

MEETING NOTICE AND AGENDA
TECHNICAL ADVISORY COMMITTEE
OF THE
SEASIDE BASIN WATER MASTER

DATE: Wednesday, November 14, 2012

MEETING TIME: 1:30 p.m.

**Monterey Regional Water Pollution Control Agency Offices
5 Harris Court, Building D (Ryan Ranch)
Monterey, CA 93940**

If you wish to participate in the meeting from a remote location, please call in on the Watermaster Conference Line by dialing (877)810-9415. Use the Access Code of 4560043. Please note that if no telephone attendees have joined the meeting by 10 minutes after its start, the conference call will be ended.

OFFICERS

Chairperson: Eric Sabolsice, California American Water Company
Vice-Chairperson: Rob Johnson, MCWRA

MEMBERS

California American Water Company	City of Del Rey Oaks	City of Monterey
City of Sand City	City of Seaside	Coastal Subarea Landowners
Laguna Seca Property Owners	Monterey County Water Resources Agency	
Monterey Peninsula Water Management District		

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**SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE**

***** AGENDA TRANSMITTAL FORM *****

MEETING DATE:	November 14, 2012
AGENDA ITEM:	2.A
AGENDA TITLE:	Approve Minutes from October 10, 2012
PREPARED BY:	Robert Jaques, Technical Program Manager
SUMMARY:	<p>Draft Minutes from this meeting were emailed to all TAC members. Any changes requested by TAC members have been included in the attached version.</p>
ATTACHMENTS:	Minutes from this meeting
RECOMMENDED ACTION:	Approve the minutes

D-R-A-F-T
MINUTES

**Seaside Groundwater Basin Watermaster
Technical Advisory Committee Meeting
October 10, 2012**

Attendees: TAC Members

City of Seaside – Rick Riedl (replaced at 2:48 p.m. by Leslie Llantero via phone)
California American Water – Eric Sabolsice
City of Monterey – Norm Green
Laguna Seca Property Owners – Bob Costa (arrived at 1:51 p.m.)
MPWMD – Joe Oliver
MCWRA – Rob Johnson (arrived at 2:35 p.m.)
City of Del Rey Oaks – Ron Langford (via phone)
City of Sand City – No Representative
Coastal Subarea Landowners – No Representative

Watermaster

Technical Program Manager - Robert Jaques

Consultants

HydroMetrics – Derrick Williams (via phone)

Others:

None

The meeting was called to order at 1:43 p.m. after waiting for a quorum to arrive.

1. Public Comments

There were no public comments.

2. Administrative Matters:

A. Approve Minutes from September 12, 2012 Meeting

On a motion by Mr. Riedl, seconded by Mr. Oliver, the minutes were unanimously approved as presented.

B. Administrative Update on Discussion of “Repayment” of Overpumped Groundwater

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

Mr. Sabolsice said that during the October 3rd Board meeting there was discussion that the TAC should weigh-in on this issue. He went on to say he felt that without current evidence of seawater intrusion occurring in the Basin, he did not see how a schedule could be developed to meet the needs of the Basin. He noted that the Memorandum of Understanding (MOU) currently says that overpumped water shall be repaid on a "feasible" schedule. He wondered how the TAC could develop a feasible schedule any better than the Board could. He noted that the Board had formed an Ad Hoc committee to work on this, and that he is on that committee.

Mr. Green asked if CAW's plan was to repay the overpumped water debt with water from the new regional desalination plant. Mr. Sabolsice responded that ASR, GWRP, Sand City desalination, conservation, and regional desalination are all potential sources of the repayment water.

Mr. Oliver asked Mr. Sabolsice when CAW needed to have a schedule developed. Mr. Sabolsice said that CAW would like to have a defined schedule as soon as possible, so the regional desalination plant can be properly sized.

Mr. Sabolsice estimated that CAW's repayment debt will be about 18,000 acre feet by the time the regional desalination plant goes online. He is proposing a repayment period of 50 years with a water repayment rate of 350 acre feet per year. The cost to provide that capacity in the desalination plant will be about \$5 million, according to Mr. Sabolsice. The additional capacity costs flow to the rate-payers, and CAW would like to keep its rates as low as possible. Compressing the schedule too much will increase capital costs and will result in excess capacity in the desalination plant, once the water debt has been repaid.

Mr. Oliver asked if the Judge will likely need to weigh-in on the proposed schedule. Mr. Jaques responded that probably would be true, and that CAW's intent would be to amend the MOU to delete the word "feasible" and replace it with a defined schedule which would be an attachment to the amended MOU.

Mr. Costa asked when the desalination plant goes online will CAW continue pumping at its current 2,800 AFY rate from the Seaside Basin. Mr. Sabolsice responded that the regional desalination plant will provide sufficient water so that CAW's pumping in the Seaside Basin will be reduced to its Natural Safe Yield allowance of 1,474 acre feet per year.

Mr. Oliver noted that groundwater modeling performed to date has not included any repayment water. Such modeling could be done to show the impact of a proposed overpumped water repayment schedule. Mr. Sabolsice said that if seawater intrusion were to be detected in the Basin, the MOU should provide for revising the schedule to address that condition.

Mr. Jaques said that the Board might want the TAC to look at the reasonableness of CAW's proposal in terms of desalination plant sizing, costs, timing, etc. He also noted that modeling could be done to see if protective water levels can be lowered based on now having a better understanding of the Basin's hydrogeology. If protective water levels were lower, less repayment water might be needed to protect the Basin. Mr. Williams said that protective water levels are the gauge of whether the Basin is safe with regard to seawater intrusion.

Mr. Riedl said that the City of Seaside does not have an alternate source of water, so if seawater intrusion occurs and the Seawater Intrusion Response Plan has to be implemented, there will be significant impacts on the City's municipal water system. He said that Seaside would like to have groundwater levels brought up as quickly as possible. He noted that pumping from Seaside wells is becoming more difficult because the groundwater level at the City's wells has dropped. He went on to say the City may be forced to put in a new well to replace Well No. 4, and that this would be very costly. He noted that the Decision mentions "material damage" which could include Standard Producers having to pay more to produce water. He suggested some "rough cut" groundwater model runs be initially performed to better understand Basin response to various replenishment scenarios prior to refining the Protective Water Levels model.

There was discussion of several topics including what the modeling scenarios might be, what Seaside Golf Course pumping will be once the current in-lieu program concludes, how long it would take for HydroMetrics to perform modeling, and whether an economic evaluation of the proposed repayment schedule should be done. One suggested potential modeling scenario was in-lieu replenishment by Cal Am pumping less from the Basin. Mr. Sabolsice stated that this could be one of the possible scenarios.

Following this discussion, Mr. Sabolsice said that he would advise the Ad Hoc committee that the TAC feels performing modeling would be helpful in developing a schedule. Mr. Sabolsice said that the Ad Hoc committee's first meeting will probably be one to two weeks prior to the November 28 board meeting.

Mr. Jaques suggested that, if the Ad Hoc committee wishes to have modeling performed, a Request for Service (RFS) to have HydroMetrics perform modeling could be put on the November 14th TAC agenda. If the TAC approves the RFS then it could go on the November 28th Board agenda for approval, and the modeling work could start shortly thereafter. Mr. Williams confirmed that he could meet that schedule in terms of preparing a scope of work description for use in preparing an RFS. Mr. Sabolsice said he would discuss this with the Ad Hoc committee and advise Mr. Jaques.

Note: At this point in the meeting Mr. Riedl had to depart for another meeting and he was replaced by Leslie Llantero as the Seaside representative at 2:48 p.m. via phone.

3. Request from California American Water to Retire and Destroy Certain Wells in the Seaside Basin

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

Mr. Oliver said he hoped there could be a win-win solution to minimize the loss in data that would occur through the proposed well abandonment. He said that even though there are other wells in this portion of the Basin, some of these do not report data and others have long histories of data, so MPWMD is concerned about not continuing the historical data gathering from those wells. He also posed the question of whether the Watermaster should have a protocol developed for well abandonment. He asked Mr. Sabolsice what the main driver was for CAW to propose retiring these wells. Mr. Sabolsice responded that CAW no longer needs these wells for production purposes, and that there are no plans to drill new wells to replace them. CAW would like to abandon, seal, and properly destroy the wells to protect the Basin. He went on to state that if data from the wells is not critical to seawater intrusion monitoring or to modeling, CAW would like to retire them. Otherwise, there will be ongoing costs to maintain the wells to keep them from deteriorating.

Mr. Oliver said that some of the wells have data dating back to the 1950s. He wondered if the wells could be converted from production to monitoring status by retrofitting them. Mr. Sabolsice said the CAW would be agreeable to converting them to monitoring wells if the costs to do so were not excessive. Mr. Oliver said this would satisfy MPWMD's concerns. Mr. Sabolsice said the CAW would at some point like to be able to destroy the wells when data gathering from them is no longer necessary. Mr. Oliver said that of the four wells proposed for retirement by CAW, the least important one would be the Darwin well.

Mr. Johnson asked if MPWMD would want to take over these wells. Mr. Oliver and Mr. Lear responded that MPWMD would be willing to consider doing the monitoring once they are converted to monitoring wells. The decision with regard to whether CAW or MPWMD will perform monitoring on these wells will be made between those two parties.

A motion was made by Mr. Johnson, seconded by Mr. Costa, to have CAW convert the Hilby, Military, and Luxton wells from production to monitoring wells on the understanding that conversion will be less costly than destruction, and that destruction of the Darwin well can proceed because data from that well is not critical. The motion passed unanimously. Mr. Oliver will provide Mr. Sabolsice with a proposed retrofitting procedure to convert these wells from production to monitoring wells.

4. Approve Initial RFSs for MPWMD and HydroMetrics for 2012

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

Mr. Oliver requested that for Task I.4.b the schedule be revised to show this work occurring in the June-July timeframe, rather than the April-May time frame, due to potential workload conflicts during the April-May time period. On a motion by Mr. Johnson, seconded by Mr. Sabolsice, all four of the RFSs were unanimously approved with only this one change to the schedule.

5. Schedules

A. For remainder of 2012

B. For 2013

Mr. Jaques briefly discussed the schedules, and there was no other discussion on this item.

6. Other Business

Mr. Oliver commented that WY 2012 has just come to an end and that WY 2013 had begun, and that CAW water production, especially from the Carmel River Basin, was lower than in prior years. Mr. Sabolsice said that new water rates have resulted in users conserving more, and also that CAW had been able to reduce its non-revenue water (water losses and unmetered water deliveries) by about 900 AFY.

There was brief discussion about CAW reporting its ASR quantities in accordance with the Storage Agreement between the Watermaster and CAW.

7. Set Next Meeting Date:

The next regular meeting will be held on Wednesday November 14, 2012 at 1:30 p.m. at the MRWPCA Board Room

The meeting adjourned at 3:25 p.m.

**SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE**

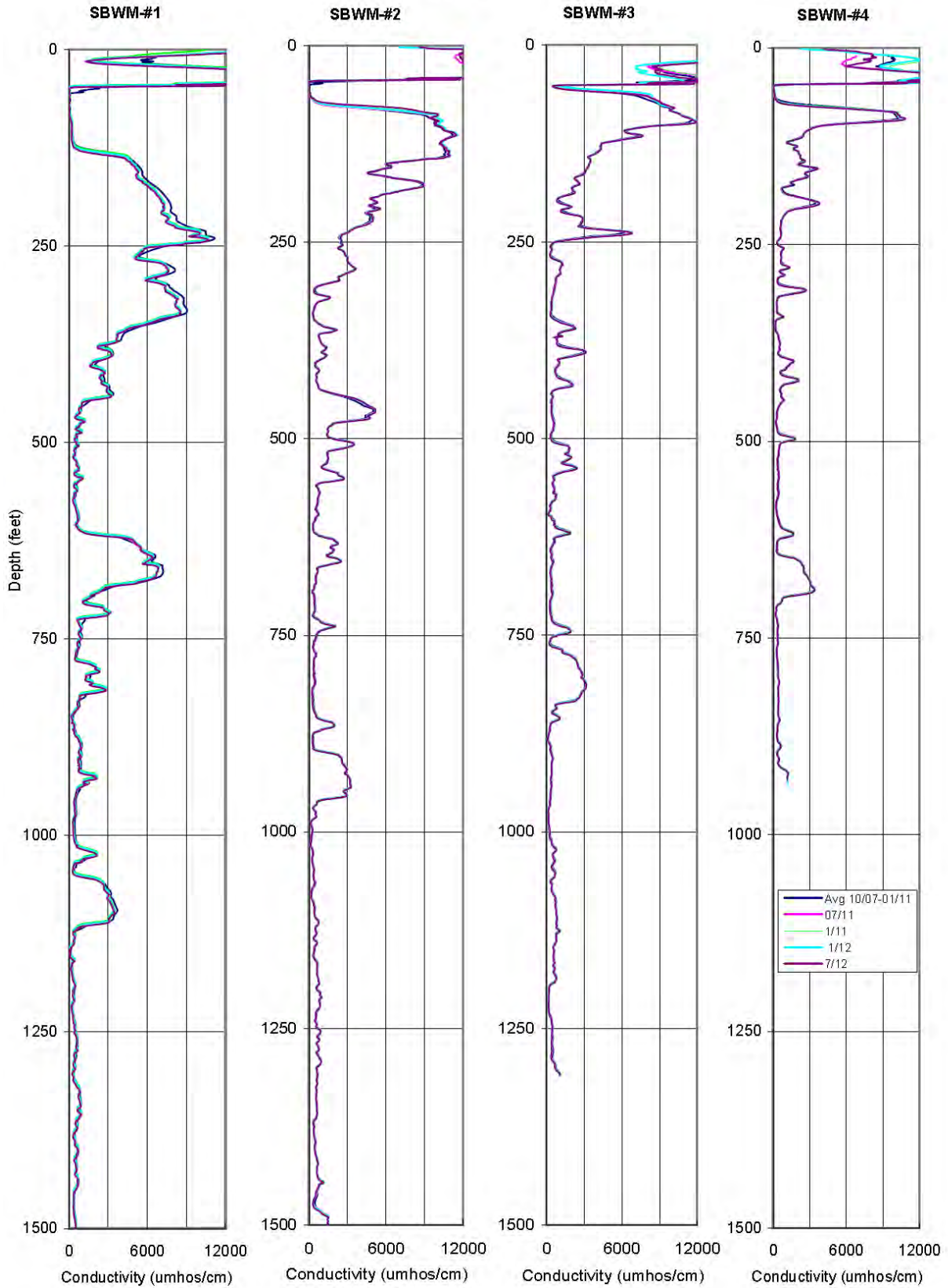
*** * * AGENDA TRANSMITTAL FORM * * ***

MEETING DATE:	November 14, 2012
AGENDA ITEM:	3
AGENDA TITLE:	Update on Request from California American Water to Retire and Destroy Certain Wells in the Seaside Basin
PREPARED BY:	Robert Jaques, Technical Program Manager
SUMMARY:	<p>At the TAC's October 10, 2012 meeting there was unanimous agreement to recommend to the Board that (1) Cal Am be asked to convert the Hilby, Military, and Luxton wells from production to monitoring wells on the understanding that conversion will be less costly than destruction, and (2) that destruction of the Darwin well can proceed because data from that well is not critical.</p> <p>At the October 10th meeting Mr. Oliver offered to provide Mr. Sabolsice with a proposed retrofitting procedure to convert these wells from production to monitoring wells. They also said they would discuss which of these parties would be able to perform the monitoring work, once the wells are converted to monitoring wells.</p> <p>This item is on today's agenda to receive an oral update from MPWMD and Cal Am as to whether the proposed retrofitting procedure is acceptable to Cal Am and which party will perform the monitoring work, so the above-stated recommendations can be forwarded to the Board.</p>
ATTACHMENTS:	None
RECOMMENDED ACTION:	Confirm direction from TAC at its October 10, 2012 meeting to make the above-stated recommendations to the Board

**SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE
* * * AGENDA TRANSMITTAL FORM * * ***

MEETING DATE:	November 14, 2012
AGENDA ITEM:	4
AGENDA TITLE:	Sentinel Well Induction Logging Results for 2012
PREPARED BY:	Robert Jaques, Technical Program Manager
SUMMARY: Martin Feeney has provided the attached Sentinel Well summary of induction log data for 2012, as well as the cumulative data from the start of the program. Mr. Feeney reports that there have been no changes at depth in the deeper aquifers, but that some seasonal changes in the very shallow superficial aquifers continue to be observed.	
ATTACHMENTS:	Induction Log Plots from the Sentinel Wells from 2007 through 2012
RECOMMENDED ACTION:	None required – information only

Seaside Groundwater Basin Watermaster
Sentinel Wells
Induction Logs
2007-2012



**SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE**

***** AGENDA TRANSMITTAL FORM *****

MEETING DATE:	November 14, 2012
AGENDA ITEM:	5
AGENDA TITLE:	Discuss and Provide Input on the 2012 Seawater Intrusion Analysis Report (SIAR)
PREPARED BY:	Robert Jaques, Technical Program Manager
SUMMARY:	<p>HydroMetrics has prepared the Draft Seawater Intrusion Analysis Report (SIAR) for Water Year 2011-2012. The Executive Summary from the SIAR is attached. The complete SIAR has been posted on the Watermaster's website for your review prior to today's TAC meeting.</p> <p>The SIAR examines the "health" of the Basin with regard to whether or not there are any indications that seawater intrusion is either occurring or is imminent. The SIAR states that depressed groundwater levels, continued pumping in excess of recharge and fresh water inflows, and ongoing seawater intrusion in the nearby Salinas Valley all suggest that seawater intrusion <u>could</u> occur in the Seaside Groundwater Basin. In spite of these factors, the SIAR reports that neither the Piper nor the Stiff Diagrams indicate the presence of seawater intrusion in the existing monitoring wells. However, a trend toward increasing chloride concentration in a few of the near-coast monitoring wells, and decreasing sodium/chloride molar ratios in some of those wells warrants increasing the monitoring frequency in those wells.</p> <p>HydroMetrics and MPWMD will describe a possible cause of these changes in water quality at these wells, related to a change in the method samples are collected. A low-flow sampling technique was implemented in 2009, replacing the previously used air-lift sampling technique. This possible cause will be evaluated early in WY 2013.</p> <p>Representatives from HydroMetrics will attend today's TAC meeting (via telephone) to provide a summary of the report and to respond to questions by TAC members.</p>
ATTACHMENTS:	Executive Summary of Draft WY 2012 Seawater Intrusion Analysis Report (full document is posted on the Watermaster's website)
RECOMMENDED ACTION:	Discuss and either modify the Draft SIAR or recommend that the Board approve the Draft SIAR

EXECUTIVE SUMMARY

This annual report addresses the potential for, and extent of, seawater intrusion in the Seaside Groundwater Basin. Continued pumping in excess of recharge and fresh water inflows, pumping depressions near the coast, and ongoing seawater intrusion in the nearby Salinas Valley all suggest that seawater intrusion could occur in the Seaside Groundwater Basin. No seawater intrusion is currently observed in existing monitoring and production wells, as demonstrated by the different tools and analyses that are used to investigate for evidence of seawater intrusion. However, there are two monitoring wells (PCA-West Deep and sentinel well SBWM-4) that need to be watched carefully over the next water year as explained in the third bullet below.

- Piper diagrams for groundwater samples collected from depth-discreet monitoring wells during Water Year 2012 show no changes in water chemistry towards seawater.
- No groundwater samples analyzed with Stiff diagrams are indicative of incipient seawater intrusion.
- Wells with increasing chloride concentrations over the past year are: PCA-West Deep, sentinel well SBWM-4 shallow, and SBWM-4 deep. The September 2012 chloride concentration in the PCA-West Deep well is only 4 mg/L below the chloride threshold value of 186 mg/L established in the Seawater Intrusion Response Plan (SIRP) for this well (HydroMetrics WRI, 2009c). The sentinel wells do not have chloride threshold values, however, the deep sample from well SBWM-4 is above the secondary MCL of 250 mg/L. The increasing trend seen in the shallow and deep samples from well SBWM-4 start at the same time as the PCA-West Deep well's increasing trend. Well SBWM-4 should be sampled quarterly at the same time as the PCA-West Deep well so that results can be correlated. No other increases from the current monitoring frequency are warranted. Quarterly data from PAC-West Deep and SBWM-4 need to be evaluated each quarter after results are received from the laboratory.
- The PCA-West Deep well and sentinel well SBWM-4 are the only wells with decreasing sodium/chloride ratios. If these trends continue and drop below 0.86, it could indicate seawater intrusion.

- Maps of chloride concentrations for the shallow aquifer do not show chlorides increasing towards the coast. The deep aquifer maps show that higher chloride concentrations are limited to coastal monitoring wells PCA-West Deep and sentinel well SBWM-4.
- Although production wells have a different water quality than the monitoring wells, this is probably as a result of them being screened across both shallow and deep zones. The production well water qualities are not indicative of seawater intrusion.
- Groundwater levels continue to be below preliminary protective elevations in the deep coastal target monitoring wells for which protective elevations were developed (MSC deep, PCA-West, and Sentinel Well 3). Two of the three shallow wells' groundwater levels are above protective elevations: PCA-W shallow and CDM-MW4. MSC shallow remains below preliminary protective elevations.

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

1. Analyze Data from PCA-West Deep Quarterly

Increasing chloride concentrations, decreasing sodium/chloride molar ratio, and chloride concentrations approaching the chloride threshold justify increasing how often data from well PCA-West Deep is evaluated. In the past, access issues due windblown sands from the nearby dunes have prevented sampling in the first quarter of the water year. However, every effort must be made to collect a sample in the first quarter of WY 2013 to confirm the observed trends. Additionally, due to a change in sampling method from airlifting to micropurging in 2009, it would be prudent to collect samples using both methods to verify whether the change in water quality is an artifact of the sampling method. After each quarterly sampling event at this well, the data must be analyzed and documented.

2. Initiate Quarterly Water Quality Sampling and Analysis for Sentinel Well SBWM-4

Because nearby monitoring well PCA-West Deep has an increasing chloride trend with decreasing sodium/chloride molar ratio which matches the trends observed in SBWM-4, sampling at SBWM-4 needs to

increase its sampling frequency from semi-annual to quarterly so that a direct comparison can be made with the quarterly samples collected at PCA-West Deep.

3. Evaluate Water Quality at Sand City Public Works Corp Yard Well

Due to the evolving water type being observed in the Piper diagram, the source of the irregular water quality at this well needs to be evaluated. The Piper and Stiff diagrams, and sodium/chloride molar ratio suggest that the source of high chloride is not seawater, however, this needs to be confirmed with further investigation into historical water quality of the area around the well.

4. Watermaster to Request Complete Sample Analysis for Production Wells

When Watermaster makes its annual request to producers for water quality data, the request will state that full results from one sample are to be reported. This ensures that the anions and cations balance and that anion/cation analyses can be carried out for this report.

5. Continue to Analyze and Report on Water Quality Annually

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

6. Refine Preliminary Protective Groundwater Elevations

Once the water supply parameters of the Coastal Water Project are better defined, we recommend that the preliminary protective groundwater elevations be refined using final calibrated aquifer properties from the Seaside Basin groundwater flow model. It is expected that the protective elevations will decrease to a few feet, which will make them more practical to meet.

**SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE**

***** AGENDA TRANSMITTAL FORM *****

MEETING DATE:	November 14, 2012
AGENDA ITEM:	6
AGENDA TITLE:	Discuss and Provide Input on Preliminary Draft Annual Report for 2012
PREPARED BY:	Robert Jaques, Technical Program Manager
SUMMARY: The Watermaster submits an Annual Report to the Court after the end of each Water Year to fulfill one of its obligations under the Court Decision that created the Watermaster. A Preliminary Draft Annual Report is being presented to the TAC for its review and input, in as complete a form as it can be as of today's TAC meeting. Due to its large file size, a complete copy of the Preliminary Draft 2012 Annual Report cannot be included with the agenda packet. However, a copy of the body of the Preliminary Draft is attached. The Attachments to the Annual Report, several of which are still being prepared, are not included. A copy of the complete Preliminary Draft Annual Report, with those attachments that have been completed, is posted on the Watermaster's website for anyone that would like to examine the entire document. Please note the following: <ul style="list-style-type: none">• MPWMD is still compiling the data for the WY 2012 Water Level/Water Quality Monitoring Report. Some of the Water Quality data were collected in late in the Water Year and are not yet worked up. Only the text of that report has been prepared, and it is included in Preliminary Draft Annual Report. The appendices to that Monitoring Report will be included in the Annual Report as soon as they become available.• The Preliminary Draft Annual Report includes the Draft 2012 Seawater Intrusion Analysis Report (SIAR). The Draft SIAR will be replaced with the Final SIAR following approval by the Board at its November 28, 2012 meeting.	
ATTACHMENTS:	Preliminary Draft 2012 Annual Report (Body only)
RECOMMENDED ACTION:	Provide input to the Technical Program Manager regarding any edits to the Preliminary Draft Annual Report that the TAC wishes to propose

SEASIDE BASIN WATERMASTER

ANNUAL REPORT – 2012

PRELIMINARY DRAFT

Integral to the Superior Court Decision (Decision) rendered by Judge Roger D. Randall on March 27, 2006 is the requirement to file an Annual Report. The ruling of the Court originally required that the Annual Report be prepared and filed with the Court and mailed to all the parties on or before the 15th day of November every year for the preceding Water Year. The Court's subsequent Annual Report Review and Order entered on January 7, 2012 revised the deadline for submittal of Annual Reports to December 15. This 2012 Annual Report is being filed on or before December 15, 2012, consistent with the provisions of the Decision, as amended by the Annual Report Review and Order. This Annual Report addresses the specific Watermaster functions set forth in Section III. L. 3. x. of the Decision. In addition this Annual Report includes a section pertaining to Water Quality Monitoring and Basin Management.

A. Groundwater Extractions

The schedule summarizing the Water Year 2012 (WY 2012) groundwater production from all the producers allocated a Production Allocation in the Seaside Groundwater Basin is provided in Attachment 1, "Seaside Groundwater Basin Watermaster, Reported Quarterly and Annual Water Production From the Seaside Groundwater Basin for all Producers Included in the Seaside Basin Adjudication During Water Year 2012." For the purposes of this Annual Report Water Year 2012 is defined as beginning October 1, 2011 and ending on September 30, 2012.

B. Groundwater Storage

Monterey Peninsula Water Management District (MPWMD), in cooperation with California American Water (CAW), operated the Seaside Basin Aquifer Storage and Recovery (ASR) program during WY 2012. During WY 2012, a total of 131.27 acre-feet (AF) of water was diverted by CAW from its Carmel River sources during periods of flow in excess of the State Water Resources Control Board bypass flow requirements, and transported through the existing CAW distribution system for injection and storage in the Seaside Basin at the MPWMD's Santa Margarita ASR site and CAW's Seaside Middle School ASR site. This is the only reported storage of non-native groundwater into the Seaside Basin in WY 2012.

Also during WY 2012, MPWMD and CAW initiated construction of the second ASR well at the Seaside Middle School ASR site. This is the fourth ASR well in the basin, and it is anticipated to be ready for permanent service in late 2013. In addition, utilization of new pipeline connections from the Seaside Middle School to the Santa Margarita ASR facility began in WY 2012. Use of these pipeline connections will allow routine backflushing of the two Seaside Middle School site ASR wells to occur at the existing backflush basin at the Santa Margarita site on an interim basis until a permanent backflush basin can be installed for this purpose. The new ASR wells at the Seaside Middle School site will eventually provide over twice the existing capacity to inject and store excess Carmel River winter flows, and their completion satisfies orders and decisions recently issued by the State Water Resources Control Board and California Public Utilities Commission.

Based upon production reported for WY 2011, the following Standard Producers are entitled to Free and Not-Free Carryover Credits in accordance with the Decision, Section III. H. 5. for WY 2012:

<u>Producer</u>	<u>Free Carryover Credit</u> <u>(Acre-feet)</u>	<u>Not-Free Carryover Credit</u> <u>(Acre-feet)</u>
Granite Rock	89.21	69.97
DBO Development	180.17	136.41
CAW	0 00	0 00

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

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

The Watermaster has interpreted the above language to mean that the following Artificial Replenishment action was undertaken in WY 2012:

Watermaster indirectly engaged in In-lieu Replenishment of the Basin during Water Year 2012. Non-native water was made available to the Basin during Water Year 2012 and is foreseeable for Water Year 2012 under a Memorandum of Understanding and Agreement entered into by Watermaster with the City of Seaside for its golf course irrigation program creating in-lieu replenishment water. 298.2 acre-feet was in-lieu replenished to the Basin by the program in Water Year 2012.

D. Leases or sales of Production Allocation and Administrative Actions

No sale of Production Allocation and no actions pertaining to real property and/or water rights occurred during WY 2012.

At its October 3, 2012 meeting the Watermaster Board adopted revisions to its *Rules and Regulations*. These revisions pertained to the appointment of officers to committees in the third sentence in Section 3.3. The wording of that sentence was changed 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.”

During WY 2012 the Watermaster Board was comprised of the following Members and Alternates:

<u>MEMBER</u>	<u>ALTERNATE</u>	<u>REPRESENTING</u>
Director Paul Bruno	N/A	Coastal Subarea Landowner
Director Craig Anthony Director Eric Sabolsice	Eric Sabolsice Brian Bruce (effective January 2012)	California American Water
Director Bob Costa	N/A	Laguna Seca Subarea Landowner
Director Bob Brower	Judi Lehman	MPWMD
Mayor Dave Pendergrass	Steve Matarazzo	City of Sand City
Supervisor Dave Potter	Jane Parker	Monterey County (MCWRA)

Mayor Jerry Edelen	Kristin Clark	City of Del Rey Oaks
Mayor Chuck Della Sala	Libby Downey	City of Monterey
Mayor Felix Bachofner	Dennis Alexander	City of Seaside

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

The CAW/MPWMD ASR Program occurred in WY 2012 with 131.3 acre-feet of water injected into the Basin as Stored Water Credits and 1,224.3 acre-feet extracted.

In addition to the water imported from the Carmel Basin for the ASR program described in Section B above, during WY 2012 298.2 acre-feet of imported water was used to irrigate golf courses owned by the City of Seaside overlying the Seaside Basin, as discussed above in Section C. The terms and conditions under which this in-lieu replenishment water was used to generate a credit to be applied against the City of Seaside’s overproduction replenishment assessments is described in the “Memorandum of Understanding Between the Seaside Basin Watermaster and the City of Seaside” which was contained in Attachment 3 to the Watermaster’s 2010 Annual Report. This is the only imported, reclaimed or desalinated water used either directly or for storage in the groundwater basin that has been reported to the Watermaster during WY 2012.

As reported in Section E of the 2010 Annual Report, the MPWMD, City of Seaside, MCWD, and Watermaster developed an MOU to add an additional 68.8 acre-fee of in lieu replenishment to the City of Seaside's total in lieu replenishment for Water Year 2009/2010. This MOU was finalized and executed in early 2012, and a copy of the MOU is contained in Attachment 5. This will result in a revision to the Replenishment Account balance sheet for Water Year 2009/2010.

F. Violations of the Decision and any corrective actions taken

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

The Watermaster made a declaration regarding the availability of Artificial Replenishment for WY 2012 at its Board meeting of November 28, 2012. A copy of this declaration is contained in Attachment 2. In WY 2012 the Watermaster continued the 10% water production reduction that was implemented in WY 2010, as required under Section III.B.2 of the Decision. In WY 2012 the Watermaster implemented an additional 10% water production reduction, also as required under Section III.B.2 of the Decision.

Total pumping for WY 2012 did not exceed the Operating Yield (OY) for the Seaside Basin, but it did exceed the Natural Safe Yield (NSY) of the Basin.

CAW and the City of Seaside reported annual pumping quantities that exceeded their Standard Production NSY allocations by 597.51 and 56.39 acre-feet, respectively, and reported annual pumping quantities that exceeded their Operating Yield allocations by 222.97 and 2.43 acre-feet, respectively. The City of Seaside did not exceed its Alternative Production NSY. The Watermaster will assess CAW and the City of Seaside a Replenishment Assessment for these over productions, as further described in Section H, below.

G. Watermaster administrative costs

The total estimated Administrative costs through the end of Fiscal Year 2012 amounted to \$85,000 including a \$25,000 dedicated reserve. Costs include maintaining an office and paying a part time administrator and some part time staff to take and transcribe minutes of the Watermaster Board meetings during 2012. The “Fiscal Year 2012 Administrative Fund Report” is provided as Attachment 3.

H. Replenishment Assessments

A Replenishment Assessment of \$2,780 per acre-foot was established by the Watermaster Board at its October 7, 2009 meeting for use against WY 2010 pumping, and this same unit cost was used for WY 2012. At its meeting of October 3, 2012 the Watermaster Board determined that this same \$2,780 per acre-foot Replenishment Assessment unit cost should be used against WY 2013 pumping. The Agenda transmittal from that meeting discussing this determination is contained in Attachment 4.

Alternative and Standard Producers report their production amounts from the Basin to the Watermaster on a quarterly basis. Based upon the reported production for WY 2012, CAW’s Replenishment Assessment for Overproduction in excess of its share of the Natural Safe Yield is \$1,661,089.98, and for Overproduction in excess of its share of the Operating Yield is \$619,853.40. The City of Seaside’s Replenishment Assessment for its Municipal System for Overproduction in excess of its share of the Natural Safe Yield is \$156,751.85, and for overproduction in excess of its share of the Operating Yield is \$6,756.65. The City of Seaside did not exceed its Alternative Production Allocation for its Golf Course System production. A summary of the calculations for Replenishment Assessment for WY 2012 is contained in Attachment 5.

I. All components of the Watermaster budget

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

J. Water Quality Monitoring and Basin Management

Water Quality Analytical Results

Groundwater quality data continued to be collected and analyzed on a quarterly basis during WY 2012 from the enhanced network of monitoring wells. As initiated in 2009, a new low-flow sampling method continued to be implemented to improve the efficiency of sample collection, and will continue to be employed during the upcoming year. Where feasible, water quality at selected locations may continue to be supplemented with continuous water-quality dataloggers to offset the reduction in sample collection frequency. No modifications to the quarterly data collection frequency at these wells are being proposed for WY 2013, but consideration will be given to reducing the sampling frequency from quarterly to semi-annually at selected monitor wells that continue to exhibit stable water-quality results. Any recommendations for future changes in sampling frequency will be included in the 2013 Annual Report.

In addition, quarterly geophysical (induction) logging continued to be performed at the four Watermaster Sentinel wells that were installed in 2007. The induction logging results have shown very little variations and trends have been steady since this monitoring began, indicating that the coastal water quality conditions are not changing at this sample frequency. Therefore, beginning in WY 2010, as approved by the Court’s Order dated February 19, 2010, the induction logging frequency was reduced to semi-annually at these wells. Water samples from these wells continue to be collected on an annual basis.

Beginning in WY 2012 water quality analyses were expanded to include barium and iodide ions. These expanded analyses will be continued in WY 2013 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).

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

All of the recommendations contained in the report in Attachment 7 are being actively pursued by the Watermaster. Funds to pursue these recommendations have been included in the adopted FY 2012 budgets contained in Attachment 6.

Management and Monitoring Program Work Plan

The Management and Monitoring Program (M&MP) 2013 Work Plan contained in Attachment 9 includes the types of basin management activities conducted in prior years as well as revisions recommended by the TAC when it reviewed the Draft M&MP 2012 Work Plan at its August 8, 2012 meeting, and 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.

Basin Management Database

Pertinent groundwater resource data obtained from a number of sources has been consolidated into the Watermaster's database to allow more efficient organization and data retrieval. No modifications or enhancements to the database are planned in FY 2012.

Enhanced Monitoring Well Network

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

Basin Management Action Plan (BMAP)

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

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

- References

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

Updating of the BMAP was planned for FY 2010, and again in FYs 2011 and 2012, but certain information (coming from other parties) that would be needed to perform that work was still not available. Therefore, updating the BMAP has been rescheduled for FY 2013, as described in the M&MP Work Plan contained in Attachment 9.

Seawater Intrusion Response Plan

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

The Final SIRP was approved by the Watermaster Board at its January 2009 meeting, and a summary of the Seawater Intrusion Contingency Actions from the SIRP were contained in Attachment 10 of the 2009 Annual Report. The complete document may be viewed and downloaded from the Watermaster's website at: <http://www.seasidebasinwatermaster.org/>.

Seawater Intrusion Analysis

The Watermaster retained HydroMetrics LLC to prepare the WY 2012 Seawater Intrusion Analysis Report (SIAR) required by the M&MP. The WY 2012 SIAR provides an analysis of data collected during this Water Year.

The WY 2012 SIAR states that depressed groundwater levels, continued pumping in excess of recharge and fresh water inflows, and ongoing seawater intrusion in the nearby Salinas Valley all suggest that seawater intrusion could occur in the Seaside Groundwater Basin. In spite of these factors, the SIAR reports that neither the Piper nor the Stiff Diagrams indicate the presence of seawater intrusion in the existing monitoring wells. However, a trend toward increasing chloride concentration in a few of the near-coast monitoring wells, and decreasing sodium/chloride molar ratios in some of those wells warrants increasing the monitoring frequency in those wells.

As discussed in Attachment 7, a low-flow sampling technique was implemented in 2009, replacing the previously used air-lift sampling technique. The cause of these changes in water quality at these wells may be related to this change in the method samples are collected. This will be evaluated early in WY 2013, as noted in Attachment 7.

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

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

Groundwater Modeling

During FY 2009 the previous Groundwater Model of the Basin was updated and a separate Groundwater Model was developed to determine protective water levels within the Basin. The modeling work was

performed by HydroMetrics LLC. This Model development work was described in the 2009 Annual Report.

Modeling Scenarios

In FY 2010 one Scenario was modeled using the updated Groundwater Model. This was a scenario to evaluate the potential effects of additional pumping in the Laguna Seca Subarea. A full copy of the Technical Memorandum describing that work was contained in Attachment 14 of the Watermaster's 2010 Annual Report.

A second Scenario was planned for modeling in FY 2012, and again in FY 2012. This scenario was to model the effects of implementing the "Monterey Regional Water Supply Project –Phase 1" as that project is defined in the Final EIR for the Coastal Water Project. A key component of this project will be a Regional Desalination Plant. That scenario (Scenario 2) was described in Section J of the 2010 Annual Report.

However, because the data needed to perform modeling of Scenario 2 was still being developed by others during FYs 2011 and 2012, the Watermaster deferred proceeding with work on Scenario 2. The Scenario 2 modeling work has been included in the Monitoring and Management Program Scope of Work and Budget for FY 2013, so that this work can be performed if the more definitive data necessary to perform this work becomes available.

Protective Water Levels

In FY 2009 the Watermaster completed development of preliminary Protective Water Levels (PWLs) for each of the Basin's production aquifers at the locations of several coastal wells. There was discussion of performing refined analyses and/or to determine how the PWLs would be affected if less than 100% of the Basin was to be protected. Performing these refinements was included as a Task in the 2010, 2011, and 2012 M&MP Work Plans, and in their respective M&MP Budgets.

However, water supply information from the Regional Water Supply Project that would be needed to perform that work was still not available in 2012. There was consensus that there was no danger at this time in delaying refining the Protective Water Levels. Therefore, refining the PWLs has been rescheduled and budgeted for FY 2013, as described in the M&MP Work Plan contained in Attachment 9.

Aquifer Cross-Contamination Investigation

In 2012 MPWMD completed its evaluation of coastal wells for cross-aquifer contamination potential. This work consisted of the following tasks:

1. Field verifying selected older steel cased wells.
2. Inspecting well logs to assess proper seal placement to isolate aquifers.
3. Investigating the Santa Margarita – Purissima interface.
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. The potential sources of cross-contamination between the primary aquifers within the Seaside Groundwater basin (the confined Santa Margarita aquifer and the unconfined Paso Robles aquifer) 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.

The work performed in this study included examining well records and performing field verifications to determine if any obvious problems existed in terms of well location, construction, maintenance, or abandonment which would pose a potential cross-aquifer contamination risk, if sea water intrusion were to reach the locations of these wells. For 261 wells, no problems related to maintenance or abandonment were evident from this work. However, 18 wells were identified to exist in the coastal zone and to be either completed in two aquifer zones or to have been drilled through the upper aquifer and completed in the deeper aquifer. These are potential conduits for seawater intrusion, as wells screened in two aquifers potentially provide a direct connection and wells completed in the deeper zone could contribute to cross-aquifer contamination through improperly constructed or failed seals. The 18 identified wells are currently being used as production, backup production, or monitoring wells.

If seawater intrusion were to be detected in the locality of one or more of these wells at some future date, it will be necessary to perform focused evaluation to inspect the integrity of well materials and determine the effects of well completions on the movement of seawater between aquifers at specific wells on a case by case basis. Seawater intrusion has not been detected or reported in the locality of any of these wells. Therefore, no further investigative work is warranted at this time.

A complete copy of the MPWMD investigation is contained in Attachment 10.

Evaluation of Impacts of Temporary Suspension of 10% Pumping Reductions

In FY 2012 groundwater modeling was performed 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. The rationale for making such a request to the Court is 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 Board determined that it would make this request to the Court through a separate filing in either late 2012 or early 2013.

K. Conclusions and Recommendations

The Seaside Basin Watermaster Board has worked diligently to meet all of the Court's established deadline dates. All of the Phase 1 Scope of Work activities, which are described in the "Implementation Plan for the Seaside Basin Monitoring and Management Program" dated March 7, 2007, have been completed. At the Watermaster Board meeting held on October 3, 2012 the Board adopted the budgets contained in Attachment 6, which support carrying out all elements of the "Seaside Groundwater Basin Management and Monitoring Program Anticipated 2013 Work Plan." That Work Plan describes the M&MP activities that will be conducted during Fiscal Year 2013. A copy of this Work Plan is contained in Attachment 9.

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

**SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE**

***** AGENDA TRANSMITTAL FORM *****

MEETING DATE:	November 14, 2012
AGENDA ITEM:	7
AGENDA TITLE:	Notice of Preparation of EIR for the Cal Am Monterey Peninsula Water Supply Project
PREPARED BY:	Robert Jaques, Technical Program Manager
SUMMARY:	<p>Attached are two items pertaining to Cal Am's Monterey Peninsula Water Supply Project:</p> <ol style="list-style-type: none">1. The California PUC recently issued the attached Notice of Preparation (NOP) of an EIR for the Cal Am Monterey Peninsula Water Supply Project. The November 9, 2012 deadline for comments has already passed. The Monterey Peninsula Regional Water Authority has submitted the attached comment letter on the NOP, and it describes issues pertaining to replenishment of the Seaside Basin, which are further discussed under Agenda Item No. 8 on today's Agenda.2. The Monterey Peninsula Regional Water Authority recently had a report prepared by its consultants titled "Draft Evaluation of Seawater Desalination Projects." The full report is about 60 pages long, but the Executive Summary is attached. <p>This agenda item is intended to keep TAC members abreast of progress toward implementation of this Project, and to invite TAC input on any comments the TAC feels it should provide to the Watermaster Board, if any, on either of these documents</p>
ATTACHMENTS:	<ol style="list-style-type: none">1. Notice of Preparation issued by the PUC2. Executive Summary from the "Draft Evaluation of Seawater Desalination Projects"
RECOMMENDED ACTION:	Provide input to the Technical Program Manager regarding any comments the TAC may wish to provide to the Watermaster Board, if any, on either of these documents

PUBLIC UTILITIES COMMISSION505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

NOTICE OF PREPARATION

Environmental Impact Report for the CalAm Monterey Peninsula Water Supply Project

Introduction

In accordance with the provisions of the California Environmental Quality Act (CEQA) and the CEQA Guidelines, the California Public Utilities Commission (CPUC), as CEQA Lead Agency, is preparing an Environmental Impact Report (EIR) for the California American Water Company's (CalAm) proposed Monterey Peninsula Water Supply Project (MPWSP or proposed project). The MPWSP is comprised of various facilities and improvements, including: a seawater intake system; a 9-million-gallons-per-day (mgd) desalination plant; desalinated water storage and conveyance facilities; and expanded Aquifer Storage and Recovery (ASR) facilities. If the Groundwater Replenishment Project proposed by the Monterey Regional Water Pollution Control Agency (MRWPCA) is timely approved and implemented, CalAm's proposed desalination plant would be sized at 5.4 mgd. This document serves as the Notice of Preparation (NOP) for the EIR and solicits relevant comments on the scope of environmental issues as well as alternatives and mitigation measures that should be explored in the Draft EIR. The 30-day public scoping period begins on October 10, 2012 and closes at 5pm on November 9, 2012. This NOP provides background information on prior CalAm planning efforts to meet the water supply needs of the Monterey Peninsula, and describes the proposed project, its location, and anticipated environmental effects.

Background

In 2004, CalAm filed Application A.04-09-019 seeking a Certificate of Public Convenience and Necessity from the CPUC for the Coastal Water Project. The Coastal Water Project (CWP) was intended to replace existing Carmel River water supplies for the CalAm Monterey District service area that are constrained by legal decisions (see discussion under the heading, Project Purpose, for more information regarding the legal decisions). In general, the previously proposed CWP involved the production of desalinated water supplies, increased yield from the Seaside Groundwater Basin ASR system, and additional storage and conveyance systems to move the replacement supplies to the existing CalAm distribution system. The CWP proposed project (also referred to as the Moss Landing Project) was sized to meet existing water demand and did not include supplemental supplies to accommodate growth. The CWP was previously proposed to use the existing intakes at the Moss Landing Power Plant to draw source water for a new 10-mgd desalination plant at Moss Landing, construct conveyance and storage facilities, and facility improvements to the existing

Seaside Groundwater Basin ASR system.¹ On January 30, 2009, the CPUC published a Draft EIR analyzing the environmental impacts of the previous CWP, as well as the environmental impacts of two project alternatives—the North Marina Project² and the Regional Project.³ The CPUC published the Coastal Water Project Final EIR (SCH No. 2006101004) in October 2009 and certified the EIR in December 2009 (Decision D.09-12-017). A year later, in Decision D.10-12-016, the CPUC approved implementation of the Regional Project alternative.

Subsequent to approval of the Regional Project, CalAm withdrew its support for the Regional Project in January 2012.⁴ As a result, in April 2012, CalAm submitted Application A.12-04-019 to the CPUC for the Monterey Peninsula Water Supply Project (MPWSP). The MPWSP is intended to secure replacement water supplies for the Monterey District associated with legal decisions affecting existing supplies from both the Carmel River and the Seaside Groundwater Basin (see discussion under the heading, Project Purpose, for more information). The MPWSP includes many of the same elements previously analyzed in the CWP EIR; however, key components, including the seawater intake system and desalination plant, have been relocated and/or modified under the current proposal.

Pursuant to CEQA Guidelines Section 15162, the CPUC has determined that preparation of a Subsequent Environmental Impact Report is the appropriate level of CEQA review for the MPWSP.⁵ Although the MPWSP EIR will qualify as a “Subsequent EIR” under CEQA, there are

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- ¹ The existing Seaside Groundwater Basin ASR system includes several injection/extraction wells, and storage and conveyance facilities to store Carmel River water supplies during the wet season in the groundwater basin, and recover the banked water during the dry season for consumptive use.
 - ² The North Marina Project alternative included most of the same facilities as the previously proposed CWP and, like the previously proposed CWP, would only provide replacement supplies to meet existing demand. The key differences between this alternative and the previously proposed CWP were that the slant wells and desalination plant would be constructed at different locations (Marina State Beach and North Marina, respectively), and the desalination plant would have a slightly greater production capacity (11 mgd versus 10 mgd).
 - ³ The Regional Project alternative was intended to integrate several water supply sources to meet both existing and future water demand in the CalAm service area. The Regional Project would have been implemented jointly by CalAm and Marina Coast Water District (MCWD). The Regional Project was to be implemented in phases and included vertical seawater intake wells on coastal dunes located south of the Salinas River and north of Reservation Road; a 10-mgd desalination plant in North Marina (Armstrong Ranch); product water storage and conveyance facilities; and expansions to the existing Seaside Groundwater Basin ASR system. This alternative would also develop supplemental supplies from the Salinas River by expanding an existing diversion facility and treatment plant in North Marina; expand the Castroville Seawater Intrusion Project (CSIP) by constructing additional storage and conveyance facilities; and expand the Seaside Groundwater Basin Replenishment Project by providing advanced water treatment for recycled water supplies generated at the MRWPCA Regional Wastewater Treatment Plant for injection into the groundwater basin.
 - ⁴ The CPUC subsequently closed the CWP proceeding in Decision D.12-07-008 (July 12, 2012).
 - ⁵ Per CEQA Section 21166 a Subsequent EIR would be required if: (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR, was certified as complete was adopted, shows any of the following: (a) The project will have one or more significant effects not discussed in the previous EIR or negative declaration; (b) Significant effects previously examined will be substantially more severe than shown in the previous EIR; (c) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or (d) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

no special procedural requirements that apply to a Subsequent EIR; therefore, for simplicity we will simply call this new document an EIR. The MPWSP EIR will provide a comprehensive description and evaluation of all proposed components (including the new proposed elements and previously analyzed components) as the “whole of the action”. The MPWSP EIR may evaluate alternatives not previously considered in the CWP EIR. The CWP EIR will not in itself be incorporated by reference into the MPWSP EIR. However, the MPWSP EIR will utilize relevant data that was developed for the CWP EIR, and update the data and prior analyses as appropriate to address the effects of the current proposal. Environmental review of the MPWSP will have no effect on the certified CWP EIR or related approvals.

While it is not yet known whether the MPWSP would have additional or more severe impacts than the alternatives analyzed in the previous CWP EIR or whether new feasible alternatives or mitigation measures are available, the changes to the CWP EIR would not be so minor as to qualify for a supplemental EIR under CEQA Guidelines 15163. Therefore, the CPUC has determined that a Subsequent EIR is the most appropriate CEQA documents to evaluate the MPWSP. To assist in funding the MPWSP, CalAm is applying for a loan under the Clean Water State Revolving Fund (CWSRF) administered by the State Water Resources Control Board (SWRCB). For this reason, the MPWSP EIR will be prepared in compliance with the SWRCB’s CWSRF Guidelines and “CEQA-Plus” requirements. If it is determined through the scoping process that additional federal review is required, CPUC will coordinate with the appropriate agency to comply with the National Environmental Protection Act (NEPA).

Documents or files related to the MPWSP are available for review at the CPUC administrative offices in San Francisco, by appointment, during normal business hours. This information can also be obtained by visiting the CPUC website (<http://www.cpuc.ca.gov/PUC/energy/Environment/Current+Projects/esa/mpwsp/index.html>).

CPUC Process

The CPUC is a constitutionally created state agency charged with the regulation of investor-owned public utilities within California. Consistent with its broad scope of authority, the CPUC regulates the construction and expansion of water lines, plants, and systems by private water service providers pursuant to Certificates of Public Convenience and Necessity (CPCN) (Public Utilities Code Section 1001) and authorizes water service providers to charge their customers “just and reasonable” rates for the provision of water services (Public Utilities Code Sections 451 and 454). The project proponent, CalAm, is a public utility under the CPUC’s jurisdiction and has applied to the CPUC for a CPCN under Public Utilities Code Section 1001 to build, own, and operate all elements of the MPWSP, and also for permission to recover present and future costs for the project through short-term rate increases. The CPUC administrative law judge will review the Final EIR and prepare a proposed decision for consideration by the CPUC regarding certification of the MPWSP EIR and approval of the MPWSP. In addition to the environmental impacts addressed during the CEQA process, the CPCN process will consider any other issues that have been established in the formal record, including but not limited to economic issues, social impacts, and the need for the project. During this process, the CPUC will also take into account testimony and

briefs from parties who have formally intervened in Proceeding A.12-04-019,⁶ as well as formal records of all project-related hearings held by the administrative law judge.

Project Purpose

The primary purpose of the MPWSP is to replace existing water supplies that have been constrained by legal decisions affecting the Carmel River and Seaside Groundwater Basin water resources. SWRCB Order 95-10 requires CalAm to reduce surface water diversions from the Carmel River in excess of its legal entitlement of 3,376 acre-feet per year (afy), and SWRCB Order 2009-0060 (“Cease and Desist Order”) requires CalAm to develop replacement supplies for the Monterey District service area by December 2016. In 2006, the Monterey County Superior Court adjudicated the Seaside Groundwater Basin, effectively reducing CalAm’s yield from the Seaside Groundwater Basin from approximately 4,000 afy to 1,474 afy. A secondary purpose of the MPWSP is to provide adequate supplies for CalAm to meet its duty to serve customers in its Monterey District, as required by Public Utilities Code Section 451.

Proposed Project

The proposed MPWSP would be comprised of the following facilities:⁷

- Seawater intake system consisting of eight 750-foot-long subsurface slant wells extending offshore into the Monterey Bay, and source water conveyance pipelines
- Desalination plant and appurtenant facilities, including source water receiving tanks; pretreatment, reverse osmosis, and post-treatment systems; chemical feed and storage facilities; brine storage and discharge facilities; and associated non-process facilities
- Desalinated water conveyance facilities, including pipelines, pump stations, clearwells, and a terminal reservoir
- Improvements to the existing Seaside Groundwater Basin ASR system, including two additional injection/extraction wells, a pump station, a product water pipeline, a pump-to-waste pipeline, and pump-to-waste treatment

The proposed MPWSP would include a 9-mgd desalination plant and facility improvements to the existing Seaside Groundwater Basin ASR system to provide replacement water supplies to meet existing demand for the approximately 40,000 customers in CalAm’s Monterey District

⁶ Proceeding No. A.12-04-019, *Application of California-American Water Company (U210W) for Approval of the Monterey Peninsula Water Supply Project and Authorization to Recover All Present and Future Costs in Rates* (Filed April 23, 2012).

⁷ Several facility components of the proposed MPWSP are similar or identical to facilities evaluated in the CWP EIR, including the product water storage and conveyance facilities and improvements to the existing ASR system. The primary difference between the desalination facilities proposed under the MPWSP and those described under the previously proposed CWP and CWP project alternatives are the site locations for the seawater intake system and desalination plant. The Regional Project alternative that was approved by the CPUC was envisioned as a joint project between CalAm, Monterey County Water Resources Agency and Marina Coast Water District (MCWD); at this time it is anticipated that the facilities and improvements proposed under the current MPWSP proposal would be owned and operated entirely by CalAm.

service area.⁸ See **Figure 1** for an overview of MPWSP area. As an alternative to the 9-mgd desalination plant, CalAm's application also includes a 5.4-mgd desalination plant coupled with a water purchase agreement for 3,500 afy of product water from the MRWPCA's proposed Groundwater Replenishment Project. For purposes of the environmental analysis, this alternative is discussed below under the heading Alternatives to the Project.

The subsurface slant wells would extend offshore into the Monterey Bay and draw seawater from beneath the ocean floor for use as source water for the proposed desalination plant. Approximately 20 to 22 mgd of source water would be needed to produce 9 mgd of desalinated product water. The preferred site for the subsurface slant wells is a 376-acre coastal property located north of the city of Marina and immediately west of the CEMEX active mining area. New pipelines would convey the seawater (or "source water") from the slant wells to the MPWSP desalination plant.

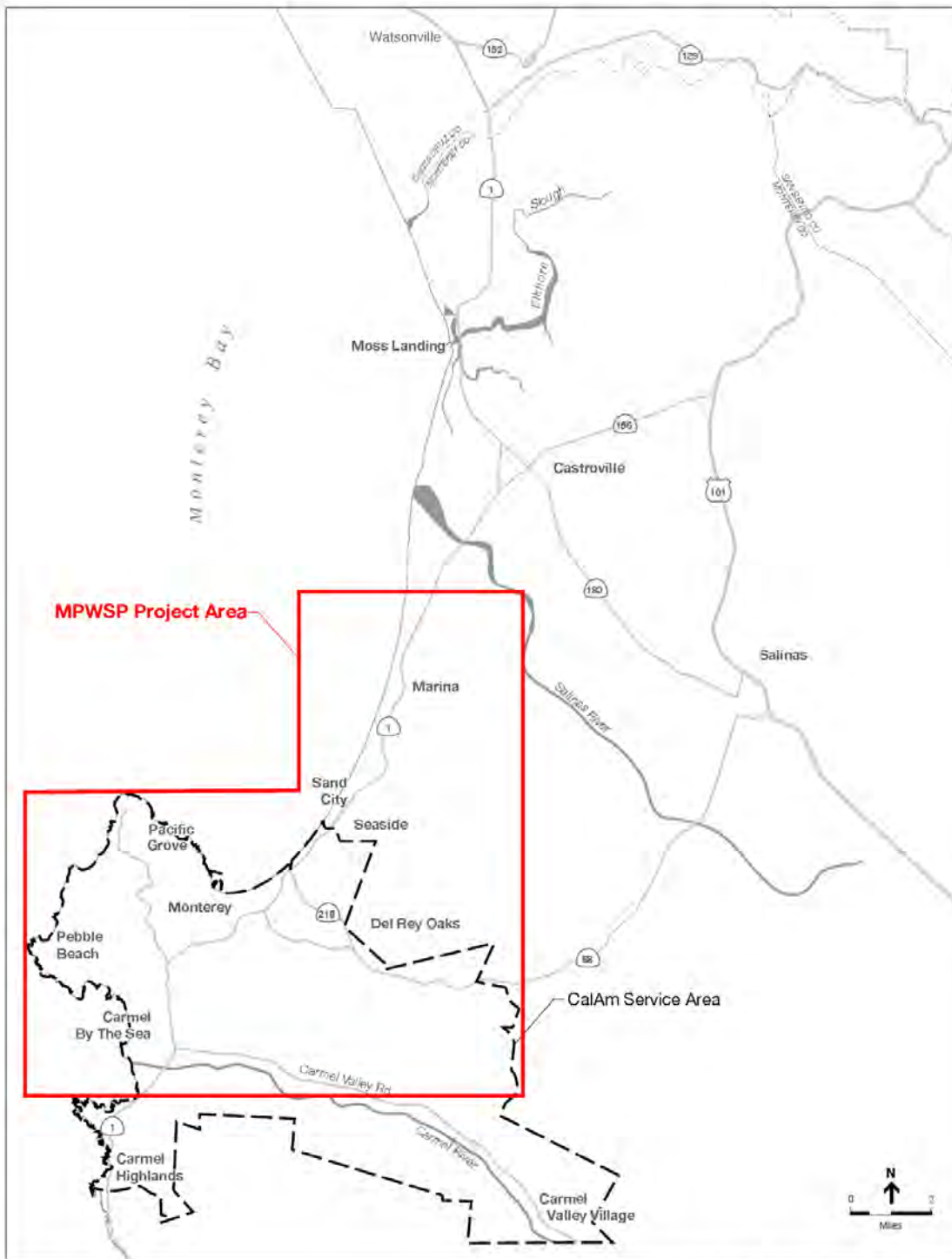
The MPWSP desalination plant and appurtenant facilities would be located on a 46-acre vacant parcel near Charles Benson Road, northwest of the Monterey Regional Water Pollution Control Agency's (MRWPCA) Regional Wastewater Treatment Plant and the Monterey Regional Environmental Park. Facilities proposed at the MPWSP desalination plant include pretreatment, reverse osmosis, and post-treatment systems; chemical feed and storage facilities; a brine storage basin; and an administrative building. Brine produced during the desalination process would be conveyed to an existing MRWPCA ocean outfall and discharged to the Monterey Bay. Approximately 9,006 afy of potable water supplies would be produced by the proposed desalination facilities.

Desalinated product water would be conveyed south via a series of proposed pipelines to existing CalAm water infrastructure and customers in the Monterey Peninsula. Up to 28 miles of conveyance pipelines and water mains would be constructed under the MPWSP. In addition, if it is determined that the MPWSP needs to return water to the Salinas Valley Groundwater Basin, water could be conveyed southeast via a new pipeline to the existing Castroville Seawater Intrusion Project (CSIP) pond at the MRWPCA Regional Wastewater Treatment Plant for subsequent distribution to agricultural users in the Salinas Valley.

The primary function of the two additional ASR wells and the proposed improvements to the conveyance system is to allow desalinated water to be injected into the Seaside Groundwater Basin for subsequent distribution to customers. These improvements would also provide redundant injection capacity and improve the long-term reliability and efficiency of the ASR system for injecting Carmel River water into the Seaside Groundwater Basin. Improving the efficiency of the ASR system to inject Carmel River water into the Seaside Groundwater Basin when there is significant rainfall (wet and extremely wet years) increases the long-term annual yield from the ASR system to 1,920 afy.

A preliminary project facilities map is provided in **Figure 2**. Construction of the MPWSP is anticipated to occur over approximately three years.

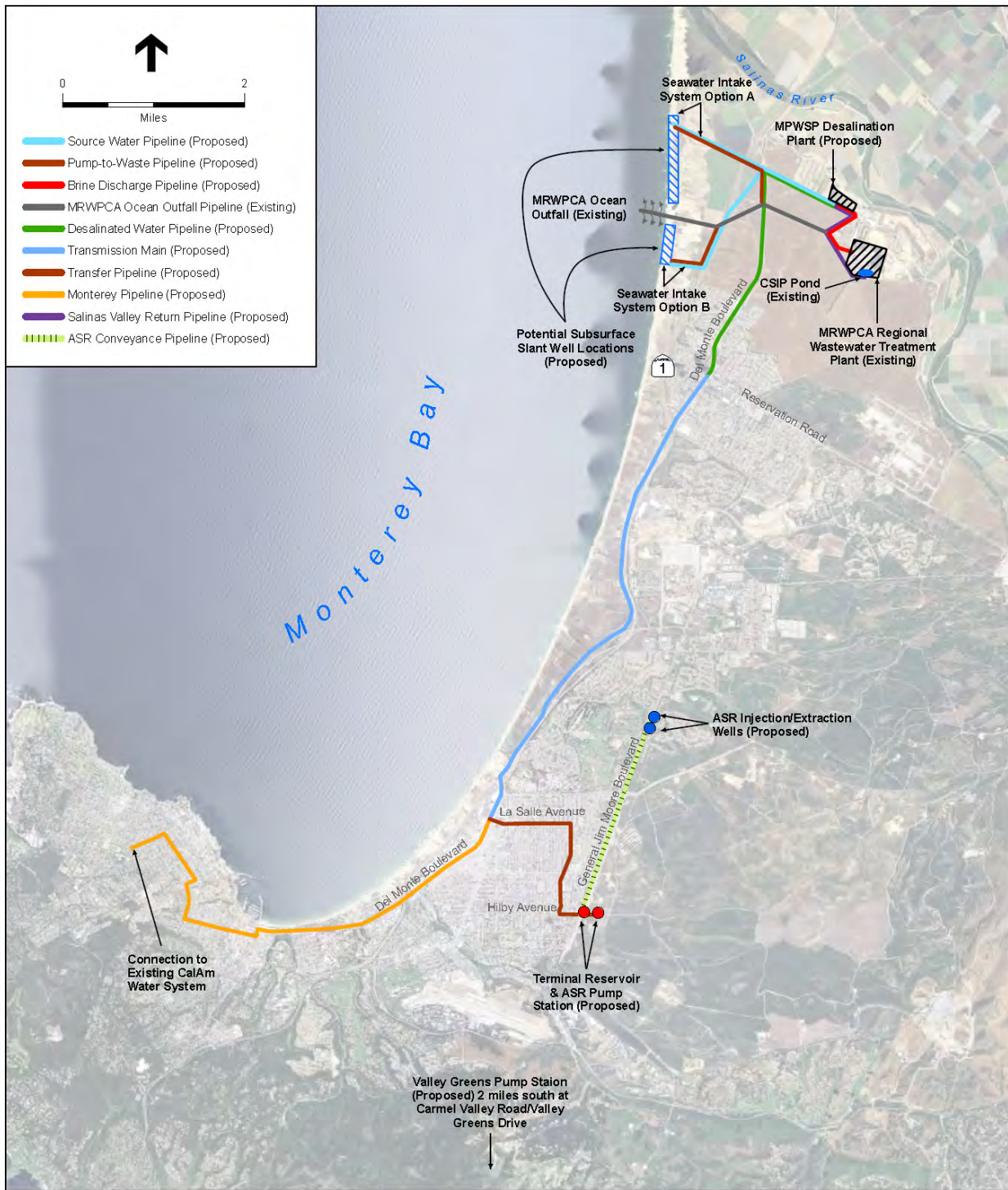
⁸ CalAm's Monterey District service area encompasses most of the Monterey Peninsula, including the cities of Carmel-by-the-Sea, Del Rey Oaks, Monterey, Pacific Grove, Sand City, and Seaside, and the unincorporated areas of Carmel Highlands, Carmel Valley, Pebble Beach, and the Del Monte Forest.



SOURCE: ESA, 2012

Monterey Peninsula Water Supply Project . 205335.01

Figure 1
Project Location Map



SOURCE: ESA, 2012

Monterey Peninsula Water Supply Project . 205335.01

Figure 2
Preliminary Project Facilities Map

Issues to be Addressed in the EIR

This NOP is not accompanied by an Initial Study that screens out environmental topics; the MPWSP EIR will include an analysis for all topics identified in Appendix G of the CEQA Guidelines. The MPWSP EIR will address potential impacts associated with project construction, operation, and maintenance activities. The analysis will include, but will not be limited to, the following issues of potential environmental impact:

- **Surface Water Hydrology and Water Quality** – Construction and operation of the MPWSP could increase soil erosion and adversely affect water quality in receiving waterbodies. Project operations would generate brine, maintenance and cleaning solutions, and other effluents that would be discharged to the Monterey Bay, stormwater system, and sanitary sewer. The MPWSP EIR will evaluate impacts to surface water quality as a result of project construction and operations; changes to existing drainage patterns resulting in increased erosion or runoff; potential impacts related to the capacity of the existing MRWPCA ocean outfall; and potential adverse effects of brine discharges on offshore water quality.
- **Groundwater Resources** – Updated groundwater modeling will be used to evaluate potential impacts to groundwater levels and groundwater quality associated with slant well operations, including any effects on the seawater/freshwater interface. Water rights issues will be addressed as needed to evaluate project feasibility and project effects on groundwater.
- **Marine and Terrestrial Biological Resources** – The EIR will evaluate project impacts on terrestrial special-status animal and plant species, sensitive habitats, mature native trees, and migratory birds associated with facility siting and project-related construction activities. Particular attention will be given to the coastal dune habitat in the vicinity of the proposed subsurface slant wells. Potential impacts on marine resources to be evaluated include salinity changes at the MRWPCA ocean outfall from brine discharges and any related effects on benthic and pelagic organisms and environments. The EIR will also evaluate any potential conflicts with applicable plans, policies, and plans related to the protection of marine and terrestrial biological resources.
- **Air Quality and Greenhouse Gases** – The EIR will analyze construction-related and operational emissions of criteria air pollutants. Emissions estimates will be evaluated in accordance with all applicable federal, state, and regional ambient air quality standards. Potential human health risks at nearby sensitive receptors from emissions of diesel particulate matter and toxic air contaminants during project construction and operations will be addressed. The EIR will also estimate greenhouse gas (GHG) emissions associated with project construction and operations, and compare these to applicable plans and policies related to reducing GHGs.
- **Mineral and Energy Resources** – The EIR will evaluate potential impacts to mineral resources associated with facility siting. The MPWSP's energy requirements, particularly the energy needs for desalination, will be evaluated to reflect the proposed plant capacity, specifications, and operations.
- **Geology and Soils** – The EIR will review site-specific seismic, geologic, and soil conditions and evaluate project-related impacts. The analysis will address the potential for project construction activities to result in increased soil erosion or loss of topsoil, as well as potential slope instability issues associated with facility siting and construction. Particular attention will be given to potential increases in coastal erosion rates resulting from project

implementation, as well as damage to the slant wells and other facilities in the coastal zone resulting from natural erosion.

- **Hazards and Hazardous Materials** – The EIR will summarize documented soil and groundwater contamination cases within and around the project area, and evaluate the potential for hazardous materials to be encountered during construction. Inadvertent releases of hazardous construction chemicals, and contaminated soil or groundwater into the environment during construction will be addressed. The analysis will also consider the proper handling, storage, and use of hazardous chemicals that would be used during operations.
- **Noise** – The EIR will evaluate construction-related noise increases and associated effects on ambient noise levels, applicable noise standards, and the potential for indirect impacts to nearby land uses.
- **Transportation and Traffic** – Project construction activities would generate construction trucks and vehicles, resulting in a temporary increase in traffic volumes along local and regional roadways. The installation of pipelines along or adjacent to road right-of-ways could result in temporary land closures and traffic delays. Impacts to vehicular traffic, traffic safety hazards, public transportation, and other alternative means of transportation will be evaluated. Traffic increases associated with project operations will also be addressed.
- **Cultural Resources** – The EIR will evaluate potential impacts on historic, archaeological, and paleontological resources, and human remains. It is anticipated that any potential impacts to cultural resources would be limited to project construction and/or facility siting.
- **Land Use** – The EIR will evaluate potential conflicts with established land uses as a result of facility siting and during project construction. Potential conflicts with applicable plans and policies will also be evaluated. Particular attention will be given to consistency with the Coastal Plan.
- **Agricultural Resources** – Agricultural land uses are present within and around the project area. The EIR also evaluate potential impacts to designated farmland and Williamson Act contracts.
- **Utilities and Public Services** – The EIR will evaluate potential conflicts with existing utility lines during project construction, including potential service interruption. Particular attention will be paid to “high-priority” utilities that could pose a risk to workers in the event of an accident during construction. Potential impacts related to landfill capacity associated with the disposal of spoils and debris generated during project construction will be described. Project consistency with federal, state, and local waste diversion goals will also be considered.
- **Aesthetic Resources** – Project facilities would be sited along the coastal zone and Highway 1, a designated scenic highway. The EIR will evaluate visual impacts related to the new/proposed facilities.
- **Cumulative Impacts** – The environmental effects of the MPWSP, in combination with the effects of past, present, and future foreseeable cumulative projects in the vicinity, could result in significant cumulative impacts. Potential cumulative projects include the future expansion of the Salinas Valley Water Project, a desalination plant for the Marina Coast Water District/Fort Ord area, and the Groundwater Replenishment Project (if groundwater replenishment is not made part of the proposed project or an alternative). The EIR will evaluate the project’s contribution to any identified cumulative impacts.

The MPWSP EIR will describe water supply and demand in the CalAm service area and the relationship of the proposed project (including facility sizing and capacities) to such supply and demand. The potential for implementation of the MPWSP to result in growth-inducing effects will be evaluated.

To comply with the CEQA-Plus requirements under the CWSRF Guidelines, the EIR will include information to support federal agency consultations under Section 106 of the National Historic Preservation Act, Section 7 of the Federal Endangered Species Act, the Federal Clean Air Act General Conformity Rule,⁹ and any other applicable federal consultations. If it is determined through the scoping process that additional federal review is required, CPUC will coordinate with the appropriate federal agency to comply with NEPA.

Where feasible, mitigation measures will be proposed to avoid or reduce any identified environmental impacts attributable to the project.

Comments received during the EIR scoping period will be considered during preparation of the MPWSP EIR. Public agencies and interested organizations and persons will have an opportunity to comment on the Draft EIR after it is published and circulated for public review.

Scoping and Draft EIR Schedule

During this NOP review period, the CPUC is soliciting comments on the scope of environmental issues as well as reasonable alternatives and mitigation measures that should be explored in the Draft EIR.¹⁰ Written scoping comments may be submitted by hand, mailed, faxed, or sent by email during the NOP review period, which closes at 5:00 p.m. on November 9, 2012. Please include a name, address, and telephone number of a contact person to receive future correspondence on this matter. Please send your comments to:

Andrew Barnsdale
California Public Utilities Commission
c/o Environmental Science Associates
550 Kearny Street, Suite 800
San Francisco, CA 94108
Fax: 415.896.0332
Or email to: MPWSP-EIR@esassoc.com

Scoping Meetings

CEQA Statute Section 21083.9 mandates that a scoping meeting be held for projects of statewide, regional or area-wide significance. Given the high level of interest in and the importance of this proposed project to the Monterey County region and to ensure that the public and regulatory

⁹ The General Conformity Rule ensures that the actions taken by federal agencies in nonattainment and maintenance areas do not interfere with a state's plans to meet national standards for air quality. As of March 30, 2012, the North Central Coast Air Basin (NCCAB) meets all National Ambient Air Quality Standards and is not subject to a maintenance plan with conformity obligations. Therefore, the MPWSP EIR will describe why the General Conformity Rule would not apply to the MPWSP.

¹⁰ Publication of the Draft EIR is scheduled for summer 2013.

agencies have an opportunity to ask questions and submit comments on the scope of the EIR, a series of scoping meetings will be held during the NOP review period. The scoping meetings will start with a brief presentation providing an overview of the proposed project and the project alternatives identified to date. Subsequent to the presentation, interested parties will be provided an opportunity to interact with technical staff. Participants are encouraged to submit written comments, and comment forms will be supplied at the scoping meetings. Written comments may also be submitted anytime during the NOP scoping period to the mailing address, fax number, or email address listed above. The locations and dates of the scoping meetings are listed below:

October 24, 2012
6:30 p.m. to 8:30 p.m.
Rancho Canada Golf Club
4860 Carmel Valley Road
Carmel, CA 93923

October 25, 2012
1:30 p.m. to 3:30 p.m.
Oldemeyer Center
Blackhorse Room
986 Hilby Avenue
Seaside, CA 93955

October 25, 2012
6:30 p.m. to 8:30 p.m.
Oldemeyer Center
Laguna Grande Hall
986 Hilby Avenue
Seaside, CA 93955

Preliminary List of Alternatives to the Project

In accordance with CEQA Guidelines Section 15126.6, the EIR will describe a reasonable range of potentially feasible alternatives to the MPWSP, or to the location of the project, that would achieve most of the basic objectives of the project while avoiding or substantially lessening any of the significant effects of the project, and will also evaluate the comparative merits of the alternatives. Alternatives to the proposed MPWSP are briefly introduced below. The alternatives set forth below comprise a preliminary list of potentially feasible alternatives. This list will be refined, and may be expanded or contracted, as warranted based upon comments received and data gathered as part of the EIR preparation process on such topics as feasibility (as well as economic, environmental, legal and social factors), ability to avoid significant effects of the project, and ability to meet the basic objectives of the project.

5.4-mgd Desalination Plant with Groundwater Replenishment

As an alternative to the proposed 9-mgd desalination plant, CalAm would implement a 5.4-mgd desalination plant and enter into a water purchase agreement with the Monterey Peninsula Water Management District (MPWMD) to purchase up to 3,500 afy of product water from the Groundwater Replenishment Project. CalAm has entered into a Memorandum of Understanding with the MRWPCA and Monterey Peninsula Water Management District to collaborate on development of the Groundwater Replenishment Project. The MRWPCA currently owns and operates two plants that treat wastewater influent from the Monterey Peninsula and Salinas Valley service area: the Regional Wastewater Treatment Plant treats community wastewater for discharge to the ocean; also, in the mid-1990s, the MRWPCA constructed and now operates a tertiary treatment plant known as the Salinas Valley Reclamation Project, which treats water for agricultural irrigation that is distributed via the Castroville Seawater Intrusion Project.¹¹

¹¹ The Salinas Valley Reclamation Project and the Castroville Seawater Intrusion Project are projects being operated in partnership with the Monterey County Water Resources Agency and growers in the Salinas Valley.

The Groundwater Replenishment Project would include replenishment of the Seaside Groundwater Basin with wastewater treated at a proposed advanced water treatment plant to be located at the Regional Treatment Plant. The Groundwater Replenishment Project would convey the treated water into the Seaside Basin for dilution and storage. Replenishment could occur at either inland or coastal locations and could include vadose zone wells and/or injection wells. Vadose zone wells would be used for recharge of the unconfined Paso Robles Aquifer, and injection wells would directly replenish the confined Santa Margarita Aquifer. The Groundwater Replenishment Project could be operated during the winter months and during other non-peak months. Extraction from the Seaside Groundwater Basin can occur later, at any time of the year.

DeepWater Desal Alternative

DeepWater Desal LLC is proposing the DeepWater Desal Alternative, a 25-mgd seawater reverse osmosis desalination facility that would serve Santa Cruz, San Benito, and Monterey Counties. The desalination facility would be constructed at Capurro Ranch on a leased 8.14-acre property located on Highway 1 near Moss Landing. This site is immediately north of the Moss Landing harbor in Santa Cruz County, and approximately 1 mile from the proposed seawater intake to be located at the Sandholdt pier, which would be rebuilt under this alternative.¹² The intake and brine discharge pipes would be anchored to the Sandholdt pier. Approximately 50 million gallons of raw seawater per day would be drawn via a passive¹³ open-water intake at a depth of about 100 feet through an existing pipeline and easement¹⁴ located on the edge of the Monterey Submarine Canyon. The desalination system would use some existing facilities at the Moss Landing Power Plant. Approximately 25 mgd of brine discharge would be diluted in the Moss Landing Power Plant's cooling water discharge and returned to the ocean. The desalination system would include pretreatment facilities and onsite storage tanks and would utilize an electrical power-source mix. The DeepWater Desal Alternative could qualify for tax-free municipal bond financing. DeepWater Desal LLC anticipates that municipal agencies within the Monterey Bay area would form a joint powers authority to assume ownership of the DeepWater Desal Alternative.¹⁵ No details are available at this time regarding the infrastructure needed to convey product water to the Monterey Peninsula or other service areas.

People's Moss Landing Water Desalination Project (People's Project) Alternative

The People's Project would be a 10-mgd desalination facility located at the Moss Landing Green Commercial Park, adjacent to the Moss Landing Power Plant on the former National Refractories & Minerals Corporation site. The proposed 200-acre site is currently zoned for light and heavy industrial use, and approximately 25 acres would be designated for the desalination plant. The People's Project would consist of the following major components: screened, passive open-water

¹² Construction of the DeepWater Desal Alternative would include the reconstruction of the Sandholdt Pier on its historical site.

¹³ "Passive intake" means that the maximal velocity of seawater being drawn in through the "wedge-wire" screen will never exceed 1 foot per second.

¹⁴ DeepWater Desal LLC intends to lease this pipeline easement from Dynegy.

¹⁵ DeepWater Desal LLC, "Our Location" and "Our Approach." Available online at <http://deepwaterdesal.com/>. Accessed August 2012. Updated 2011.

intake (existing, located at the former National Refractories and Minerals Plant site); outfall pipeline (existing); intake pump station (existing); pretreatment media filtration system; 10-mgd seawater desalination system; 45-mgd onsite product water storage tanks; post-treatment facilities; product water pump station; solids handling system; electrical and solar power supply and energy recovery system; and approximately 13 miles of transmission and/or distribution pipeline to convey product water to the Monterey Peninsula. The transmission pipeline would be constructed in paved and unpaved areas and would require crossings at Mojo Cojo Slough, Tembladero Slough, and the Salinas River. The City of Pacific Grove has agreed to serve as the lead public agency for The People's Moss Landing Water Desalination Project.¹⁶

Conservation Alternative

As an alternative to the proposed project, CalAm would implement water reduction efforts and other conservation measures to reduce demand on the existing water supply. The Monterey Peninsula Water Management District currently works with CalAm to provide education and encourage water conservation in an effort to protect water resources in the community. These conservation efforts include: conservation billing rates, limited watering schedule, free water audits, free water-saving devices, rebates on high-efficiency appliances, rebates for low water landscaping, and turf removal. This alternative, which would further expand conservation programs, could set stricter conservation requirements for residential and commercial customers. Under this alternative, CalAm would reduce system water loss via leakage control zones, pressure control, acoustic monitoring, transmission main testing, and main replacement programs. CalAm would use tiered rates to reduce water use. CalAm would also work with customers to promote water-wise landscaping and turf replacement, graywater use, plumbing retrofits, and other best management practices. It is yet to be determined if the Conservation Alternative would be a project alternative, or if the Conservation Alternative, implemented in conjunction with desalination, would enable the proposed MPWSP desalination plant to be reduced in size.

Locational Alternatives

The MPWSP EIR will also consider locational alternatives to the MPWSP preferred project, including alternative desalination plant locations and sizes (capacity); alternate pipeline alignments; and alternate intake well locations and configurations (i.e. open water intake; vertical wells; Ranney collector wells; etc.).¹⁷

¹⁶ The People's Moss Landing Water Desal Project, "The Project." Available online at <http://www.thepeopleswater.com/theproject.html>. Accessed August 2012. Updated March 2012.

¹⁷ A Ranney well is a radial arrangement of screens that form a large infiltration gallery with a single central withdrawal point used to extract water from an aquifer with direct connection (caisson constructed in the sand) to surface water.

MONTEREY PENINSULA REGIONAL WATER AUTHORITY

Directors:
Chuck Della Sala, President
Felix Bachofner, Vice President
Carmelita Garcia, Secretary
Jerry Edelen, Treasurer
Jason Burnett
David Pendergrass



Executive Director:
Fred Meurer (Interim)

November 8, 2012

Andrew Barnsdale
California Public Utilities Commission
c/o Environmental Science Associates
550 Kearny Street, Suite 800
San Francisco, CA 94108

RE: CPUC Application 12-04-019
Subj: Notice of Preparation for Environmental Impact Report

Dear Mr. Barnsdale:

This letter sets forth the comments of the Monterey Peninsula Regional Water Authority ("Authority") concerning the California Public Utilities Commission's ("CPUC") Notice of Preparation of an Environmental Impact Report ("EIR") for the California American Water Company's ("Cal-Am") proposed Monterey Peninsula Water Supply Project. The Authority respectfully requests the EIR address the following principal comments:

1. The project alternatives should be evaluated with the same level of detail that the EIR evaluates the proposed project (i.e., a "project level" analysis).
2. The production capacity of the desalination facility, identified for review in the EIR, should be sufficient to both replace water supplies that Cal-Am will lose from the Carmel River and the Seaside Groundwater Basin and to provide water for Cal-Am to meet its replenishment obligations to the Seaside Basin, the quantity and timing of which is presently being determined.
3. The capacity of the project pipelines and other project components that cannot be expanded at a later date (i.e., those that are not modular), identified for review in the EIR, should be sufficient to accommodate potentially necessary upsizing of the project in the future.
4. The CPUC should confer with federal agencies that may have permitting responsibility over the project to determine whether compliance with the National Environmental Policy Act ("NEPA") will be required so that the EIR can be developed as a joint EIR/EIS to satisfy NEPA's requirements, if necessary.

Further detail concerning these requests is set forth below.

I. Detailed Analysis of Project Alternatives

There is considerable uncertainty pertaining to the feasibility and timing of the proposed project. Uncertainties include the technical viability of the proposed slant wells for source water, water rights associated with the Salinas Valley Groundwater Basin, access to ocean outfall capacity, and project financing, among other matters.

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It is also not presently clear that the proposed project is the most cost-effective in comparison to other potentially feasible alternatives, including the DeepWater Desal Project (DeepWater Project) and People's Moss Landing Water Desalination Project (People's Project).¹ These issues will hopefully be resolved during the pendency of the subject application. It is possible that one of the project alternatives will become the preferred project for approval by the CPUC within the Certificate of Public Convenience and Necessity. To avoid the delay that would result should the draft EIR need to be revised and recirculated to address the chosen alternative, the Authority respectfully requests that the proposed alternatives be evaluated with the same level of detail that the EIR evaluates the Proposed Project. The alternatives that should receive such "project-level" analysis include the DeepWater Project, the People's Project, Cal-Am's proposed 5.4 MGD desal project developed in conjunction with the Monterey Regional Water Pollution Control Agency's proposed Groundwater Replenishment Project, and the potential alternatives for critical project components that may be necessary to address contingencies (e.g., alternative desalination plant locations and intake well locations and configurations).²

The authority is mindful that, as a general rule, project alternatives need not be evaluated in the same level of detail as the proposed project (CEQA Guidelines § 15126.6(d)), and that more expansive evaluation of the project alternatives will require greater expenditures. However, the Authority believes that the additional effort is justified because of the tight timeframe facing the Monterey Peninsula to complete the development of a replacement water supply project ahead of the 2017 deadline established by the State Water Resources Control Board. The Authority is comprised of the Mayors of all six peninsula cities and represent communities that in aggregate represent the majority of the affected Cal-Am ratepayers. In this role, the Authority is in an ideal position to weigh the tradeoff between the increased expenditures on one hand and the increased risk of project delay on the other hand. The Authority strongly believes the increased expenditure is justified because it will reduce the risk of much more costly project delay. The Authority therefore urges the CPUC to undertake the proposed expanded review of the project alternatives to ensure that the most appropriate project can be developed ahead of this deadline.

II. Desal Project Sizing

The necessary sizing of the desalination project is not yet settled and several considerations warrant caution in establishing the size of the project to be evaluated in the EIR. First, while Cal-Am is legally obligated to replenish the Seaside Basin, it is not yet clear what rate of annual replenishment will be required of Cal-Am. Cal-Am recently proposed a replenishment rate of 350 acre-feet per year for roughly 50 years. It is likely that Cal-Am will be required to satisfy its replenishment obligation in a greater amount per year over a shorter period. We understand that the Seaside Basin Watermaster may soon commission basin modeling to assist in determining a recommended replenishment rate. Also, the ultimate decision will likely be made by the Monterey Superior Court that oversees the Watermaster and the Seaside Basin adjudication judgment. The requisite replenishment rate will likely be determined within three to six months. At this time, we urge the CPUC to proceed conservatively, with an assumption that the replenishment rate will likely be substantially greater than 350 acre-feet a year or, alternatively, to evaluate several possible replenishment rates in the EIR so that the eventual rate chosen will be bounded by rates considered in the EIR.

Second, Cal-Am's modeling of demand projections in comparison to the proposed project sizing of 10,306 acre-feet of new supply (15,250 of total supply), as presented at the workshop held on July 26, 2012, demonstrates a thin quantity of contingency water. Should Cal-Am's demand projections turn out to be understated (e.g., because of higher than anticipated water demands or other unknown factors³), additional replacement water

¹ The Authority has not yet determined whether it will support Cal-Am's proposed Project or one of two proposed alternative desalination projects. The Authority has retained the consulting engineering firm, Separation Processes, Inc. ("SPI"), to review the proposed project in comparison to the alternative projects to determine which project is most likely to be completed in a timely and cost-effective manner. SPI has just issued its final report to the Authority earlier this week. Once the Authority has time to review the report, it will then determine which of the three projects it intends to support within the CPUC proceeding.

² The DeepWater Project and the People's Project continue to develop. Therefore, the Authority urges the CPUC to collaborate with the proponents of these projects to identify and include all new data, descriptions and reports for these projects.

³ As one example of a potential unknown factor that could affect Cal-Am's water demand, should the Seaside Basin experience seawater intrusion, the Watermaster's seawater intrusion plan could require Cal-Am to

supplies will be needed. The Authority believes that it is inappropriate to place the community's future welfare in potential jeopardy because of an improperly undersized project. We therefore recommend that the size of the desalination project, that will be evaluated in the EIR, be sufficient to provide adequate water to satisfy the yet-to-be-determined Seaside Basin replenishment rate and a reasonable buffer to meet potential contingencies.

The Authority also notes that the City of Pacific Grove has proposed a suite of three potential small projects that may reduce a portion of Cal-Am's water demands in the future. By recognizing the coupling of the desalination project and the small projects as an alternative to the desalination project alone, the EIR should consider how these projects may factor into the sizing or operations of the desalination project, as well as other potential environmental impacts.

III. Sizing of Pipelines and Non-Modular Project Components

It is particularly important that the pipelines for source and product water, and certain other components of the project that are not susceptible to modular addition in the future, be sized conservatively to allow for future project expansion if necessary.⁴ While certain aspects of the project can be modularized to address future contingencies, several other components, such as pipelines, cannot be modularized. For this reason, the Authority urges the CPUC to be particularly conservative in choosing a capacity of these components to be evaluated in the EIR, which will accommodate modular upsizing of the project in the future if needed.

The Authority recognizes that pipeline flow capacity is affected by pipeline diameter and pressure, and that higher flows may be achieved by increasing pressure, which requires additional horsepower, and thus, energy consumption. The optimal pipeline size, that will be evaluated in the EIR, should accommodate a conservative estimate of potential demand, including Seaside Basin replenishment and other demand considerations. Once this demand projection is established, the pipeline sizing determination must balance the higher capital costs of larger diameter pipelines with the energy costs to operate the system, with the goal of achieving the most cost-effective pipeline sizing for ratepayers over the long-term.

IV. Conferencing with Federal Agencies; Potential NEPA Compliance

There is a significant possibility that one or more federal agencies may need to issue a permit for the proposed project or one of the alternatives if an alternative project is chosen as the preferred project. For example, a permit may be required from the Office of National Marine Sanctuaries for the intake of source water or discharge of brine (depending upon the chosen project and its configuration). The Authority believes the CPUC should collaborate with all relevant federal agencies to determine the scope of permits that would be required for the proposed project as well as the alternative projects, and to consider developing the EIR as a joint EIR/EIS to comply with the provisions of NEPA if NEPA compliance is required.

Thank you for your consideration of the Authority's comments as set forth above. Should you desire, I will gladly make myself and others from the Authority available to further discuss these comments. The Authority is grateful to the CPUC for its efforts to assist the Monterey Peninsula in achieving the most appropriate replacement water supply project in a timely manner.

Sincerely,



Chuck Della Sala
President, Monterey Peninsula Regional Water Authority

substantially reduce its extraction of groundwater below its share of the presently assumed safe yield (Cal-Am's share is assumed to be 1,474 AFY). This reduction would need to be offset from greater replacement water.

⁴ A larger project may be necessary if, for example, one of the other water supply projects does not produce the anticipated quantity of water.

EXECUTIVE SUMMARY

Separation Processes Inc. (SPI) in association with Kris Helm Consulting (KHC) is providing engineering and consulting support to the Monterey Peninsula Regional Water Authority (MPWRA) to assist with the evaluation of three candidate desalination projects on the Monterey Peninsula. This report presents the results of our evaluation of the projects, targeted at replacing supplies currently extracted from the Carmel River but subject to a 1995 order from the State Water Resources Control board to secure an alternate source of supply by December, 2016.

The proposed strategy for meeting the projected annual demand within the California American Water service area of 15,250 acre-feet is a multi-pronged approach including permitted extractions from the Carmel River and Seaside Basin, an aquifer-storage and recovery system, and the existing Sand City desalination plant--totaling 6,250 acre-feet; leaving a 9,000 acre-feet gap in supply. Two alternatives are under consideration to compose this final supply—a 9,000 acre-feet production seawater desalination plant; or a 5,500 acre-feet seawater desalination plant in concert with a groundwater water replenishment project using advanced treated recycled water of 3,500 acre-feet.

This report presents the results of our evaluation of three candidate alternatives for the seawater desalination component of the overall water supply portfolio. California American Water is actively engaged with the California Public Utilities Commission to build a facility and secure the required supply. Two other development groups have proposed alternative projects for consideration—DeepWater Desal, LLC and the People’s Moss Landing Water Desal Project. The three projects were analyzed on functional, performance, economic and implementation grounds in an effort to provide a balanced evaluation for consideration by the MPRWA.

PROJECT SUMMARIES

The three projects are in the conceptual or preliminary stage of development and all three have as their objective to provide California American Water the seawater desal component of the required replacement water supply under State Water Resources Control Board Order No. 95-10. The DeepWater Desal group proposes to provide an expandable plant capable of serving additional regional water needs as well, outside of the California American Water service area. Brief summaries of the projects follow:

Project Name	Monterey Peninsula Water Supply Project (MPWSP)
Proponent(s)	California American Water (Cal-Am)
Location	46-acre site of vacant, disturbed land west of the MRWPCA Regional Treatment Plant (RTP).
Purpose	To supply supplemental desal component of the Monterey Peninsula regional water supply This project is currently under consideration by the California Public Utilities Commission (CPUC).
Production Volume	5.4 mgd or 9.0 mgd



Project Name	DeepWater Desal (DWD)
Proponent(s)	DeepWater Desal, LLC, Dynegy Moss Landing Power Plant, MFJK Partnership of the Capurro Ranch, PV2 Solar, and Ecomert Technologies
Location	Capurro Ranch Property, north of /Elkhorn Slough
Purpose	Phase 1 to supply supplemental desal component of the Monterey Peninsula regional water supply Phase 2 to supply northern customers
Production Volume	Phase 1: 4.9 mgd or 9.1 mgd Phase 2: 22.0 mgd

Project Name	The People's Moss Landing Water Desal Project (PML)
Proponent(s)	DeSal America, LLC composed of Moss Landing Commercial Park, LLC; and Stanley and Patricia-Vance Lueck
Location	Moss Landing Commercial Park
Purpose	To supply supplemental desal component of the Monterey Peninsula regional water supply This project is currently proposed as alternative to the Cal-Am MPWSP.
Production Volume	4.8 mgd or 9.4 mgd

PROJECT FUNCTION

We evaluated the function of each project in terms of project purpose, customers identified, adequacy of treatment approach, residuals handling, feed water characterization, quality of project information, and any omissions or fatal flaws in the information provided. The evaluation was conducted based on information provided in response to a 56-item questionnaire prepared by the MPRWA technical advisory committee and submitted by each proponent; along with additional information each provided in response to specific questions and interviews from SPI and KHC.

All three projects have available sites for building the required treatment facilities; and credible seawater intake and brine disposal approaches, though there are substantive differences among them. Cal-Am proposes to use a group of subsurface slant intake wells (up to eight for the maximum capacity plant alternative); DWD proposes a new screened open ocean intake installed at roughly 60-ft of depth; and PML is considering options to use either an existing seawater intake pump station drawing from the Moss Landing Harbor, or potentially a new screened open ocean intake installed coincident with an existing 51-in diameter concrete outfall pipeline owned

by the Moss Landing Commercial Park. Cal-Am has projected there may be up to 3 percent of groundwater from the Salinas Valley Groundwater Basin (SVGB) entrained with their intake supply that would need to be returned (as facility product water) to the basin. For brine disposal, Cal-Am and DWD propose to blend concentrated brine from the desal plants with existing outfall flows—Cal-Am blending with the existing Monterey Peninsula Regional Water Pollution Control Agency’s wastewater plant outfall; and DWD using the existing cooling water return outfall at the Moss Landing Power Plant. Both sources have sufficient dilution and hydraulic capacities. PML proposes to use their existing 51-in diameter outfall, currently permitted to discharge magnesium-depleted seawater. There is some evidence of disrepair of the outfall in terms of pipeline integrity and condition of the existing diffusers which would need to be addressed along with the permitting of a non-shore diluted brine stream.

Cal-Am and PML propose to serve only the identified demand within the Cal-Am service area at the two plant capacity increments under consideration; while DWD envisions a higher capacity regional project, capable of producing up to 25,000 AFY. DWD has not yet secured agreements with any potential customers.

In terms of treatment approach—all three candidate teams propose to use reverse osmosis (RO) as the primary desalination technology. However, both DWD and PML propose a single pass RO system; while Cal-Am has proposed a partial double or two pass system—treating a portion of the product water from the first pass RO system with a second RO system and blending the supplies to form the final treated water. The issue relates to the quality of product water produced, more than treatment function; as either approach is considered functional.

Pre- and post-treatment approaches are similar. All incorporate granular media filtration of the incoming seawater, with PML following on with a low pressure membrane filtration system (microfiltration or ultrafiltration) to deal with the anticipated higher solids load from water extracted from Moss Landing Harbor. In the case of Cal-Am, the aquifer filtration provided by the slant wells could obviate the need for media filtration; but the potential presence of iron and manganese in the supply could just as well make them necessary—so the approach is considered conservative. In the case of DWD, the incoming seawater extracted at depth will be cold (roughly 15 °C) and warmed through a proprietary warming system at the Moss Landing Power Plant prior to transmission to the treatment plant site. All three proponents propose to use calcite beds, carbon dioxide and sodium hydroxide for re-mineralization/stabilization of the RO treated product water and chlorine disinfection.

Cal-Am and DWD will require offsite pipelines for feed, product water and brine disposal; while PML proposes to use existing intake and outfall pipelines originating on site; requiring only a product water delivery pipeline. DWD’s site location north of the Elkhorn Slough is likely to entail complex issues with crossings for all three of their large diameter pipelines (one 48-in and two 36-in).

All three proponents were cooperative with our evaluation and provided all available and requested information. The Cal-Am project through past work on other regional projects as well as ongoing procedures with the California Public Utilities Commission has produced the most detailed information on their project, followed by DWD who have prepared a fair amount of pre-design data on their proposed system along with active environmental investigations for their proposed intake. PML is at a more preliminary level of engineering and planning in comparison.

Importantly however, we have not found any fatal flaws associated with any of the candidate projects.

PROJECT PERFORMANCE

Performance of each proposed system was gauged relative to categories of plant design capacity, targeted product water quality and disinfection strategy.

For plant capacity, we considered the proposed instantaneous design capacity of each treatment facility in comparison to the required annual production increment—either 5,500 AFY or 9,000 AFY. What we found were wide variations—with Cal-Am proposing capacities of 5.4 mgd and 9.0 mgd; DWD of 4.9 mgd and 9.1 mgd; and PML at 4.8 mgd and 9.4 mgd. We considered the level of equipment redundancy proposed by each team in the context of the amount of “online” time it would require a facility at a given rated capacity to deliver the required annual allotment. For Cal-Am, we gauged their planned design capacities adequate considering the need to return flow to the SVGB as well as meet the 5,500 AFY or 9,000 AFY into their distribution system. At capacities of 5.4 mgd and 9.0 mgd, the plant(s) would need to operate 98 percent of the time to meet production—not overly conservative but achievable given the level of equipment redundancy (including spare process units) in their proposed facility. DWD, with similar proposed levels of redundancy, would have equivalent minimum facility capacity requirements of 5.0 mgd and 8.2 mgd; somewhat lower than Cal-Am as they lack the requirement to return flow to the SVGB. PML did not provide a detailed equipment list indicating numbers of process units; so gauging proposed levels of equipment redundancy was uncertain. However, we feel the facility should have adequate reliability and conducted our evaluation on that basis—recommending equivalent capacity ratings to DWD of 5.0 mgd and 8.2 mgd.

The product quality produced by the proposed systems would differ based on the configuration of their proposed RO systems. Cal-Am’s proposed partial two-pass system could likely achieve chloride, boron, and total dissolved solids (TDS) consistent with current Carmel River supplies; but the single pass systems would not. We consider a lower salinity product supply an asset and evaluated all three projects (from an economic perspective) as having partial two-pass RO systems. The recommended product quality goal is summarized in **Table ES-1**.

Table ES-1 - Summary of Proposed Product Water Quality

Parameter	Units	Value
Total Dissolved Solids	mg/L	380
Chloride	mg/L	60
Boron	mg/L	0.5
pH	units	≥ 8.0
Calcium	mg/L as CaCO ₃	40
Alkalinity	mg/L as CaCO ₃	40

For disinfection, the proposed facilities must comply with the Surface Water Treatment Rule and Long-Term 2 Enhanced Surface Water Treatment Rule. Under these regulations, pathogen removal/inactivation requirements are set on a logarithmic (log) scale, with the California Department of Public Health establishing specific log removal for priority pathogens, including giardia, cryptosporidium (crypto), and virus. The levels set will be based on source water quality and other factors, and are expected to be in the range of 3-5 for giardia, 2-4 for crypto, and 4-6 for virus, based on each of the project source waters being classified as surface waters or under the influence of surface waters. We find all three projects are likely to achieve sufficient log removal credits under their proposed treatment schemes to comply.

ECONOMICS

A primary focus of our evaluation was to provide a balanced, “apples to apples” comparison of the candidate projects from an economic perspective. We implemented this by focusing on the following principles:

- Uniformity in plant design capacity for the two non-regional approaches; equivalent capacity allocation for the proposed DWD regional project.
- Equivalency in treatment to achieve: a common RO feed water quality following pretreatment; a common treated water quality goal; and pathogen removal credits required for the applicable supply source.
- Uniformity in equipment redundancy.
- Uniformity in unit cost criteria for common items.
- Uniformity in cost factors applied to aggregated costs (e.g., contingencies; electrical and I&C costs; etc.).
- Uniformity in unit costs for chemicals and other consumables for treatment evaluations.

To implement the above, we adjusted plant capacities for the evaluation on the basis described in the Project Performance discussion, rating Cal-Am’s proposed system at design capacities of 5.4 mgd and 9.0 mgd; and the DWD and PML systems at 5.0 mgd and 8.2 mgd. In terms of treatment process, we attempted to maintain the overall proposed process design of the proponents, but did evaluate all as including a partial (40 percent) capacity second pass RO system. We also assumed N+1 redundancy on all rotating equipment and major treatment process units (e.g., filters, RO membrane trains). We employed an equivalent basis in developing our capital equipment cost estimates, relying on targeted quotes for equipment and SPIs cost information from past, similar seawater RO projects. For indirect costs, we assumed fixed factors and applied them uniformly to each project.

We implemented a similar strategy on annual operating and maintenance expenses, using common chemical unit prices along with pricing on common consumables, such as the RO process membranes. The results of our evaluation are presented in **Table ES-2**.

Table ES-2 - Summary of Evaluated Capital and Operating Cost Estimates

Cost Element	Project Proponent					
	Cal-Am		DWD		PML	
	9 kAFY	5.5 kAFY	9 kAFY	5.5 kAFY	9 kAFY	5.5 kAFY
CAPITAL COSTS (in Millions 2012 Dollars)						
Intake/Outfall	\$37.0	\$31.7	\$2.71	\$1.66	\$3.00	\$3.00
Pretreatment & Residuals Handling	\$10.6	\$7.94	\$11.2	\$7.94	\$20.2	\$13.6
Desalination System	\$22.3	\$15.1	\$19.4	\$13.2	\$19.9	\$14.0
Post-Treatment	\$1.48	\$0.88	\$1.48	\$0.88	\$1.66	\$1.07
Distribution	\$17.0	\$16.0	\$29.0	\$28.9	\$22.4	\$22.3
Site Structures	\$11.5	\$10.8	\$3.65	\$2.52	\$10.0	\$7.00
Indirect Costs ¹	\$58.0	\$50.8	\$54.5	\$47.5	\$67.9	\$62.3
Contingency Allowance (30%)	\$47.4	\$40.0	\$36.6	\$30.8	\$43.6	\$37.0
Mitigation Allowance (1%)	\$1.60	\$1.30	\$1.20	\$1.00	\$1.50	\$1.20
TOTAL	\$207	\$175	\$160	\$134	\$190	\$161
ANNUAL O&M COSTS (in Millions 2012 Dollars)						
Energy	\$5.83	\$3.54	\$3.93	\$2.41	\$4.20	\$2.56
Chemicals	\$0.32	\$0.19	\$0.83	\$0.50	\$0.93	\$0.57
Expendables	\$0.69	\$0.45	\$1.02	\$0.68	\$1.09	\$0.65
Other Proponent Expenses	-	-	\$2.85	\$2.60	-	-
O&M Labor	\$2.69	\$2.36	\$2.69	\$2.36	\$2.69	\$2.36
Equipment Replacement ²	\$1.50	\$1.23	\$1.01	\$0.83	\$1.16	\$0.92
TOTAL	\$11.0	\$7.77	\$12.3	\$9.38	\$10.1	\$7.06
ANNUAL COST OF WATER (in Millions 2012 Dollars)						
Capital Recovery ³	\$12.0	\$10.1	\$9.24	\$7.77	\$11.0	\$9.34
Total Annual Cost	\$23.0	\$17.9	\$21.5	\$17.2	\$21.1	\$16.4
Production Cost of Water (\$/AF)	\$2,555	\$3,250	\$2,395	\$3,120	\$2,345	\$2,980

¹Includes implementation costs at 25% ROW easement and land costs, mobilization/demobilization at 2% electrical and I&C systems at 18% engineering and startup at 15% and additional project proponent prescribed costs. All percentages applied to plant facilities costs.

²Calculated as 1.5% of plant facilities costs.

³Capital recovery factor based on an interest rate of 4.0% and term of 30 years.

Overall, the final water production costs are fairly equivalent given the overall accuracy of the estimate and degree of project development. Cal-Am’s capital cost is the highest; owing largely to its high intake system cost. PML is proposing to reuse existing intake infrastructure; while DWD has an unspecified separate business entity which will be funding its intake, outside of the assigned DWD facility budget. Cal-Am’s operating cost is also relatively high, owing in large measure to higher stipulated energy costs than either DWD or PML—roughly \$0.13/kW-hr vs. \$0.08 kW-hr.

IMPLEMENTATION CONSIDERATIONS

The three projects are at varying states of development in terms of the regulatory permitting process. Cal-Am is further along than either DWD or PML, though DWD has completed or is nearing completion of their initial CEQA compliance documents. Forecast project implementation schedules were identified for each project proponent, based on a select number of key environmental and permitting tasks, including:

1. A project description must be completed.
2. An Environmental Assessment must be made.
3. An EIR/EIS must be completed (CEQA/NEPA compliance).
4. Commercial Agreements must be negotiated/ Cal-Am must obtain a Certificate of Public Convenience and Necessity (CPCN), after certification of the EIR.
5. Jurisdictional Permits must be obtained for facilities impacting Waters of the U.S.
6. NPDES Permits must be amended/obtained.
7. Coastal Development Permits must be obtained.

It was further assumed that each proponent had the financial capacity to proceed with predesign preparation/procurement package development such that the project could be put out to final design and construction bid coincident with approval of the final project permits. The schedules are provided below as **Figure ES-1, Figure ES-2 and Figure ES-3.**

Figure ES-1 – Projected Cal-Am Project Implementation Schedule

ID	Task Name	2013					2014					2015				2016				2017			
		Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
1	Final EIR	[Bar]																					
2	NOD and CPCN					[Bar]																	
3	RWQCB Brine Discharge Permit					[Bar]																	
4	Coastal Development Permit					[Bar]																	
5	Test Slant Well			[Bar]																			
6	Desal Plant Preliminary Design					[Bar]																	
7	Desal Plant Design/Construction									[Bar]													
8	Desal Plant Startup																					[Bar]	



Figure ES-2 - Projected DWD Project Implementation Schedule

ID	Task Name	2013				2014				2015				2016				2017				2018			
		Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
1	Complete EIR/EIS	[Bar]																							
2	Negotiate Commercial Agreements							[Bar]																	
3	Jurisdictional Permits									[Bar]															
4	NPDES Permit Amendment											[Bar]													
5	Coastal Development Permit													[Bar]											
6	Desal Plant Preliminary Design											[Bar]		[Bar]											
7	Desal Plant Design/Construction															[Bar]		[Bar]							
8	Desal Plant Startup																							[Bar]	

Figure ES-3 - Projected PML Project Implementation Schedule

ID	Task Name	2013				2014				2015				2016				2017				2018				2019			
		Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
1	Prepare Project Description	[Bar]																											
2	Conduct Environmental Assessment							[Bar]																					
3	Complete EIR/EIS									[Bar]																			
4	Negotiate Commercial Agreements															[Bar]													
5	NPDES Permit Amendment															[Bar]													
6	Coastal Development Permit																	[Bar]											
7	Desal Plant Preliminary Design															[Bar]		[Bar]											
8	Desal Plant Design/Construction																			[Bar]		[Bar]							
9	Desal Plant Startup																											[Bar]	

**SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE
*** AGENDA TRANSMITTAL FORM *****

MEETING DATE:	November 14, 2012
AGENDA ITEM:	8
AGENDA TITLE:	Request for Service for HydroMetrics to Model Basin Replenishment Scenarios
PREPARED BY:	Robert Jaques, Technical Program Manager

SUMMARY:

At the TAC's September and October 2012 meetings there were agenda items pertaining to the "Memorandum of Understanding Between Seaside Basin Watermaster and California American Water" (MOU) regarding CAW's Replenishment Assessments and Replenishment Assessment Credits. Specifically, these agenda items pertained to the development of a schedule under which CAW would repay the quantities of water that it has overpumped from the Seaside Basin, upon completion of its Monterey Peninsula Water Supply Project.

This topic was on the September 12, 2012 TAC meeting agenda, but no quorum existed at that meeting when this agenda item came up for discussion so it was never taken up. At the Board's October 3, 2012 meeting this same topic was on the Board agenda. The Board determined that it would handle this matter without TAC involvement, so this agenda item did not appear on the October 10, 2012 TAC agenda. However, there was discussion on this matter at the October TAC meeting which led to Eric Sabolsice stating that he would approach the Board's Ad Hoc Committee (created for the purpose of working on this topic) to provide them the TAC's recommendation that modeling be done in order to assist in the development of a "feasible" replenishment schedule for use by Cal Am in fulfilling its MOU repayment obligations.

Mr. Sabolsice reported that the Ad Hoc Committee has not yet met to consider the TAC's recommendation, but agreed that it would be appropriate for the TAC to develop a proposed contract to have HydroMetrics perform the modeling work, so it could be presented for the Board's consideration at its November 29th Special meeting.

A conference call was held on Thursday November 8th involving representatives of the City of Seaside, CAW, HydroMetrics, and myself to discuss the scope of the work for the modeling to be done by HydroMetrics. The attached RFS No. 2012-4 contains the scope of work developed as a result of that conference call, and the cost proposal from HydroMetrics to perform this work. The cost proposed by HydroMetrics is \$49,330. The Board may need to draw funds from other line items in the M&MP Budget for FY 2012 to cover this unbudgeted cost, as it is slightly higher than the contingency line item in that budget.

At today's meeting the TAC is invited to suggest revisions to the scope of work and costs, so that the RFS can be finalized and presented to the Board for its consideration at its November 29, 2012 Special Meeting.

ATTACHMENTS:	HydroMetrics RFS No. 2012-4
RECOMMENDED ACTION:	Approve RFS No. 2012-4, including any revisions the TAC wishes to make, so that it can be provided to the Board for its consideration

SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: November 30, 2012
filled in by WATERMASTER)

RFS NO. 2012-04

(To be

TO: Derrick Williams
HydroMetrics LLC
PROFESSIONAL

FROM: Robert Jaques
WATERMASTER

Services Needed and Purpose: Perform groundwater monitoring as described in Attachment 1.

Completion Date: All work of this RFS shall be completed not later than 60 days from the date of execution of this RFS No. 2012-04.

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

Total Price Authorized by this RFS: \$ 49,330.00 (Cost is authorized only when evidenced by signature below.) (See Attachment 1 for Estimated Costs).

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

Requested by: _____ Date: _____
WATERMASTER Technical Program Manager

Authorized by: _____ Date: _____
WATERMASTER Chief Executive Officer

Agreed to by: _____ Date: _____
PROFESSIONAL

ATTACHMENT 1



519 17th Street, Suite 500
Oakland, CA 94612

Mr. Robert S. Jaques, Technical Program Manager
Seaside Basin Watermaster
83 Via Encanto
Monterey, CA 93940

November 9, 2012

Subject: Scope and Cost Estimate to Model Cal-Am Replenishment
Repayment Scenarios

Dear Mr. Jaques:

HydroMetrics Water Resources Inc. is pleased to submit this scope and cost estimate for modeling the effects from four different Cal-Am replenishment repayment scenarios. The purpose of the modeling work is to evaluate whether protective groundwater elevations are achieved over the repayment period of 25 or 50 years, or how much of a decrease in pumping is needed to achieve protective elevations over the 25 and 50 year periods.

Our scope includes providing professional consulting services to the Seaside Groundwater Basin Watermaster for preparing and running an extended baseline scenario to 2067, and developing and running four repayment scenarios.

The four repayment scenarios include:

1. 50 Year Repayment Scenario – Cal-Am pumps an annual total of 1,124 acre-feet per year (AFY) [1,474 AFY less 350 AFY] from the Basin for a period of 50 years beginning in 2017.
2. 50 Years to Achieve Protective Elevations Scenario – pumping in all wells in the Seaside Basin will be iteratively reduced to determine a pumping schedule that achieves protective elevations within 50 years through in-lieu recharge.

3. 25 Year Repayment Scenario – Cal-Am pumps an annual total of 724 AFY (1,474 AFY less 700 AFY) from the Basin for a period of 25 years beginning in 2017.
4. 25 Years to Achieve Protective Elevations Scenario – pumping in all wells in the Seaside Basin will be iteratively reduced to determine a pumping schedule that achieves protective elevations within 25 years through in-lieu recharge.

The tasks required to model the above scenarios are described below.

Task 1. Develop and Run Base Simulation to 2067

The predictive Seaside Basin model currently extends out to 2031. For the proposed scenarios, model fluxes (recharge and pumping) need to be extended to 2067, to cover the 50 year period after 2017 when Cal-Am will repay Watermaster. This extended simulation will be the basis of the four scenarios. Only the amount of pumping will change between scenarios.

Task 2A. Develop and Run 50 Year Repayment Scenario

Cal-Am's annual production will be reduced to 1,124 AFY for the replenishment repayment period of 50 years. After the scenario has been developed, the model will be run and outputs generated for tabular and graphical representation of protective groundwater elevations and average coastal groundwater velocities.

Task 2B. Iterate 50 Year Repayment Scenario to Achieve Protective Elevations

If protective groundwater elevations are not achieved within the 50 year repayment period in Task 2A, we will adjust production iteratively until protective elevations are reached by the end of the 50 year repayment period. Pumping from all wells in the Seaside Basin will be reduced proportionally until protective groundwater elevations are reached. Tabular and graphical representation of protective groundwater elevations and average coastal groundwater velocities will be prepared to show the results of the scenario.

Task 3A. Develop and Run 25 Year Repayment Scenario

Cal-Am's annual production will be reduced to 724 AFY for the replenishment repayment period of 25 years. After the scenario has been developed, the model

will be run and outputs generated for tabular and graphical representation of protective groundwater elevations and average coastal groundwater velocities.

Task 3B. Iterate 25 Year Repayment Scenario to Achieve Protective Elevations

If protective groundwater elevations are not achieved within the 25 year repayment period in Task 3A, we will adjust production iteratively until protective elevations are reached by the end of the 25 year repayment period. Pumping from all wells in the Seaside Basin will be reduced proportionally until protective groundwater elevations are reached. Tabular and graphical representation of protective groundwater elevations and average coastal groundwater velocities will be prepared to show the results of the scenario.

Task 4. Meetings

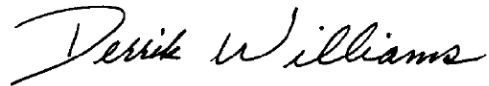
The budget includes time for three meetings. The first meeting will be by teleconference and will be used to finalize model assumptions. The second meeting will be used to present the final results to the TAC, with the third meeting used to present the results to the Board.

Task 5. Reporting

Model assumptions, descriptions of the extended simulation and four model scenarios, findings, conclusions, and recommendations will be summarized in a brief technical memorandum. A draft of the technical memorandum will be provided electronically to the Watermaster's Technical Program Manager in MS Word format for presentation and discussion with the Technical Advisory Committee (TAC) at the second meeting mentioned in Task 4. A final version of the Technical Memorandum, reflecting comments and issues raised by the Technical Program Manager and the TAC will be provided electronically to the Technical Program Manager in MS Word format.

The estimated cost for the work discussed is \$49,330, as shown on the attached table.

Sincerely,

A handwritten signature in black ink that reads "Derrick Williams". The signature is written in a cursive style with a large initial 'D'.

Derrick Williams, President
HydroMetrics Water Resources Inc.

**Cost Estimate for Seaside Groundwater Basin Watermaster
Professional Services to Model Cal-Am Replenishment Repayment Scenarios**

Tasks	HydroMetrics WRI Labor					Other Direct Costs	TOTALS
	Derrick Williams	Georgina King	Nick Byler	Labor Total			
	Program Manager	Senior Hydrogeologist	Staff Hydrogeologist	Hours	(\$)		
Rates	\$190	\$160	\$110				
Task 1. Develop and Run Base Simulation to 2067							
Extend Base Simulation to 2067	16	16	8	40	\$ 6,480	\$ -	\$ 6,480
<i>Subtotal Task 1</i>				40	\$ 6,480	\$ -	\$ 6,480
Task 2A. Develop and Run 50 Year Repayment Scenario							
2A.1. Develop Pumping Data	2	2	4	8	\$ 1,140	\$ -	\$ 1,140
2A.2. Produce Tabular and Graphical Output on Protective Elevations and Groundwater Velocity	8	4	4	16	\$ 2,600	\$ -	\$ 2,600
<i>Subtotal Task 2A</i>				24	\$ 3,740	\$ -	\$ 3,740
Task 2B. Iterate 50 Year Repayment Scenario to Achieve Protective Elevations							
2B.1. Iterate Modeling to Determine How Much Water is Needed to Achieve Protective Elevations within 50 Years	24	0	16	40	\$ 6,320	\$ -	\$ 6,320
2B.2. Produce Tabular and Graphical Output on Protective Elevations and Groundwater Velocity	4	4	4	12	\$ 1,840	\$ -	\$ 1,840
<i>Subtotal Task 2B</i>				52	\$ 8,160	\$ -	\$ 8,160
Task 3A. Develop and Run 25 Year Repayment Scenario							
3A.1. Develop Pumping Data	2	2	4	8	\$ 1,140	\$ -	\$ 1,140
3A.2. Produce Tabular and Graphical Output on Protective Elevations and Groundwater Velocity	8	4	4	16	\$ 2,600	\$ -	\$ 2,600
<i>Subtotal Task 3A</i>				24	\$ 3,740	\$ -	\$ 3,740
Task 3B. Iterate 25 Year Repayment Scenario to Achieve Protective Elevations							
3B.1. Iterate Modeling to Determine How Much Water is Needed to Achieve Protective Elevations within 50 Years	24	0	16	40	\$ 6,320	\$ -	\$ 6,320
3B.2. Produce Tabular and Graphical Output on Protective Elevations and Groundwater Velocity	4	4	8	16	\$ 2,280	\$ -	\$ 2,280
<i>Subtotal Task 3B</i>				56	\$ 8,600	\$ -	\$ 8,600

Tasks	HydroMetrics WRI Labor					Other Direct Costs	TOTALS
	Derrick Williams	Georgina King	Nick Byler	Labor Total			
	Program Manager	Senior Hydrogeologist	Staff Hydrogeologist	Hours	(\$)		
Rates	\$190	\$160	\$110	Hours	(\$)	(\$)	(\$)
Task 4. Meetings							
Assume Three Meetings - One to Finalize Model Assumptions, One to Present Results to TAC and, One to Present Results to Board	20	8	2	30	\$ 5,300	\$ 300	\$ 5,600
<i>Subtotal Task 4</i>				30	\$ 5,300	\$ 300	\$ 5,600
Task 5. Reporting							
Prepare Technical Memorandum describing Scenarios, Findings, Conclusions and Recommendations	24	36	24	84	\$ 12,960	\$ 50	\$ 13,010
<i>Subtotal Task 5</i>				84	\$ 12,960	\$ 50	\$ 13,010
TOTAL				310	\$ 48,980	\$ 350	\$ 49,330

Notes

Other Direct Costs includes mileage, postage, office supplies

**SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE**

***** AGENDA TRANSMITTAL FORM *****

MEETING DATE:	November 14, 2012
AGENDA ITEM:	9
AGENDA TITLE:	Schedule
PREPARED BY:	Robert Jaques, Technical Program Manager
SUMMARY:	<p>As a regular part of each monthly TAC meeting, I will provide the TAC with an updated Schedule of the activities being performed by the Watermaster, its consultants, and the public entity, MPWMD, which is performing certain portions of the work.</p> <p>A. Attached is the most recent update of the Work Schedule for the remainder of FY 2012.</p> <p>B. Attached is the proposed Work Schedule for FY 2013.</p>
ATTACHMENTS:	Schedules of Work Activities for FY 2012 and FY 2013
RECOMMENDED ACTION:	Provide Input to Technical Program Manager Regarding Any Corrections or Additions to these Schedules

Seaside Basin Watermaster Monitoring and Management Program 2012 Work Schedule

ID	Task Name	2012												201									
		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1	CRITICAL PROJECT MILESTONES ASSOCIATED WITH TAC, BOARD, AND/OR CONSULTANT WORK																						
2	2011 Administration, Operations and Replenishment Budgets																						
3	Prepare M&MP Draft Budgets (Same as Task 19)																						
4	TAC Approves M&MP Budgets (Same as Task 20)																						
5	Board Approves M&MP Budgets (Same as Task 21)																						
6	Watermaster Prepares Quarterly Water Production, Water Level, and Water Quality Reports																						
7	Watermaster Prepares Combined Quarterly Water Production, Water Level, and Water Quality Reports for 1st & 2nd Quarters (Same as Task 41)																						
8	Watermaster Prepares Quarterly Water Production, Water Level, and Water Quality Reports for 3rd and 4th Quarters (Same as Task 42)																						
9	Watermaster Prepares Annual Water Production, Water Level, and Water Quality Report for 2012 (Same as Task 43)																						
10	Replenishment Assessment Unit Costs for Water Year 2012																						
11	B&F Committee Develops Replenishment Assessment Unit Cost for 2013 Water Year																						
12	If Requested, TAC Provides Assistance to B&F Committee in Development of 2013 Water Year Replenishment Assessment Unit Cost																						
13	Board Adopts and Declares 2013 Water Year Replenishment Assessment Unit Cost																						
14	Replenishment Assessments for Water Year 2012																						
15	Watermaster Prepares Replenishment Assessments for Water Year 2012																						
16	Watermaster Board Approves Replenishment Assessments for Water Year 2012 (At November Meeting)																						
17	Watermaster Levies Replenishment Assessment for 2012																						

Seaside Basin Watermaster Monitoring and Management Program 2012 Work Schedule

ID	Task Name	2012												201									
		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
18	Monitoring & Management Program (M&MP) Budgets for 2012 and 2013																						
19	Preliminary Discussion of Potential Scope of Work for 2013 M&MP												Completed										
20	Prepare Draft 2013 and 2014 M&MP O&M and Capital Budgets											Completed											
21	TAC approves Draft 2013 and 2014 M&MP O&M and Capital Budgets											Completed											
22	Board approves 2013 and 2014 M&MP O&M and Capital Budgets											Completed											
23	2012 Annual Report (Note: Schedule Reflects Court Approval of Later Submittal Date for Annual Report)																						
24	Prepare Preliminary Draft 2012 Annual Report												Completed										
25	TAC Provides Input on Draft 2012 Annual Report																						
26	Prepare Revised Draft 2012 Annual Report (Incorporating TAC Input)																						
27	Board Provides Input on Revised Draft 2012 Annual Report (At November Board Meeting)																						
28	Prepare Final 2012 Annual Report (Incorporating Board Input)																						
29	Watermaster Submits Final 2012 Annual Report to Judge																						
30	MANAGEMENT																						
31	M.1 PROGRAM ADMINISTRATION (All Work Performed by Watermaster Staff)																						
32	Prepare Initial Consultant Contracts for 2012												Completed										
33	TAC Approval of Initial Consultant Contracts for 2012												Completed										
34	Board Approval of Initial Consultant Contracts for 2012 (At November Board Meeting)												Completed										
35	IMPLEMENTATION																						
36	I.2.a DATABASE MANAGEMENT																						

Seaside Basin Watermaster Monitoring and Management Program 2012 Work Schedule

ID	Task Name	2012												201									
		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
37	I.2.a.1 Conduct Ongoing Data Entry/Database Maintenance																						
38	I.2.b DATA COLLECTION PROGRAM																						
39	I.2.b.2 Collect Monthly Water Levels (MPWMD)																						
40	I.2.b.3 Collect Quarterly Water Quality Samples (MPWMD)																						
41	I.2.b.6 Reports (from MPWMD)																						
42	Watermaster Prepares Combined Quarterly Water Production, Water Level, and Water Quality Reports for 1st & 2nd Quarters																						
43	Watermaster Prepares Quarterly Water Production, Water Level, and Water Quality Reports for 3rd and 4th Quarters																						
44	Watermaster Prepares Annual Water Production, Water Level, and Water Quality Report for 2012																						
45	I.3.a ENHANCED SEASIDE BASIN GROUNDWATER MODEL																						
46	I.3.a.2 Develop Protective Water Levels																						
47	I.3.a.3 Evaluate Replenishment Scenarios and Develop Answers to Basin Management Questions																						
48	I.3.c Refine and/or Update the BMAP																						
49	I.3.d Evaluate Coastal Wells for Cross-Aquifer Contamination Potential																						
50	TAC Receives Initial Report from MPWMD on its Evaluation																						
51	MPWMD Makes Final Report to TAC on Its Evaluation																						
52	Presentation of MPWMD's Evaluation to Board																						
53	I.4.a HydroMetrics & MPWMD Provide Oversight of Seawater Intrusion Detection and Tracking																						
54	I.4.b HydroMetrics Analyzes and Maps Water Quality from Coastal Monitoring Wells																						

Seaside Basin Watermaster Monitoring and Management Program 2012 Work Schedule

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		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
55	I.4.c Annual Seawater Intrusion Analysis Report (SIAR)																						
56	HydroMetrics Provides Draft SIAR to Watermaster																						
57	TAC Approves Annual Seawater Intrusion Analysis Report (SIAR)																						
58	Board Approves Annual Seawater Intrusion Analysis Report (SIAR)																						
59	I.4.d Complete Preparation of Seawater Intrusion Response Plan (SIRP)																						
60	I.4.e Refine and/or Update the SIRP																						

Seaside Basin Watermaster Monitoring and Management Program 2013 Work Schedule

ID	Task Name	2013												2014									
		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1	CRITICAL PROJECT MILESTONES ASSOCIATED WITH TAC, BOARD, AND/OR CONSULTANT WORK																						
2	2014 Administration, Operations and Replenishment Budgets																						
3	Prepare M&MP Draft Budgets (Same as Task 19)																						
4	TAC Approves M&MP Budgets (Same as Task 20)																						
5	Board Approves M&MP Budgets (Same as Task 21)																						
6	Watermaster Prepares Quarterly Water Production, Water Level, and Water Quality Reports																						
7	Watermaster Prepares Combined Quarterly Water Production, Water Level, and Water Quality Reports for 1st & 2nd Quarters (Same as Task 41)																						
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19	Preliminary Discussion of Potential Scope of Work for 2014 M&MP																						
20	Prepare Draft 2014 and 2015 M&MP O&M and Capital Budgets																						
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33	TAC Approval of Initial Consultant Contracts for 2014																						
34	Board Approval of Initial Consultant Contracts for 2014 (At November Board Meeting)																						
35	IMPLEMENTATION																						
36	1.2.a DATABASE MANAGEMENT																						

ASSUME NOV. BOARD MEETING SET FOR TWO WEEKS AFTER NOV. TAC

Seaside Basin Watermaster Monitoring and Management Program 2013 Work Schedule

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		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
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ASSUME NOV. BOARD MEETING SET FOR TWO WEEKS AFTER NOV. TAC

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45	I.3.a.2 Develop Protective Water Levels																						
46	I.3.a.3 Evaluate Replenishment Scenarios and Develop Answers to Basin Management Questions																						
47	I.3.c Refine and/or Update the BMAP																						
48	I.3.d Evaluate Coastal Wells for Cross-Aquifer Contamination Potential																						
49	MPWMD Migrates Well Data from Newly Identified Wells into Watermaster's Database																						
50	I.4.a HydroMetrics & MPWMD Provide Oversight of Seawater Intrusion Detection and Tracking																						
51	I.4.b MPWMD Performs Focused Hydrogeologic Investigation in Vicinity of Sand City Public Works Well																						
52	I.4.c Annual Seawater Intrusion Analysis Report (SIAR)																						
53	HydroMetrics Provides Draft SIAR to Watermaster																						
54	TAC Approves Annual Seawater Intrusion Analysis Report (SIAR)																						

Seaside Basin Watermaster Monitoring and Management Program 2013 Work Schedule

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57	I.4.d Complete Preparation of Seawater Intrusion Response Plan (SIRP)																					
58	I.4.e Refine and/or Update the SIRP																					

**SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE**

***** AGENDA TRANSMITTAL FORM *****

MEETING DATE:	November 14, 2012
AGENDA ITEM:	10
AGENDA TITLE:	Other Business
PREPARED BY:	Robert Jaques, Technical Program Manager
SUMMARY:	<p>The "Other Business" agenda item is intended to provide an opportunity for TAC members or others present at the meeting to discuss items not on the agenda that may be of interest to the TAC.</p>
ATTACHMENTS:	None
RECOMMENDED ACTION:	None required – information only

**SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE
*** AGENDA TRANSMITTAL FORM *****

MEETING DATE:	November 14, 2012
AGENDA ITEM:	11
AGENDA TITLE:	Set Next Meeting Date
PREPARED BY:	Robert Jaques, Technical Program Manager
SUMMARY:	<p>All of the work planned for the TAC in FY 2012 has been completed.</p> <p>For this reason there does not appear to be any need to hold a TAC meeting in December. I am therefore recommending that the TAC cancel its December 2012 meeting and have its next meeting on Wednesday January 9, 2013.</p>
ATTACHMENTS:	None
RECOMMENDED ACTION:	Approve recommendation to cancel the December TAC meeting and set the next TAC meeting for January 9, 2013