Watermaster for Fiscal Year 2013

RECOMMENDATION:
That the Board consider approving the attached proposed Administrative Fund Budget for Fiscal Year 2013

DISCUSSION:
The Watermaster Budget and Finance Committee met on September 21, 2012 and reviewed and unanimously voted to recommend for approval the attached proposed Administrative Fund Budget For FY2013. When comparing actual expenditures to estimates we found that the rollover of unspent funds were not as large as we reported to the Board last year. That led to the discovery that we spent approximately $10,000 of the Watermaster’s reserve funds. That means that in order to bring the reserve back up to $25,000 the Administrative Assessment will be $70,000 for the 2013 fiscal year.

That means the individual assessments for the administrative portion of the budget will be:

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<table>
<thead>
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<tbody>
<tr>
<td>California American Water</td>
<td>83%</td>
<td>$58,100</td>
</tr>
<tr>
<td>City of Seaside</td>
<td>14.4%</td>
<td>10,080</td>
</tr>
<tr>
<td>City of Sand City</td>
<td>2.6%</td>
<td>1,820</td>
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<tr>
<td>Total Assessment for</td>
<td></td>
<td>$70,000</td>
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The court decision states that the next year fiscal year’s budgets must be approved by the Board of Directors no later than the end of October each year in order for the tentative budgets to be circulated to each Party to the adjudication “no earlier than November 1 and no later than November 15” of each fiscal year.

FISCAL IMPACT:
Provides sufficient funds for the proposed administrative oversight financial spending plan for next fiscal year 2013.

ATTACHMENTS:
1) Proposed Administrative Fund Budget Schedule
### Seaside Groundwater Basin Watermaster
#### Administrative Fund

#### Proposed Budget

<table>
<thead>
<tr>
<th></th>
<th>2012 Adopted Budget</th>
<th>2012 Estimated</th>
<th>2013 Proposed Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assessment Income</strong></td>
<td></td>
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</tr>
<tr>
<td>Reserve</td>
<td>$25,000</td>
<td>$25,000</td>
<td>$15,000</td>
</tr>
<tr>
<td>FY Rollover</td>
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<tr>
<td>Administrative Fund</td>
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<td>-</td>
<td>70,000</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>85,000</td>
<td>50,000</td>
<td>85,000</td>
</tr>
</tbody>
</table>

| **Proposed Budget**  |                      |                |                      |
| Contractual Services - Administrative | 60,000 | 60,000 | 60,000 |
| Total Expenses       | 60,000              | 60,000         | 60,000               |
| Total Available      | 25,000              | (10,000)       | 25,000               |
| Less Reserve         | 25,000              | 25,000         | 25,000               |
| **Net Available**    | -                   | -              | -                    |
TO:   Board of Directors

FROM:   Robert S. Jaques, Technical Program Manager

MODIFIED AND APPROVED BY: Dewey D Evans, CEO

DATE:   October 3, 2012


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RECOMMENDATION:

It is recommended that the Board approve the attached M&MP FY 2013 Work Plan and M&MP O&M and Capital Budgets for FY 2013. It is important to point out that because there is sufficient rollover or unspent funds that the Budget and Finance Committee members are recommending to the Board that there will be no need to assess a fee for FY2013.

BACKGROUND:

At its September 12, 2012 meeting the TAC approved the Proposed FY 2013 M&MP Work Plan, and proposed 2013 M&MP Operations and Capital Budgets, and recommended that the Board approve these. On September 21, 2012 the Budget and Finance Committee reviewed the TAC-approved Work Plan and Budgets, and approved these documents with the following qualification: Use carryover funds projected from FY 2012 to fund the FY 2013 Operations Budget

DISCUSSION:

The M&MP 2013 Work Plan which is attached reflects revisions recommended by the TAC when it reviewed the Draft M&MP 2013 Work Plan at its August 8, 2012 meeting, as well as the following revisions that resulted from subsequent discussions with MPWMD and HydroMetrics representatives:

• Installation of additional dataloggers on certain wells under Task I.2.b.2
• Completing well retrofits and providing ongoing maintenance funding for the sample collection equipment under Task I.2.b.3
• Incorporating into the Watermaster’s Database data from wells that were newly identified by the work performed in 2012 under Task I.3.d (considered under item IX.A.1.b) above.
• Compiling historical and current water quality data in the coastal area to provide more in depth evaluation of conditions in the shallow Dune Sand/Aromas Sand aquifer in the vicinity of the Sand City Public Works well, where unique water quality conditions and variability have recently been observed as discussed at TAC meetings. This work is under Task I.4.b.

As shown in the attachments, the proposed 2013 M&MP Operations Budget is $1,560 higher than the 2012 Budget. This is in part due to the additional work added to the scope of the Work Plan this year, as described above, and to increases in hourly rates by both MPWMD and HydroMetrics.

MPWMD’s hourly rates (with very minor exception) have not changed since 2007. MPWMD’s new CFO has been updating rates for all MPWMD staff labor and revisions are being incorporated into MPWMD’s updated Rules & Regulations, so MPWMD must apply those updated rates in all of its contract work.
Even with the adjusted rates, they are well below the rates charged by consulting firms doing equivalent work in this area.

In my negotiations with MPWMD on their contracts for 2013, we were able to largely compensate for the increased hourly rates and the additional scope items by reducing, where possible, the time spent on various tasks compared to previous years’ contracts with MPWMD.

The proposed 2013 budget also includes only modest cost increases for the work HydroMetrics performs.

I am not recommending that any new monitoring wells be installed in 2013. Consequently, it is proposed that no monies be budgeted in the M&MP Capital Budget for 2013.

ATTACHMENTS:
1. Proposed 2013 M&MP Work Plan
2. Proposed 2013 M&MP Operations Budget
3. Proposed 2013 M&MP Capital Budget
Seaside Groundwater Basin Management and Monitoring Program
FY 2013 Work Plan

The tasks outlined below are those that are anticipated to be performed during 2013. Some Tasks listed below are specific to 2013, while others Tasks recur throughout the program, such as data collection and database entry, and Program Administration Tasks.

Within the context of this document the term “Consultant” refers either to a firm providing professional engineering or other types of technical services, or to the Monterey Peninsula Water Management District (MPWMD). The term “Contractor” refers to a firm providing construction or field services such as well drilling, induction logging, or meter calibration.

M.1 Program Administration

M.1.a Project Budget and Controls ($0)
Consultants will provide monthly or bimonthly invoices to the Watermaster for work performed under their contracts with the Watermaster. Consultants will perform maintenance of their internal budgets and schedules, and management of their subconsultants. The Watermaster will perform management of its Consultants.

M.1.b Assist with Board and TAC Agendas ($0)
Watermaster staff will prepare Board and TAC meeting agenda materials. No assistance from Consultants is expected to be necessary to accomplish this Task.

M.1.c & M.1.d Preparation for and Attendance at Meetings ($5,500)
The Consultants' work will require internal meetings and possibly meetings with outside governmental agencies and the public. For meetings with outside agencies, other Consultants, or any other parties which are necessary for the conduct of the work of their contracts, the Consultants will set up the meetings and prepare agendas and meeting minutes to facilitate the meetings. These may include planning and review meetings with Watermaster staff. The costs for these meetings will be included in their contracts, under the specific Tasks and/or subtasks to which the meetings relate. The only meeting costs that will be incurred under Tasks M.1.c and M.1.d will be:

- Those associated with attendance at TAC meetings (either in person or by teleconference connection), including providing written monthly progress reports to the Watermaster for inclusion in the agenda packets for the TAC meetings, when requested by the Watermaster to do so. These progress reports will typically include project progress that has been made, problem identification and resolution, and planned upcoming work.
- From time to time when Watermaster staff asks Consultants to make special presentations to the Watermaster Board and/or the TAC, and which are not included in the Consultant's contracts for other tasks.

Appropriate Consultant representatives will attend TAC meetings when requested to do so by Watermaster Staff (either in person or by teleconference connection), but will not be asked to prepare agendas or meeting minutes. As necessary, Consultants may provide oral updates to their progress reports (prepared under Task M.1.d) at the TAC meetings.

M.1.e Peer Review of Documents and Reports ($3,100)
When requested by the Watermaster staff, Consultants may be asked to assist the TAC and the Watermaster staff with peer reviews of documents and reports prepared by various other Watermaster Consultants and/or entities.

M.1.f QA/QC ($0)
A Consultant (MPWMD) will provide general QA/QC support over the Seaside Basin Monitoring and Management Program.
I. 2 Comprehensive Basin Production, Water Level and Water Quality Monitoring Program

I. 2. a. Database Management

I. 2. a. 1 Conduct Ongoing Data Entry and Database Maintenance/Enhancement ($11,724)
The database will be maintained by a Consultant (MPWMD) performing this work for the Watermaster. MPWMD will enter new data into the consolidated database, including water production volumes, water quality and water level data, and such other data as may be appropriate. Another Consultant will periodically post database information to the Watermaster’s website, so it will be accessible to the public and other interested parties. No enhancements to the database are anticipated during 2013.

I. 2. a. 2 Verify Accuracy of Production Well Meters ($0)
To ensure that water production data is accurate, the well meters of the major producers were verified for accuracy during 2009. No additional work of this type is anticipated during 2013.

I. 2. b. Data Collection Program

I. 2. b. 1 Site Representation and Selection. ($0)
The monitoring well network review that was started in 2008 has been completed, and sites have been identified where future monitoring well(s) could be installed, if it is deemed necessary to do so in order to fill in data gaps. No further work of this type is anticipated in 2013.

I. 2. b. 2 Collect Monthly Manual Water Levels. ($7,076)
Each of the monitoring wells will be visited on a monthly basis. Water levels will be determined by either taking manual water levels using an electric sounder, or by dataloggers. Pursuant to the Management and Monitoring Program approved by the Court in 2006, in 2013 wells at 2 additional sites in the Laguna Seca Subarea will be equipped with dataloggers taking measurements in two aquifers at each site. The cost included in this Task for equipping these additional wells is $2,400. Also included in the cost for this Task is the purchase of one replacement datalogger @ $500.

I. 2. b. 3 Collect Quarterly Water Quality Samples. ($48,738)
Water quality data will be collected quarterly from certain of the monitoring wells. In 2012 water quality analyses were expanded to include barium and iodide ions, to determine the potential benefit of performing these additional analyses. These two parameters have been useful in analyzing seawater intrusion potential in other vulnerable coastal groundwater basins, and are briefly mentioned in the Watermaster’s annual Seawater Intrusion Analysis Reports. These parameters were added to the annual water quality sampling list for the four 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). Barium and iodide analyses will continue being performed in 2013.

Water quality data may come from water quality samples that are taken from these wells and submitted to a State Certified analytic laboratory for general mineral and physical suite of analyses, or the data may come from induction logging of these wells and/or other data gathering techniques. The Consultant selected to perform this work will make this judgment based on consideration of costs and other factors.

Under this Task in 2013 retrofitting will be completed on the wells that are sampled on an annual basis to use the new low-flow purge approach for getting water quality samples. The wells that are sampled quarterly have previously been retrofitted, and all except two of the wells that are sampled annually have been retrofitted. These two wells are FO-9 (Shallow) and FO-9 (Deep). The cost included in this Task to retrofit these two wells in 2013 is $1,500.
I. 2. b. 4
Update Program Schedule and Standard Operating Procedures. (S0)

All recommendations from prior reviews of the data collection program have been implemented. No additional work of this type is anticipated in 2013.

I. 2. b. 5.
Monitor Well Construction (S0)

An additional monitoring well was installed in 2009. No further work of this type is anticipated in 2013.

I. 2. b. 6
Reports ($5,448)

The groundwater level and quality monitoring will be conducted on a monthly, quarterly, and annual basis, as described in the Consultant’s Scope of Work. Reports summarizing data collected and analyzed will be submitted to the Watermaster on a schedule to be established during the year, and will consist of:

- One combined report summarizing the water production data and summarizing and analyzing the water quality and water level data from the 1st & 2nd Quarters of the Water Year.
- One annual report summarizing the water production data and summarizing and analyzing the water quality and water level data from the 3rd & 4th Quarters of the Water Year, and containing tables consolidating the data from the quarterly reports and a narrative summarization of the findings, conclusions, and recommendations from the quarterly reports. This annual report may include, as attachments, each of the quarterly reports.


I. 3. a.
Enhanced Seaside Basin Groundwater Model (Costs listed in subtasks below)

The Watermaster and its consultants use a Groundwater Model for basin management purposes.

I. 3. a. 1
Update the Existing Model (S0)

The existing Model, described in the report titled “Groundwater Flow and Transport Model” dated October 1, 2007, was updated in 2009 in order to develop protective water levels, and to evaluate replenishment scenarios and develop answers to Basin management questions (Tasks I.3.a.2 and I.3.a.3). No further work of this type is anticipated in 2013.

I. 3. a. 2
Develop Protective Water Levels ($25,000)

A series of cross-sectional models was created in 2009 in order to develop protective water levels for selected production wells, as well as for the Basin as a whole. This work is discussed in Hydrometrics’ “Seaside Groundwater Basin Protective Water Elevations Technical Memorandum.” In subsequent years further work was scheduled and budgeted to be done to refine these protective water levels to find the most cost-effective approach to provide the desired degree of protection. However, not all of the information needed to perform the refinements was available in those years, so this Task has been rescheduled to occur in 2013.
<table>
<thead>
<tr>
<th>I. 3. a. 3</th>
<th>Evaluate Replenishment Scenarios and Develop Answers to Basin Management Questions ($25,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>In 2009 the updated Model was used to evaluate different scenarios to determine such things as the most effective methods of using supplemental water sources to replenish the Basin and/or to assess the impacts of pumping redistribution. This work is described in HydroMetrics’ “Seaside Groundwater Basin Groundwater Model Report.” In 2010 HydroMetrics used the updated Model to develop answers to some questions associated with Basin management. If requested by the Watermaster additional work may be performed in 2013 to answer additional questions.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>I. 3. b.</th>
<th>Complete Preparation of Basin Management Action Plan ($0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Watermaster’s Consultant completed preparation of the Basin Management Action Plan (BMAP) in February 2009. The BMAP serves as the Watermaster’s long-term seawater intrusion prevention plan. The Sections that are included in the BMAP are: Executive Summary Section 1 – Background and Purpose Section 2 – State of the Seaside Groundwater Basin Section 3 – Supplemental Water Supplies Section 4 – Groundwater Management Actions Section 5 – Recommended Management Strategies Section 6 – References The only work which is anticipated to be performed on the BMAP in 2013 is discussed under Task I. 3. c.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>I. 3. c.</th>
<th>Refine and/or Update the Basin Management Action Plan ($25,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>During 2013 it may be beneficial to update the BMAP based on new data, and/or knowledge that is gained from the work described under Tasks I. 3. a. 2 and/or I. 3. a. 3. Such work might involve issues pertaining to Basin storage capacity, water storage rights, or pumping redistribution strategies. This work has been scheduled and budgeted in several of the preceding years, but not all of the information needed to update the BMAP was available at those times. Therefore, the updating has been rescheduled to occur in 2013. This task is included primarily for budgeting purposes in the event such work is deemed necessary.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>I. 3. d.</th>
<th>Evaluate Coastal Wells for Cross-Aquifer Contamination Potential ($4,700)</th>
</tr>
</thead>
<tbody>
<tr>
<td>If seawater intrusion were to reach any of the coastal wells in any aquifer, and if a well was constructed without proper seals to prevent cross-aquifer communication, or if deterioration of the well had compromised these seals, it would be possible for the intrusion to flow from one aquifer to another. An evaluation of this was completed in 2012 and is described in MPWMD’s Memorandum entitled “Summary of Seaside Groundwater Basin Cross-Aquifer Contamination Wells Investigation Process and Conclusions” dated August 8, 2012. This Memorandum did not recommend performing any further work on this matter at this time, other than to incorporate into the Watermaster’s Database data from wells that were newly identified by the work performed in 2012.</td>
<td></td>
</tr>
</tbody>
</table>

---

### I. 4 Seawater Intrusion Response Plan (formerly referred to as the Seawater Intrusion Contingency Plan)

<table>
<thead>
<tr>
<th>I. 4. a.</th>
<th>Oversight of Seawater Intrusion Detection and Tracking ($4,664)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consultants will provide general oversight over the Seawater intrusion detection program.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>I. 4. b.</th>
<th>Focused Hydrogeologic Evaluation ($7,520)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Consultant will compile historical and current water quality data in the coastal area to provide more in-depth evaluation of conditions in the shallow Dune Sand/Aromas Sand aquifer in the vicinity of the Sand City Public Works well, where unique water quality conditions and variability have recently been observed as discussed at TAC meetings. The results of this work will be summarized in a brief Technical Memorandum with conclusions and recommendations.</td>
<td></td>
</tr>
<tr>
<td><strong>I. 4. c.</strong></td>
<td><strong>Annual Report- Seawater Intrusion Analysis ($25,750)</strong></td>
</tr>
<tr>
<td>-------------</td>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td><strong>At the end of each water year, a Consultant will reanalyze all water quality data. Semi-annual chloride concentration maps will be produced for each aquifer in the basin. Time series graphs, trilinear graphs, and stiffness diagram comparisons will be updated with new data. The annual EM logs will be analyzed to identify changes in seawater wedge locations. All analyses will be incorporated into an annual report that follows the format of the initial, historical data report. Potential seawater intrusion will be highlighted in the report, and if necessary, recommendations will be included. The annual report will be submitted for review by the TAC and the Board. Modifications to the report will be incorporated based on input from these bodies, as well as Watermaster staff.</strong>*</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>I. 4. d</strong></th>
<th><strong>Complete Preparation of Seawater Intrusion Response Plan ($0)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The Watermaster’s Consultant (HydroMetrics) completed preparation of the long-term Seawater Intrusion Response Plans (SIRP) in February 2009. The Sections that are included in the SIRP are:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Section 1 – Background and Purpose</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Section 2 – Consistency with Other Documents</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Section 3 – Seawater Intrusion Indicators and Triggers</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Section 4 – Seawater Intrusion Contingency Actions</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Section 5 - References</strong></td>
<td></td>
</tr>
<tr>
<td><strong>No further work on the SIRP is anticipated in 2013.</strong>*</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>I. 4. e</strong></th>
<th><strong>Refine and/or Update the Seawater Intrusion Response Plan ($0)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>At the beginning of 2009 it was thought that it might be beneficial or necessary to perform work to refine the SIRP and/or to update it based on new data or knowledge that was gained subsequent to the preparation of the SIRP. However, this did not prove to be necessary, and no further work of this type is anticipated in 2013.</strong>*</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>I. 4. f</strong></th>
<th><strong>If Seawater Intrusion is Determined to be Occurring, Implement Contingency Response Plan ($0)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The SIRP will be implemented if seawater intrusion, as defined in the Plan, is determined by the Watermaster to be occurring.</strong>*</td>
<td></td>
</tr>
</tbody>
</table>
## Monitoring & Management - Operations Fund
Fiscal Year (January 1 - December 31, 2013)

### Proposed Budget

#### Available Balances & Assessments

<table>
<thead>
<tr>
<th>Fund</th>
<th>2012 Adopted Budget</th>
<th>Estimated 2012 Revenue/Expenses</th>
<th>2013 Proposed Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitoring &amp; Management - Ops Fund FY 2011 Rollover</td>
<td>$337,954.00</td>
<td>$751,900.00</td>
<td>$583,900.00</td>
</tr>
<tr>
<td><strong>Total Available</strong></td>
<td><strong>$337,954.00</strong></td>
<td><strong>$751,900.00</strong></td>
<td><strong>$583,900.00</strong></td>
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</tbody>
</table>

#### Appropriations & Expenses

<table>
<thead>
<tr>
<th>Category</th>
<th>2012 Adopted Budget</th>
<th>Estimated 2012 Revenue/Expenses</th>
<th>2013 Proposed Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GENERAL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technical Project Manager</td>
<td>$60,000.00</td>
<td>$36,000.00</td>
<td>$60,000.00</td>
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<tr>
<td>Contingency @ 20% (not including TPM)</td>
<td>39,584.00</td>
<td>-</td>
<td>39,844.00</td>
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<tr>
<td><strong>Total General</strong></td>
<td><strong>$99,584.00</strong></td>
<td><strong>$36,000.00</strong></td>
<td><strong>$99,844.00</strong></td>
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<tr>
<td><strong>CONSULTANTS (Hydrometrics)</strong></td>
<td></td>
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</tr>
<tr>
<td>Program Administration</td>
<td>$8,250.00</td>
<td>$26,300.00</td>
<td>$8,600.00</td>
</tr>
<tr>
<td>Production/Lvl/Qlty Monitoring</td>
<td>3,450.00</td>
<td>-</td>
<td>3,900.00</td>
</tr>
<tr>
<td>Basin Management Action Plan</td>
<td>50,780.00</td>
<td>-</td>
<td>75,000.00</td>
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<tr>
<td>Seawater Intrusion Contingency Plan</td>
<td>27,800.00</td>
<td>22,000.00</td>
<td>27,750.00</td>
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<tr>
<td><strong>Total Consultants</strong></td>
<td><strong>$90,280.00</strong></td>
<td><strong>$48,300.00</strong></td>
<td><strong>$115,250.00</strong></td>
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<tr>
<td><strong>MPWMD</strong></td>
<td></td>
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<tr>
<td>Production/Lvl/Qlty Monitoring</td>
<td>$74,720.00</td>
<td>$80,000.00</td>
<td>$69,086.00</td>
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<tr>
<td>Basin Management</td>
<td>5,000.00</td>
<td>-</td>
<td>4,700.00</td>
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<tr>
<td>Seawater Intrusion</td>
<td>3,700.00</td>
<td>3,700.00</td>
<td>10,184.00</td>
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<tr>
<td><strong>Direct Costs</strong></td>
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<td>-</td>
<td>-</td>
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<tr>
<td><strong>Total MPWMD</strong></td>
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<td><strong>$83,700.00</strong></td>
<td><strong>$83,970.00</strong></td>
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<tr>
<td><strong>Reserve</strong></td>
<td>$24,220.00</td>
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</table>

#### Total Appropriations & Expenses

<table>
<thead>
<tr>
<th>Budget</th>
<th>2012 Adopted Budget</th>
<th>Estimated 2012 Revenue/Expenses</th>
<th>2013 Proposed Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td><strong>$297,504.00</strong></td>
<td><strong>$168,000.00</strong></td>
<td><strong>$299,064.00</strong></td>
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</tbody>
</table>

#### Total Available

<table>
<thead>
<tr>
<th>Budget</th>
<th>2012 Adopted Budget</th>
<th>Estimated 2012 Revenue/Expenses</th>
<th>2013 Proposed Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td><strong>$40,450.00</strong></td>
<td><strong>$583,900.00</strong></td>
<td><strong>$284,836.00</strong></td>
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</tbody>
</table>
## Management and Monitoring Plan Operations Budget
### For Tasks to be Undertaken in 2013

<table>
<thead>
<tr>
<th>Task</th>
<th>Subtask</th>
<th>Sub-Subtask</th>
<th>Cost Description</th>
<th>CONSULTANTS &amp; CONTRACTORS</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>MPWMD</strong></td>
<td><strong>Private</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Labor</td>
<td></td>
</tr>
<tr>
<td>M.1</td>
<td>Program Administration</td>
<td></td>
<td>Technical Project Manager</td>
<td>$0</td>
<td>$60,000</td>
</tr>
<tr>
<td>M.1.a</td>
<td></td>
<td></td>
<td>Project Budget and Controls</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>M.1.b</td>
<td></td>
<td></td>
<td>Assist with Board and TAC Agendas</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>M.1.c &amp; M.1.d</td>
<td></td>
<td>Preparation for and Attendance at Meeting(8)</td>
<td>$0</td>
<td>$5,500</td>
<td>$0</td>
</tr>
<tr>
<td>M.1.e</td>
<td></td>
<td></td>
<td>Peer Review of Documents and Reports(8)</td>
<td>$0</td>
<td>$3,100</td>
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<tr>
<td>M.1.f</td>
<td></td>
<td></td>
<td>QA/QC</td>
<td>$0</td>
<td>$0</td>
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<tr>
<td>I.1</td>
<td>Initial Phase 1 Monitoring Well Construction (Task Completed in Phase 1)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>I.2</td>
<td>Production, Water Level and Quality Monitoring</td>
<td></td>
<td>Database Management</td>
<td></td>
<td></td>
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<tr>
<td>I.2.a</td>
<td></td>
<td></td>
<td>Conduct Ongoing Data Entry/Database Maintenance/Enhancement</td>
<td>$9,324</td>
<td>$2,400</td>
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<tr>
<td>I.2.a.2</td>
<td></td>
<td></td>
<td>Verify Accuracy of Production Well Meters</td>
<td>$0</td>
<td>$0</td>
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<tr>
<td>I.2.b</td>
<td>Data Collection Program</td>
<td></td>
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<td></td>
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<tr>
<td>I.2.b.1</td>
<td></td>
<td></td>
<td>Site Representation and Selection(7)</td>
<td>$0</td>
<td>$0</td>
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<tr>
<td>I.2.b.2</td>
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<td></td>
<td>Collect Monthly Water Levels(8)</td>
<td>$7,076</td>
<td>$0</td>
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<tr>
<td>I.2.b.3</td>
<td></td>
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<td>Collect Quarterly Water Quality Samples(8)</td>
<td>$33,238</td>
<td>$0</td>
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<tr>
<td>I.2.b.4</td>
<td></td>
<td></td>
<td>Update Program Schedule and Standard Operating Procedures</td>
<td>$0</td>
<td>$0</td>
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<tr>
<td>I.2.b.5</td>
<td></td>
<td></td>
<td>Monitor Well Construction(7)</td>
<td>$0</td>
<td>$0</td>
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<tr>
<td>I.2.b.6</td>
<td></td>
<td></td>
<td>Reports</td>
<td>$3,948</td>
<td>$1,500</td>
</tr>
<tr>
<td>I.3</td>
<td>Basin Management</td>
<td></td>
<td>Enhanced Seaside Basin Groundwater Model (Costs Shown in Subtasks Below)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I.3.a</td>
<td></td>
<td></td>
<td>Update the Existing Model</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>I.3.a.2</td>
<td></td>
<td></td>
<td>Develop Protective Water Levels(9)</td>
<td>$0</td>
<td>$25,000</td>
</tr>
<tr>
<td>I.3.a.3</td>
<td></td>
<td></td>
<td>Evaluate Replenishment Scenarios and Develop Answers to Basin Management Questions(9)</td>
<td>$0</td>
<td>$25,000</td>
</tr>
<tr>
<td>I.3.b</td>
<td></td>
<td></td>
<td>Complete Preparation of Basin Management Action Plan</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>I.3.c</td>
<td></td>
<td></td>
<td>Refine and/or Update the Basin Management Action Plan(9)</td>
<td>$0</td>
<td>$25,000</td>
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<tr>
<td>I.3.d</td>
<td></td>
<td></td>
<td>Evaluate Coastal Wells for Cross-Aquifer Contamination Potential</td>
<td>$4,700</td>
<td>$0</td>
</tr>
<tr>
<td>I.4</td>
<td>Seawater Intrusion Contingency Plan</td>
<td></td>
<td>Oversight of Seawater Intrusion Detection and Tracking</td>
<td>$2,664</td>
<td>$2,000</td>
</tr>
<tr>
<td>I.4.a</td>
<td></td>
<td></td>
<td>Provide focused area hydrogeologic investigation for Sand City Public Works</td>
<td>$7,520</td>
<td>$0</td>
</tr>
<tr>
<td>I.4.c</td>
<td></td>
<td></td>
<td>Annual Report- Seawater Intrusion Analysis</td>
<td>$0</td>
<td>$25,750</td>
</tr>
<tr>
<td>I.4.d</td>
<td></td>
<td></td>
<td>Complete Preparation of Seawater Intrusion Response Plan(2)</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>I.4.e</td>
<td></td>
<td></td>
<td>Refine and/or Update the Seawater Intrusion Response Plan(2)</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>I.4.f</td>
<td></td>
<td></td>
<td>If Seawater Intrusion is Determined to be Occurring, Implement Contingency Response Plan(2) (No Costs are Included for This Task, as This Task Will Likely Not be Necessary During 2013. If it Does Become Necessary, Use of Contingency Funds or a Budget Modification Will Likely be Necessary)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>TOTALS CONSULTANTS &amp; CONTRACTORS</strong></td>
<td><strong>$68,470</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SUBTOTAL not including Technical Program Manager</td>
<td></td>
<td>$199,220</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Contingency (not including Technical Program Manager) @ 20%</td>
<td>$39,844</td>
<td>$0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Technical Program Manager</td>
<td>$60,000</td>
<td>$0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>TOTALS</strong></td>
<td><strong>$299,064</strong></td>
<td><strong>$297,504</strong></td>
</tr>
</tbody>
</table>
Seaside Groundwater Basin Watermaster  
Monitoring and Management - Capital Fund  
Fiscal Year (January 1 - December 31, 2013)  
Proposed Budget

<table>
<thead>
<tr>
<th>Available Balances and Assessments:</th>
<th>2012 Adopted Budget</th>
<th>Estimated Revenue/Expenditures</th>
<th>2013 Proposed Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitoring &amp; Management Fund - Capital</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>FY 2007-2011 Rollover to 2012</td>
<td>5,499</td>
<td>13,519</td>
<td>13,519</td>
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<tr>
<td>Transfer in from Operations Fund</td>
<td>-</td>
<td>-</td>
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<td><strong>Subtotal</strong></td>
<td>5,499</td>
<td>13,519</td>
<td>13,519</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Appropriations &amp; Expenses:</th>
<th>2012 Adopted Budget</th>
<th>Estimated Revenue/Expenditures</th>
<th>2013 Proposed Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Services</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Project Management</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Direct Costs</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>Well Drilling -</td>
<td>-</td>
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<td>-</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Total Appropriations and Expenses** $ - $ - $ -

**Total Available** $ -

Capital Fund Assessments owed by City of Seaside

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2009 (including 5% penalty)</td>
<td>16,538</td>
</tr>
<tr>
<td>Total</td>
<td>16,538</td>
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</table>
Management and Monitoring Plan Capital Budget
For Tasks to be Undertaken in 2013

No Capital projects are anticipated to be undertaken in 2013, so this budget is $0.
## Replenishment Fund

### Water Year 2013 (October 1 - September 30) / Fiscal Year (January 1 - December 31, 2013)

### Proposed Budget

<table>
<thead>
<tr>
<th></th>
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<th></th>
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<tr>
<td>Assessments:</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cal-Am Water Balance Forward</td>
<td>$-</td>
<td>$1,641,004</td>
<td>$4,206,475</td>
<td>($2,900,435)</td>
<td>($2,868,685)</td>
<td>($3,850,964)</td>
<td>($6,088,909)</td>
<td>($2,769,589)</td>
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<tr>
<td>Operating Yield Overproduction -</td>
<td></td>
<td>80,938</td>
<td>34,045</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>114,983</td>
<td>-</td>
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<td>CAW Credit Against Assessment</td>
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<td>(3,741,714)</td>
<td>(5,095,213)</td>
<td>(5,425,799)</td>
<td>-</td>
<td>(27,034,298)</td>
<td>-</td>
<td>(27,034,298)</td>
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<td><strong>CAW Unpaid Balance</strong></td>
<td>$1,641,004</td>
<td>$4,206,475</td>
<td>($2,900,435)</td>
<td>($2,868,685)</td>
<td>($3,850,964)</td>
<td>($6,088,909)</td>
<td>($2,769,589)</td>
<td>($680,372)</td>
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<td>City of Seaside Balance Forward</td>
<td>$-</td>
<td>$230,671</td>
<td>$413,454</td>
<td>$1,106,116</td>
<td>$1,737,569</td>
<td>$988,414</td>
<td>($13,109)</td>
<td>($1,063,109)</td>
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<tr>
<td>City of Seaside Municipal</td>
<td>332.0 AF</td>
<td>387.7 AF</td>
<td>294.3 AF</td>
<td>293.4 AF</td>
<td>282.9 AF</td>
<td>240.7 AF</td>
<td>247.6 AF</td>
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<tr>
<td>Exceeding Natural Safe Yield Considering Alternative Producers</td>
<td>169,200</td>
<td>173,739</td>
<td>385,642</td>
<td>399,211</td>
<td>231,961</td>
<td>141,335</td>
<td>150,000</td>
<td>$1,651,088</td>
<td>150,000</td>
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<tr>
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<td></td>
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<td>16,898</td>
<td>66,090</td>
<td>82,761</td>
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<td>216,575</td>
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<td>Total Municipal</td>
<td>219,687</td>
<td>174,079</td>
<td>402,540</td>
<td>465,300</td>
<td>314,721</td>
<td>141,335</td>
<td>150,000</td>
<td>1,867,663</td>
<td>150,000</td>
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<tr>
<td>City of Seaside - Golf Courses</td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>Exceeding Natural Safe Yield - Alternative Producer</td>
<td>-</td>
<td>-</td>
<td>131,705</td>
<td>69,701</td>
<td>-</td>
<td>-</td>
<td>201,406</td>
<td>-</td>
<td>201,406</td>
</tr>
<tr>
<td>Operating Yield Overproduction -</td>
<td></td>
<td>-</td>
<td>131,705</td>
<td>69,701</td>
<td>-</td>
<td>-</td>
<td>201,406</td>
<td>-</td>
<td>201,406</td>
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<td>Total Golf Courses</td>
<td>-</td>
<td>-</td>
<td>263,410</td>
<td>139,402</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>402,812</td>
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<td>Total City of Seaside*</td>
<td>$219,687</td>
<td>$174,079</td>
<td>$665,950</td>
<td>$604,702</td>
<td>$314,721</td>
<td>$141,335</td>
<td>$150,000</td>
<td>$2,270,475</td>
<td>$150,000</td>
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<td>City of Seaside Late Payment 5%</td>
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<td>8,704</td>
<td>26,712</td>
<td>26,750</td>
<td>15,737</td>
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<td>88,887</td>
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<tr>
<td>In-lieu Credit Against Assessment</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>City of Seaside Unpaid Balance</strong></td>
<td>$230,671</td>
<td>$413,454</td>
<td>$1,106,116</td>
<td>$1,737,569</td>
<td>$988,414</td>
<td>($13,109)</td>
<td>($1,063,109)</td>
<td>($2,113,109)</td>
<td>($2,113,109)</td>
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<tr>
<td>Total Replenishment Fund Balance</td>
<td>$1,871,675</td>
<td>$4,619,929</td>
<td>($1,794,319)</td>
<td>($1,131,116)</td>
<td>($2,862,551)</td>
<td>($6,102,019)</td>
<td>($3,832,699)</td>
<td>($3,832,699)</td>
<td>($1,432,738)</td>
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### Watermaster

<table>
<thead>
<tr>
<th>Seaside Groundwater Basin Watermaster</th>
<th>10/3/2012</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cal-Am Water Balance Forward</strong></td>
<td>$-</td>
</tr>
<tr>
<td><strong>Exceeding Natural Safe Yield</strong></td>
<td>-</td>
</tr>
<tr>
<td><strong>Operating Yield Overproduction</strong></td>
<td>-</td>
</tr>
<tr>
<td><strong>Total California American</strong></td>
<td>$2,106,652</td>
</tr>
<tr>
<td><strong>CAW Credit Against Assessment</strong></td>
<td>(465,648)</td>
</tr>
<tr>
<td><strong>CAW Unpaid Balance</strong></td>
<td>$1,641,004</td>
</tr>
<tr>
<td><strong>City of Seaside Balance Forward</strong></td>
<td>$-</td>
</tr>
<tr>
<td><strong>City of Seaside Municipal</strong></td>
<td>332.0 AF</td>
</tr>
<tr>
<td><strong>Exceeding Natural Safe Yield</strong></td>
<td>169,200</td>
</tr>
<tr>
<td><strong>Operating Yield Overproduction</strong></td>
<td>50,487</td>
</tr>
<tr>
<td><strong>Total Municipal</strong></td>
<td>219,687</td>
</tr>
<tr>
<td><strong>City of Seaside - Golf Courses</strong></td>
<td>-</td>
</tr>
<tr>
<td><strong>Exceeding Natural Safe Yield</strong></td>
<td>-</td>
</tr>
<tr>
<td><strong>Operating Yield Overproduction</strong></td>
<td>-</td>
</tr>
<tr>
<td><strong>Total Golf Courses</strong></td>
<td>-</td>
</tr>
<tr>
<td><strong>Total City of Seaside</strong></td>
<td>$219,687</td>
</tr>
<tr>
<td><strong>City of Seaside Late Payment 5%</strong></td>
<td>10,984</td>
</tr>
<tr>
<td><strong>In-lieu Credit Against Assessment</strong></td>
<td>-</td>
</tr>
<tr>
<td><strong>City of Seaside Unpaid Balance</strong></td>
<td>$230,671</td>
</tr>
<tr>
<td><strong>Total Replenishment Fund Balance</strong></td>
<td>$1,871,675</td>
</tr>
<tr>
<td><strong>Replenishment Fund Balance Forward</strong></td>
<td>$-</td>
</tr>
<tr>
<td><strong>Total Replenishment Assessments</strong></td>
<td>2,337,323</td>
</tr>
<tr>
<td><strong>Total Paid and/or Credited</strong></td>
<td>(465,648)</td>
</tr>
<tr>
<td><strong>Grand Total Fund Balance</strong></td>
<td>$1,871,675</td>
</tr>
</tbody>
</table>

| | $1,871,675 | $4,619,929 | ($1,794,319) | ($1,131,116) | ($2,862,551) | ($6,102,019) | ($2,632,699) | ($2,632,699) | $967,262 | $967,262 |
| **Grand Total Fund Balance**        | $1,871,675 | $4,619,929 | ($1,794,319) | ($1,131,116) | ($2,862,551) | ($6,102,019) | ($2,632,699) | ($2,632,699) | $967,262 | $967,262 |
ITEM X.

INFORMATIONAL REPORTS

(NO ACTION REQUIRED)
### Water Years

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

### Project Schedule

**SUMMARY PROJECT SCHEDULE**

- **Watermaster Board Regular Meeting Schedule 2012**
  - 1-Jan : cncl'd
  - 1-Feb : cncl'd
  - 7-Mar : cncl'd
  - 1-Feb : cncl'd
  - 2-May : cncl'd
  - 8-Jun : cncl'd
  - 1-Aug : cncl'd
  - 8-Sep : cncl'd
  - 3-Oct : 7-Nov
  - 5-Dec

- **ANNUAL MILESTONES**
  - **2006-11**
    - Jan 27-Mar-06
    - Feb 30-Sep-07
    - Mar 27-Mar-06
    - Apr 30-Jun-08
    - May 30-Aug-09
    - Jun 30-Oct-10
    - Jul 30-Dec-11
    - Aug
    - Sep
    - Oct
    - Nov
    - Dec

- **ANNUAL MILESTONES Calendar Years**
  - **2006**
    - Jan 15-Jan
    - Feb 15-Jan
    - Mar 15-Jan
    - Apr 15-Jan
    - May 15-Jan
    - Jun 15-Jan
    - Jul 15-Jan
    - Aug 15-Jan
    - Sep 15-Jan
    - Oct 15-Jan
    - Nov 15-Jan
    - Dec 15-Jan
  - **2007**
    - Jan 15-Jan
    - Feb 15-Jan
    - Mar 15-Jan
    - Apr 15-Jan
    - May 15-Jan
    - Jun 15-Jan
    - Jul 15-Jan
    - Aug 15-Jan
    - Sep 15-Jan
    - Oct 15-Jan
    - Nov 15-Jan
    - Dec 15-Jan
  - **2008**
    - Jan 15-Jan
    - Feb 15-Jan
    - Mar 15-Jan
    - Apr 15-Jan
    - May 15-Jan
    - Jun 15-Jan
    - Jul 15-Jan
    - Aug 15-Jan
    - Sep 15-Jan
    - Oct 15-Jan
    - Nov 15-Jan
    - Dec 15-Jan
  - **2009**
    - Jan 15-Jan
    - Feb 15-Jan
    - Mar 15-Jan
    - Apr 15-Jan
    - May 15-Jan
    - Jun 15-Jan
    - Jul 15-Jan
    - Aug 15-Jan
    - Sep 15-Jan
    - Oct 15-Jan
    - Nov 15-Jan
    - Dec 15-Jan
  - **2010**
    - Jan 15-Jan
    - Feb 15-Jan
    - Mar 15-Jan
    - Apr 15-Jan
    - May 15-Jan
    - Jun 15-Jan
    - Jul 15-Jan
    - Aug 15-Jan
    - Sep 15-Jan
    - Oct 15-Jan
    - Nov 15-Jan
    - Dec 15-Jan
  - **2011**
    - Jan 15-Jan
    - Feb 15-Jan
    - Mar 15-Jan
    - Apr 15-Jan
    - May 15-Jan
    - Jun 15-Jan
    - Jul 15-Jan
    - Aug 15-Jan
    - Sep 15-Jan
    - Oct 15-Jan
    - Nov 15-Jan
    - Dec 15-Jan
  - **2012**
    - Jan 15-Jan
    - Feb 15-Jan
    - Mar 15-Jan
    - Apr 15-Jan
    - May 15-Jan
    - Jun 15-Jan
    - Jul 15-Jan
    - Aug 15-Jan
    - Sep 15-Jan
    - Oct 15-Jan
    - Nov 15-Jan
    - Dec 15-Jan

- **ANNUAL MILESTONES**
  - **2006-10**
    - Jan 30-Jan-09
    - Feb 30-Feb-09
    - Mar 1-Feb-09
    - Apr 1-Feb-09
    - May 1-Feb-09
    - Jun 1-Feb-09
    - Jul 1-Feb-09
    - Aug 1-Feb-09
    - Sep 1-Feb-09
    - Oct 1-Feb-09
    - Nov 1-Feb-09
    - Dec 1-Feb-09

- **ANNUAL MILESTONES**
  - **2009**
    - Jan 30-Jan-09
    - Feb 30-Feb-09
    - Mar 1-Feb-09
    - Apr 1-Feb-09
    - May 1-Feb-09
    - Jun 1-Feb-09
    - Jul 1-Feb-09
    - Aug 1-Feb-09
    - Sep 1-Feb-09
    - Oct 1-Feb-09
    - Nov 1-Feb-09
    - Dec 1-Feb-09

### Key Milestones

- **2006-2010**
  - Jan 1-Feb-09
  - Feb 1-Feb-09
  - Mar 1-Feb-09
  - Apr 1-Feb-09
  - May 1-Feb-09
  - Jun 1-Feb-09
  - Jul 1-Feb-09
  - Aug 1-Feb-09
  - Sep 1-Feb-09
  - Oct 1-Feb-09
  - Nov 1-Feb-09
  - Dec 1-Feb-09

### Key Issues

- **Cal-Am CWP/Alternative Projects EIR/Basin replenishment MOU**
  - In Effect
  - New Project Proposed by CAW, MRWPCA & MPWMD

- **BWRCA Cease Desist Order California American Water**
  - Templates Approved; CAW on file with Watermaster

### Water Quality

- **Operational Yield of 5,600 decreased 10%**
  - 1-Oct

- **75% of the Operating Yield of 5,600 decreased 10%**
  - Jan 1

- **100% of the Operating Yield of 5,600 decreased 10%**
  - 1-Oct

### Special Issues

- **CAW Credit Request Granted 2/3/10**
  - 1-Feb

- **CAW Credit Request Granted 2/2/11**
  - 1-Feb

- **CAW Credit Request Granted 1/15, 2012**
  - 1-Feb

- **CAW Credit Request Granted 1/15, 2012**
  - 1-Feb

- **CAW Credit Request Granted 2/15, 2013**
  - 1-Feb

### Water Year Activity

- **2009 City of Seaside Not Recvd**
  - 1-Feb

### Summary

- **2012 Summary Project Schedule**
  - See detailed project schedule for more information.

- **2012 Monitoring and Management Program**
  - See detailed project schedule for more information.

### Notes

- **ANNUAL MILESTONES**
  - Calendar Years
  - Shaded boxes indicate completed activities.

- **ANNUAL MILESTONES**
  - Water Years
  - Each shade indicates status of activity.

- **ANNUAL MILESTONES**
  - Calendar Years
  - Each shade indicates status of activity.

- **ANNUAL MILESTONES**
  - Water Years
  - Each shade indicates status of activity.
The meeting was called to order at 1:34 p.m.

1. Public Comments
There were no public comments.

2. Administrative Matters:
   A. Approve Minutes from May 9, 2012 Meeting
   On a motion by Mr. Riedl, seconded by Mr. Simonitch, the Minutes were unanimously approved as presented, with Mr. Bruno abstaining because he had not attended that meeting.
   B. Response to Question Regarding Reporting on Sand City Public Works Well
Mr. Sabolsice summarized the agenda material for this item. There was a brief discussion with regard to the different water quality results from this well compared to others, and with regard to the aquifer from which this well takes water. Mr. Simonitch and Mr. Oliver noted that the Sand City desalination plant may be causing some circulation of water in the Aromas Sands formation. Mr. Sabolsice said that CAW has not been able to locate data on wells it had in this area in the past. Mr. Simonitch said he would look to see if his office had any such data. Mr. Lear said that more frequent sampling (quarterly rather than annually) for water quality and water level will be taken at this well to further monitor it.

3. Report on Investigation into Potential for Aquifer Cross-Contamination in the Coastal Wells

Mr. Lear handed out copies of his Technical Memorandum on his work and briefly discussed the results and conclusions from that work.

Of the five recommendations on page 20 of the agenda packet, only recommendation No. 3 remains to be completed. The other four recommendations have essentially been completed. Mr. Lear said that it would probably take about 20 hours of staff time to put the data for recommendation No. 3 into the Watermaster's Database. Mr. Jaques said he would need to authorize this additional work through an RFS to MPWMD, if so directed by the TAC and the Board. Mr. Oliver said the work could be done in the upcoming fiscal year, as it is not time-critical.

There were questions and answers between Mr. Lear and members of the TAC regarding some of the specifics of the work that was done, including whether it would be desirable to verify that proper well abandonment procedures had been carried out in the coastal wells, rather than relying on Monterey County Health Department reports and surface observations of the concrete well caps over the abandoned wells.

Mr. Riedl said he felt that more investigation of wells closest to the coast should be done in order to verify that those which had been abandoned had been properly abandoned. He noted differences between Figures 3 and 6 in Mr. Lear's report in terms of wells that are shown on these figures. There was much discussion of this topic. Mr. Lear will discuss Mr. Riedl’s concerns directly with him in an attempt to resolve them.

There was consensus that no further work needs to be done to verify that wells have been properly abandoned, beyond the work that Mr. Lear has already completed.

4. Initial Discussion Regarding Scope of Work for Monitoring and Management Plan (M&MP) for FY 2013

Mr. Jaques summarized the agenda packet material and for this item. Mr. Lear said that with regard to Task I.2.b.3 he felt that continuing the barium and chloride testing is beneficial. Mr. Johnson concurred, noting that this data is helpful. Mr. Oliver said this only adds about $100 per sample for the analytical costs. There was consensus to include continued testing for these parameters.

With regard to Task I.2.b.3 Mr. Lear noted that there was one more well site that needs retrofitting. Mr. Jaques will coordinate with MPWMD with regard to the cost and scope for this Task.
With regard to Task I.4.a, Mr. Oliver stated that this Task was intended to provide funding for MPWMD to interact with HydroMetrics on the Seawater Intrusion Analysis Report. He noted, however, that this work has always cost much less than previously budgeted, and could probably be reduced in the upcoming fiscal year's budget.

Mr. Oliver also recommended that some additional money be included under Task I.3.d for additional time to be spent keeping the Database up-to-date.

5. Review Request for Watermaster’s Approval of Installation of Wells to Serve Proposed New Housing Development Along Highway 68

[Note: Item 5 was taken up for discussion immediately after Item 2.A, so that members of the public wishing to speak on Item 5 would not have to wait for the preceding items to be discussed.]

Mr. Jaques summarized the agenda packet materials for this item. There were questions and answers between Mr. Jaques and Mr. Sabolsice with regard to the Adjudication Decision as it pertains to this topic. There was discussion that the primary and secondary wells on the Wang property may be located just south of the Chupines fault, and thus outside of the Laguna Seca subarea of the Seaside Basin and outside of the boundaries of the Seaside Basin as depicted on the map contained in the Decision. The discussion was focused on the question of whether or not there was evidence that the proposed pumping would have an effect on groundwater levels in the Laguna Seca subarea.

Mr. Sabolsice asked Mr. Oliver if there were any other wells he was aware of that were just outside the Seaside Basin boundary. Mr. Oliver and Mr. Lear responded that there were some wells including CAW's Hidden Hills Bay Ridge well and perhaps the few others that made or may not currently be active.

Mr. Sabolsice asked Mr. Oliver if the Wang subdivision wells were within the boundaries of the MPWMD. Mr. Oliver responded yes, and that the Wang project would therefore be subject to MPWMD permitting authority.

Mr. Sabolsice asked whether the Watermaster would want to have the Wang subdivision wells included in the Decision if pumping water from the Wang property would impact the Seaside Basin. There was much discussion on this topic. Mr. Jaques commented this would be technical information that the Board would presumably want to be aware of when it considers this matter at a future Board meeting.

Mr. Sabolsice noted that if the wells for the Wang subdivision do draw from the Seaside Basin then this could affect the quantities of the 3,000 acre feet per year of Natural Safe Yield water that would be available to each of the Producers under the Decision.

Mr. Johnson reported that in the past MCWRA had asked for a pump test to be run on the Wang subdivision wells in order to determine whether it was drawing from the Seaside Basin, but said he was not aware whether such testing had been performed.

Mr. Sabolsice invited the members of the public to provide their input on this topic.
Mr. Sommer reported that he is the water rights attorney for the Wang subdivision proponent. He said pump testing has been done, but that the report made the on the primary and secondary wells for the Wang project by a consultant hired by the County to assist with a Draft EIR in 2006 made an assumption that the wells on the Wang property could draw from the Laguna Seca subarea of the Seaside Basin. However, this assumption was made without any supporting data, and water elevations on the north and south sides of the Chupines fault were not checked or considered. Thus, the effect of the Chupines fault as a barrier was not addressed. Mr. Sommer went on to say that after being hired in at the beginning of 2012, the Wang project proponent retained David Abbott of D.B. Stephens & Associates to do a hydrogeologic study of the wells on the Wang property, as well as onsite recharge, and to address the question of effect, if any, on the Seaside Basin of pumping of the Wang wells. The results were summarized in the Abbott report dated May 14, 2012 that was included in the TAC agenda packet. The report summarizes additional data that was not considered in 2006 and concludes that the primary and secondary wells on the Wang property do not appear to be directly and hydraulically connected to the Seaside Basin, based on significant groundwater elevation differences between the planned subdivision and the Laguna Seca subarea wells, and other data summarized in the Abbott report.

Mr. Sommer reported that he and Dale Ellis had met recently with County Planning and other County agencies, including Tom Moss of MCWRA, and discussed the matter of defects in the 2006 report, and that the County had decided to replace the 2006 report with a new report from David Abbott that would include the data on the Chupines fault, and that Mr. Abbott’s report would be reviewed by MCWRA.

Concerning this question of tests to determine if pumping from the Wang subdivision wells could be detected in wells on the north side of the Chupines fault, Mr. Sommer stated that in order to estimate water level drawdown in wells in the Laguna Seca subarea from pumping of the Wang subdivision wells, it would be necessary to project drawdown impacts at a distance of several thousands of feet away from these wells. He expressed the view that making projections over such a long distance in the absence of appreciable hydrogeologic data for this area would a speculative. He noted that pump testing is expensive and questioned what benefit might be obtained from conducting further pump testing.

Mr. Sommer said that Tom Moss of MCWRA and the County had agreed with that conclusion, and agreed to dispense with any such requirement. He referred to the data in the Abbott report dated May 14, 2012 that the Wang subdivision wells have much different water levels in them (from 50 feet to 70 feet lower) than water levels in the nearby portion of the Laguna Seca subarea of the Seaside Basin. He added that in some other water rights litigation such differences in water levels have been deemed to represent a barrier, i.e. that the wells are not drawing from the same aquifer.

Mr. Sommer reported that the Wang subdivision is currently in the process of going through the County planning process and this will likely lead to questions as to whether the Watermaster has any concerns about the use of these wells. He reported that well 02-072 has a higher water level than water levels in the Laguna Seca subarea, but the Wang subdivision does not plan to use well 02-072 for water supply purposes and that County Planning had stated that it was not necessary to include further information on 02-072. He noted that on-site recharge within the Wang subdivision will be significant, and that the Abbott report had estimated the net use to only be about 12.5 acre feet per year.
Mr. Sommer cited section I.A of the Adjudication Decision with regard to the issue of where the Chupines fault is located. He reported that he has been discussing this matter with Russ McGlothlin and that he and Tony Lombardo had spoken with Don Freeman and Russ McLaughlin. He said that because of the overlying landowner water rights issues on the Wang property, the Abbott report data of differing water levels in the Wang wells as compared to wells in the Laguna Seca Subarea as evidence of a barrier, and the significant on-site recharge, that they were supportive of the request, although they did not have the technical reports available to them to review at that time.

Mr. Jaques asked Mr. Sommers for clarification with regard to whether or not pump testing as requested by MCWRA had been done. At this point Mr. Ellis addressed the Committee. He reported that the subdivision proposal from the Wangs dates back to 2003 and that source capacity tests had been required by the County Department of Environmental Health. He went on to say that three of the wells met these requirements, while the fourth well (02-72) did not produce enough water and was dropped from consideration for use as a water supply well for the Wang subdivision.

Mr. Ellis reported that "PES" (a hydrogeologic consulting firm) estimated it would cost approximately $120,000 to do pump testing to better determine if the Wang subdivision wells are pumping from the Seaside Basin, and that this information is in the EIR for the subdivision. He said that the available data indicates that if any connectivity exists between the aquifer(s) from which the Wang subdivision wells draw, and the wells in the Laguna Seca subarea of the Seaside Basin, it is very minor.

Mr. Bruno asked Mr. Abbott to describe the Chupines fault. Mr. Abbott responded that there is limited data available with regard to the fault in the Wang subdivision area. He said that he had the Lahaina Water Company make groundwater level measurements in the Wang subdivision wells, and it was found that the eastern well water levels are all about 50 feet lower than the water levels in the Laguna Seca subarea. The westerly well, however, has a higher water level elevation than the Laguna Seca subarea. He said there is not sufficient data to precisely map the fault location in the vicinity of the Wang subdivision. He went on to say that the water level differences indicate the existence of a barrier between the Wang wells and the Laguna Seca subarea wells. He reported that the area south of the fault has been uplifted, and still has some of the Santa Margarita formation in it, but this does not mean that the Santa Margarita formation to the south of the fault is connected to the Santa Margarita formation to the north of the fault (in the Laguna Seca subarea), because of this uplifting.

Mr. Oliver reported that cross sections could be prepared and could be used to visually depict the complexities of the fault in this area. He said that the PES report, of which he has a copy, shows the Wang well water levels to be about 50 feet higher than those listed in Mr. Abbott's report, and he asked if there was any apparent explanation for this. Mr. Abbott responded that he felt there had been errors in the naming of wells in the PES report and that this may contribute to this discrepancy. Mr. Oliver concurred noting that he found errors himself. However, Mr. Oliver said he would like the water levels to be verified, since they differ from the prior PES report.

Mr. Abbott said that pumping tests had been done on the Wang subdivision wells, and that these indicated a very low level of transmissivity. Therefore, he reported, it would take considerable
pumping in order to lower groundwater levels a long distance away from the wells themselves. Consequently, using monitoring wells several thousand feet away (in the Laguna Seca subarea) would require extensive pumping to produce enough drawdown to provide any indication of whether pumping from the Wang subdivision wells would have any effect on groundwater levels in the Laguna Seca subarea.

Mr. Williams commented that because of the significant water level differences in the Wang subdivision wells compared to water levels in the nearby Laguna Seca subarea, he felt the Wang subdivision wells were likely located in an area that is separated, at least to some extent, by the Chupines fault, and would thus have little impact on groundwater levels within the Laguna Seca subarea. He did say, however, that he would like to see cross sections and more data provided to better understand the geology in this area and whether the area south of the fault is separated from the area to the north. Also, he was interested in learning why the water levels are so low in the Wang subdivision wells, and wondered if water was draining away from that area.

Mr. Bruno questioned how far the Chupines fault should be "chased" i.e. should the applicant be expected to produce data to determine the fault's precise location.

Mr. Abbott said that not enough well data was available to prepare good cross-sections. He said there is little data just to the north of the fault for this purpose. Mr. Oliver said that MPWMD may be able to provide some data to help with this, as additional well data is now available beyond what is in the Watermaster's database. Mr. Sabolsice said that MPWMD would provide to Mr. Abbott whenever information they have that would be helpful for this purpose.

Mr. Sommer said that generating cross-sections can be very time-consuming and costly, if sufficient data is not currently available from which cross-sections can be prepared. Mr. Sabolsice said the TAC was only asking for what can reasonably be prepared with available or reasonably available data. Providing more information will help the TAC make a better-informed technical recommendation on this topic.

Mr. Abbott said that well information and geophysical logs are what he needs to be able to prepare useful cross-sections. Mr. Sommer said he will see what they can do utilizing available data to provide the information that is being requested by the TAC, but that the Wang project had overlying landowner water rights to the water underneath the Wang property, and could not be reasonably expected to install wells and conduct expensive tests at considerable distances.

There was discussion about considering evaluating whether the "de minimis" limitation in the Decision applies to the Wang subdivision.

Mr. Jaques asked Mr. Abbott if he could provide some further information for consideration by the TAC at its September 12 meeting. The agenda deadline for that meeting is September 5th. Mr. Abbott said he felt he could provide more information assuming that MPWMD could provide him additional well information prior to that time.

6. Schedule
Mr. Jaques summarized the agenda packet materials for this item. There was brief discussion regarding getting a report from HydroMetrics on the Groundwater Modeling at the September
2012 TAC meeting, with a complete written report on this work to come from shortly after that time.

7. Other Business
Mr. Sabolsice noted that for approximately three years he has been attending TAC meetings, and during that time he has not seen Ms. Ingersoll attend a TAC meeting. He felt it would be appropriate to select a chair of the TAC that regularly attends the meetings, rather than always having to have the Vice Chair run the meetings in the absence of the Chair. Mr. Sabolsice requested that consideration be given to rotating the Chair position responsibilities among the TAC members. He also recommended electing officers for 2013 at the next TAC meeting.

Mr. Johnson requested that Mr. Jaques provide background information with regard to the original selection of the Chair of the TAC and any matters pertaining to the procedures to be used to periodically select a new Chair in conjunction with presenting material on this topic for action by the TAC at its next meeting.

Mr. Oliver reported that another ASR well is in the process of being installed, and some temporary facilities are visible along General Jim Moore Boulevard as part of this work.

8. Set Next Meeting Date
The next meeting date was set for Wednesday September 12, 2012 at 1:30 p.m. at the MRWPCA Board Room

The meeting was adjourned at 3:42 p.m.
The meeting was called to order at 1:35 p.m.

1. Public Comments
There were no public comments.

2. Administrative Matters:
   A. Approve Minutes from August 8, 2012 Meeting
   With regard to Item No. 3 of the Minutes, on page 4 of the Agenda packet:
   - Mr. Riedl asked for clarification of the 20 hours mentioned in the 2nd paragraph. Mr. Jaques explained that this was the estimated time it would take Mr. Lear to migrate the well data for newly identified wells compiled in his evaluation into the Watermaster’s Database, so that the data would be permanently preserved in a readily accessible database.
• Mr. Riedl requested that in the 4th paragraph the first sentence be reworded to read “Mr. Riedl said he felt that more investigation of wells closest to the coast should be included in the report in order to verify that those which had been abandoned had been properly abandoned.”

With this edit made, on a motion by Mr. Costa, seconded by Mr. Johnson, the minutes were unanimously approved.

B. Election of Officers for 2013
For the position of Chair: Mr. Johnson nominated Mr. Oliver, and the nomination was seconded by Mr. Simonitch. Mr. Oliver nominated Mr. Sabolsice, and the nomination was seconded by Mr. Costa. There were no other nominations for the position of Chair.

For the position of Vice Chair: Mr. Oliver nominated Mr. Johnson, and the nomination was seconded by Mr. Costa. Mr. Johnson nominated Mr. Sabolsice, and the nomination was seconded by Mr. Bruno.

Following brief discussion there was consensus that only one Vice Chair need be elected.

Election results were as follows: For the position of Chair three votes for Mr. Oliver, six votes for Mr. Sabolsice. With Mr. Sabolsice thus elected to the position of Chair, he noted that since he cannot serve in the positions of both Chair and Vice Chair, Mr. Johnson was elected to the position of Vice Chair by default.

There was consensus that the term of office for each of these positions should be one year.

C. Board Meeting Agenda Planning
Mr. Jaques briefly discussed this item and responded to several questions.

3. Continued Discussion Regarding Request for Watermaster’s Approval of Installation of Wells to Serve Proposed New Housing Development Along Highway 68
Mr. Jaques summarized the agenda packet materials for this item.

Mr. Ellis made a PowerPoint presentation (a copy of the slides are attached) on behalf of the Wang proposal. He noted that water demand would be approximately 12.9 acre feet per year for the housing units, and that the total water demand for the entire project would be approximately 16 acre feet per year. He went on to explain that water for the project would be supplied by three wells, and that sanitary sewage from the project would be piped to Pasadera where it would be treated and recycled for use on the Laguna Seca golf course. The water that would be recycled would be approximately 12.7 acre feet per year. Thus, the net groundwater demand of the project would be approximately 3.3 acre feet per year. He went on to note that natural rainfall recharge on the Wang site is approximately 10.2 acre feet per year.

Mr. Ellis said that this data showed that the Wang project would have no significant impact on the Laguna Seca subarea, even if the wells to supply water to the project were drawing from the Laguna Seca subarea, i.e. they would be below the deminimis production level as defined in the Decision.
Mr. Bruno asked if the recycled Water would recharge the Laguna Seca subarea and thus benefit the Seaside Basin, and Mr. Ellis responded yes.

Mr. Riedl asked Mr. Ellis if the Laguna Seca golf course had agreed to use the recycled water, and if the Pasadera wastewater treatment plant was capable of accepting and treating the additional flows. At this point Mr. Sabolsice asked that the TAC focus its discussion on whether the wells should be under the purview of the Watermaster, and not delve into the details and specifics of how the water would be recycled and reused.

Mr. Abbott summarized his September 5, 2012 letter which was contained in the agenda packet. He said he found that none of the additional well data from MPWMD provided new information that was helpful in determining whether or not connectivity existed between the Laguna Seca subarea and the aquifer from which the Wang subdivision wells draw. He said that cross-sections taken from the April 22, 2009 Clarke report were only hypothetical, due to a lack of data in this area. He went on to say that whether or not the Laguna Seca subarea is hydraulically connected to the Wang wells cannot be definitively determined from the available data.

Mr. Jaques asked Mr. Abbott if he could clarify an issue pertaining to one of the Conclusions on page 28 of the agenda packet in which it states that well 02-072 (the westernmost of the Wang wells) had a significant difference in groundwater elevation compared to wells to the north (the Laguna Seca subarea), but that the three other wells for the Wang subdivision had water levels nearly the same as water levels in the Laguna Seca subarea. Mr. Abbott responded that faults come in blocks and can have differing or similar water levels from one block to another. He acknowledged that it was not possible to know definitively if there was hydraulic connectivity between the Wang wells and the Laguna Seca subarea.

Mr. Green asked what data would be required in order to be able to make such a determination. Mr. Abbott responded that a string of borings in the area would be needed to provide the necessary data, but that performing such work would be very costly.

Mr. Simonitch asked Mr. Abbott if there were any wells further to the south or southeast of the Wang wells which could be clearly determined to be south or southeast of the Chupines fault. Mr. Abbott responded that he would need three data points at a minimum to define the plane of the fault, but that it could take more than just this number of wells to provide that data. He said he was not aware of any wells in this vicinity that would be helpful in making a determination.

Mr. Costa asked Mr. Ellis if the Wang wells appear to have lower water levels than those found in the Laguna Seca subarea. Mr. Abbott responded yes, based on the water level elevations generated by the GPS work that had recently been done on the Wang wells.

Mr. Sabolsice asked Mr. Oliver for his conclusion with regard to this matter. Mr. Oliver said that he concurred that there is a lack of hydrogeologic data in this area, and it is therefore not possible to definitively say whether or not there is hydraulic connectivity between the Wang wells and the Laguna Seca subarea.

Mr. Riedl commented that the Basin boundary is not clearly defined on the map contained in the Decision. Mr. Jaques reported that Mr. Oliver had obtained a higher resolution copy of the 1994
CH2M Hill Report map upon which the Decision boundary was based, and it shows that the Wang wells are outside of the Basin boundary.

Mr. Bruno noted that the issue of deminimis use is a Board matter, not a TAC issue to address.

Mr. Sommer explained that in legal parlance the term "substantial evidence" means there is adequate evidence upon which to make an informed decision. His noted that the amount of proposed water use (demand) for the Wang subdivision is low, and that there is not substantial evidence to indicate that more than a net of five acre feet per year of water would be taken from the Laguna Seca subarea even if the wells were to some extent hydraulically connected. He went on the state that it would be very costly to obtain sufficient geologic data to determine definitively whether or not the wells have any connectivity at all with the Laguna Seca subarea.

There was unanimous agreement among the TAC members that:
1. The Wang wells are outside the Basin boundary as shown on the map contained in the Decision, which was drawn to represent the Basin boundary as shown on the 1994 CH2M Hill Report map.
2. Based on the available data, it is not possible to determine whether or not hydraulic connectivity exists between the Laguna Seca subarea and the Wang wells.

Eight of the nine TAC members further agreed that the water level data suggest that the Wang wells are not hydraulically connected to the Laguna Seca subarea.

Mr. Jaques will prepare an agenda transmittal for the next Board meeting containing these findings by the TAC.

Mr. Jaques asked if the TAC members wished to include any comment or recommendations regarding the Wang subdivision having a very low water demand. Following brief discussion it was recommended by Mr. Johnson and Mr. Sabolsice that no TAC position or recommendation be made on this matter.

**Note: Mr. Bruno and Mr. Simonitch had other commitments and had to depart right after Agenda Item 3.**

4. Approve Scope of Work for FY 2013 Management and Monitoring Program (M&MP) and FY 2013 and 2014 M&MP Operations and Capital Budgets

Mr. Jaques summarized the agenda packet materials for this item.

Mr. Sabolsice asked Mr. Evans what the approval process would be for the Budget. Mr. Evans responded that if the TAC approved the Budget, it would go to the budget committee and then onto the board for action. In response to question from Mr. Sabolsice Mr. Evans reported that both his time and Ms. Dadiw's time is charged to the Administration Budget, not to the M&MP Budget.

Mr. Riedl asked why the Watermaster would care about water quality in the dunes sand, as described under Task I.4.b. Mr. Oliver responded that there is interest in this matter because there is uncertainty about potential migration of water between the Dunes Sand/Aromas Sand formation and the Paso Robles formation.
Following brief discussion on various other items, on a motion by Mr. Riedl, seconded by Mr. Costa, the 2013 M&MP Work Plan, the 2013 and 2014 M&MP Operations Budgets, and the 2013 and 2014 M&MP Capital Budgets were unanimously approved.

**Note:** Mr. Riedl had other commitments and had to depart right after Agenda Item 4.

5. **Presentation of Findings from Groundwater Modeling by HydroMetrics**

Mr. Williams used PowerPoint slides to present the modeling findings (copies of the slides are attached, incorporating the percent recovery correction mentioned below). He explained that he had performed two sets of simulations to address two sets of criteria TAC members felt should be considered. The two Baselines differ as to what pumping rates were used by Alternative Producers and SNG. The Projects differ in which Producers roll back to 2011 levels.

The modeling indicates that all three simulations (2009 baseline, Cal Am and TAC Project Baselines, and Cal Am and TAC projects) all come to about the same groundwater levels at the end of the simulation, which is 2031.

The percent recovery in terms of water levels indicates that all of the scenarios recovered to about the same level at the end of the simulations.

Mr. Williams explained that the intrusion rate is determined by examining the model cells closest to the coast to see changes in average velocities of water moving into or out of the cells over the full length of the simulation. Five layers were modeled, one for each subsurface formation. The average intrusion rates over the length of the model (to 2031) for the five layers all were within < 1 percent of each other.

Mr. Sabolsice asked what was learned about water levels. Mr. Williams responded that water levels were at their lowest during the 2013-2017 time period. In the Projects that had rollbacks of pumping reductions, water levels stayed lower longer.

In response to another question from Mr. Sabolsice, Mr. Williams explained that it is not possible to get up to protective water levels without an outside source of water to recharge the basin.

Mr. Sabolsice asked Mr. Williams what the impact was on the Basin as indicated by the modeling. Mr. Williams responded that the impact is lower water levels, which implies a somewhat increased risk for seawater intrusion for a short period of time. But over the length of the model (to 2031) the impact is very small.

Mr. Sabolsice recommended simplifying the presentation to the Board by presenting only the TAC Project, since the Cal Am Project has almost the same results. Mr. Johnson requested that the written report explain both Projects that were modeled, but that the presentation to the Board could be simplified as suggested by Mr. Sabolsice.

There were no requested changes to the report other than to correct the percent recovery calculation formula.
Note: Mr. Oliver had other commitments and had to depart right after Agenda Item 5. This resulted in less than a quorum being present, so no further action could be taken at the meeting.

6. Discussion of “Repayment” of Overpumped Groundwater
Mr. Sabolsice asked Mr. Evans what the schedule was for repayment of Replenishment Assessment credits - was the schedule stipulated in the Decision? Mr. Evans responded that no schedule was included in the Decision, and Mr. Jaques added that no schedule was included in the Memorandum of Understanding (MOU) between the Watermaster and Cal Am, only the term "reasonable" was used in the MOU.

Mr. Sabolsice suggested developing a schedule to define what "reasonable" is.

Mr. Sabolsice said he would like to carry over this item, and subsequent items on today's agenda, to the October 10th TAC meeting.

Mr. Jaques noted that the October 10th meeting may be longer than usual due to a full agenda. Mr. Johnson suggested that Mr. Jaques notify TAC members by e-mail to expect a longer than normal meeting and to make all efforts to avoid making commitments that could cause them to have to leave early.

No other discussion due to lack of quorum.

Due to the lack of a quorum, the meeting adjourned at 3:34 PM.

7. Schedule
No discussion due to lack of quorum.

8. Other Business
No discussion due to lack of quorum.

9. Set Next Meeting Date
No discussion due to lack of quorum. The next regular meeting will be held on Wednesday October 10, 2012 at 1:30 p.m. at the MRWPCA Board Room.
Wang Wells

Water Demand
- 20 Market Rate Units (0.535 x 20 = 10.700) : 10.700 AFY
- 9 Inclusionary Units (0.239 x 9 = 2.151) : 2.151 AFY
- Total for 29 units : 12.851 AFY
- Treatment Loss (12.851 x .10 = 1.285) : 1.285 AFY
- System Loss (12.851 x .07 = 0.899) : 0.899 AFY
- Misc. Use (e.g. Recreation/Open Space) : 1.000 AFY
- Total Water Demand : 16.035 AFY

Water Availability
- Water for the proposed project would be obtained from three on-site wells. All three wells have passed source capacity tests under observation from the Monterey County Environmental Health Bureau.
- The Groundwater hydrology portion of the ADEIR estimated the total stored ground water available for the project to range from approximately 540 AFY to 3,155 AFY with an estimated annual recharge of 10.2 to 34.8 AFY.
- The peer review of the ADEIR by MOCRA concluded there is a sustainable, long-term water supply for the proposed project.
- The project was initially proposed to be served by septic systems. The project has been modified to be served by the waste water treatment facility for Pescadero Laguna Seca. The reclaimed waste water will then be used for golf course irrigation with an equivalent reduction in groundwater use for irrigation of the Laguna Seca Golf Course.

Water Balance
- Water Demand : 16.035 AFY
- Waste Water : (12.7 AFY)
- Net Demand : 3.335 AFY
- Annual On Site Recharge (Worst Case) : 10.2 AFY
No Significant Impact to the LSA

- Monterey County, through the Water Resources Agency, has determined there is a long-term water supply.
- Monterey County, through the Environmental Health Bureau, has observed and approved source capacity tests for all three wells that could be used for the project.
- There is stored water under the Wang property to support this project for 50 years.
- There is evidence that there is little if any water transfers across the Gupina fault from the LSA to the Wang property.
- The net water demand for the project is estimated at 3,238 AWF, about 40% of the estimated worst case annual recharge.
- It has been determined and written in the adjudication decision that any project using 5 AWF or less has de minimis effect on the LSA.
Results of Pumping Rollback Simulations

Seaside Groundwater Basin TAC
September 12, 2012

Objectives

- Develop new baseline simulation
- Simulate rollback pumping to pre-2011 levels between 2013 and 2017
- Provide estimates of impacts from the rollback simulation.

Two Baselines and Two Projects

- All simulations use the same hydrology
- All simulations use measured pumping through June 2012
- All simulations use July 2012 through September 2013 pumping for July through September 2012 pumping
- All simulations include 1,500 acre-feet per year of SAR injection beginning in WY2013

Two Baselines

<table>
<thead>
<tr>
<th></th>
<th>TAC</th>
<th>Cal-Am</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard Producers</strong></td>
<td>Adjudicated right with triennial reductions</td>
<td>Same</td>
</tr>
<tr>
<td><strong>Alternative Producers</strong></td>
<td>Pump at Water Year 2011 rates</td>
<td>Pump at their full right</td>
</tr>
<tr>
<td><strong>SNG</strong></td>
<td>Water Pumped by Cal-Am</td>
<td>Same, but at full right</td>
</tr>
<tr>
<td><strong>Gulf Courses</strong></td>
<td>Hydrology year-specific pumping. City of Seaside provides water to Bayonet/Blackhorse after August 25, 2015</td>
<td>Same</td>
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</table>
Two Projects

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<tr>
<th>Standard Producers</th>
<th>TAC</th>
<th>Cal-Am</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roll Back both Cal-Am and City of Seaside to 2011 pumping through 2017. All other standard producers pump at regular triennial reductions.</td>
<td>Roll Back Cal-Am to 2011 pumping through 2017. All other standard producers pump at regular triennial reductions. (i.e. Seaside is the same as TAC Baseline)</td>
<td>Same as TAC (different than baseline)</td>
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<tr>
<td>Alternative Producers</td>
<td>Pump at Water Year 2011 rates (same as baseline)</td>
<td>Same as TAC (same as baseline)</td>
</tr>
<tr>
<td>Water Pumped by Cal-Am (same as baseline)</td>
<td>Same as TAC (different than baseline)</td>
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<tr>
<td>Golf Courses</td>
<td>Hydrology year-specific pumping. City of Seaside provides water to Bayouet/Blackhorse after August 25, 2015 (same as baseline)</td>
<td>Same as TAC (same as baseline)</td>
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### Percent Recovery

#### TAC Model

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<tr>
<th></th>
<th>MSCD</th>
<th>MSCS</th>
<th>PCAWD</th>
<th>PCAWS</th>
<th>Sentinel-3</th>
<th>MW4</th>
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</thead>
<tbody>
<tr>
<td>% Recovery for Baseline</td>
<td>44%</td>
<td>47%</td>
<td>46%</td>
<td>100%</td>
<td>63%</td>
<td>35%</td>
</tr>
<tr>
<td>% Recovery for Project</td>
<td>44%</td>
<td>47%</td>
<td>46%</td>
<td>100%</td>
<td>63%</td>
<td>35%</td>
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#### Cal-Am Model

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<th>PCAWS</th>
<th>Sentinel-3</th>
<th>MW4</th>
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<tbody>
<tr>
<td>% Recovery for Baseline</td>
<td>44%</td>
<td>45%</td>
<td>45%</td>
<td>100%</td>
<td>62%</td>
<td>35%</td>
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<tr>
<td>% Recovery for Project</td>
<td>44%</td>
<td>45%</td>
<td>45%</td>
<td>100%</td>
<td>62%</td>
<td>35%</td>
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### Change in Intrusion Rate

#### TAC Model Average Intrusion Rates

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<tr>
<th>Layer</th>
<th>Baseline</th>
<th>Project</th>
<th>% Change</th>
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<tr>
<td>1</td>
<td>0.862</td>
<td>0.863</td>
<td>0.14%</td>
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<tr>
<td>2</td>
<td>0.065</td>
<td>0.063</td>
<td>-2.58%</td>
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<tr>
<td>3</td>
<td>0.033</td>
<td>0.033</td>
<td>-0.33%</td>
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<tr>
<td>4</td>
<td>0.187</td>
<td>0.192</td>
<td>2.66%</td>
</tr>
<tr>
<td>5</td>
<td>0.001</td>
<td>0.001</td>
<td>0.26%</td>
</tr>
<tr>
<td>Average</td>
<td>0.2296</td>
<td>0.2304</td>
<td>0.38%</td>
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</table>

#### Cal-Am Model Average Intrusion Rates

<table>
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<th>Layer</th>
<th>Baseline</th>
<th>Project</th>
<th>% Change</th>
</tr>
</thead>
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<td>0.864</td>
<td>0.863</td>
<td>-0.07%</td>
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<tr>
<td>2</td>
<td>0.054</td>
<td>0.063</td>
<td>8.29%</td>
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<tr>
<td>3</td>
<td>0.003</td>
<td>0.003</td>
<td>-1.73%</td>
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<td>0.192</td>
<td>0.94%</td>
</tr>
<tr>
<td>5</td>
<td>0.001</td>
<td>0.001</td>
<td>5.29%</td>
</tr>
<tr>
<td>Average</td>
<td>0.2292</td>
<td>0.2303</td>
<td>0.47%</td>
</tr>
</tbody>
</table>

*All intrusion rates are approximate values in feet/day*

### Conclusions

- Both TAC approach and Cal-Am approach have similar influences.
- Project has notable impact on water levels between 2015 and 2017.
- Water levels almost completely recover to baseline conditions by 2031.
- Average change in intrusion rate over the 22-year simulation period is less than 1%.
TO: Board of Directors

FROM: Dewey D Evans, CEO

DATE: October 3, 2012

SUBJECT: Report of First and Second Quarter Water Year 2012 Seaside Groundwater Basin Groundwater Quality and Groundwater Level Data

Due to the size of the report making the agenda packet too large if included, the First and Second Quarter Water Year 2012 Seaside Groundwater Basin Groundwater Quality and Groundwater Level Data can be found on the Watermaster web site at seasidebasinwatermaster.org on the “Postings and Records” page, at:

http://www.seasidebasinwatermaster.org/seasidebasinwatermaster.org/Other/1st_2nd_WY2012_WQWLdata_memo.pdf
ITEM NO. XI.

DIRECTOR’S REPORTS
ITEM NO. XII.

EXECUTIVE OFFICER

COMMENTS