

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

DATE: Wednesday, April 10, 2013

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		

<u>Agenda Item</u>	<u>Page No.</u>
1. Public Comments	
2. Administrative Matters:	
A. Approve Minutes from March 13, 2012 Meeting	2
B. Notice of Opportunity for Public Comments on CAW's Monterey Peninsula Water Supply Project	7
C. Discuss Attendance at Meetings	10
3. Progress Update on Seaside Basin Salt and Nutrient Management Plan Basin Boundary Question (Joe Oliver)	11
4. Sentinel Well Induction Logging Results for January 2013 (Bob Jaques)	12
5. Discussion of Board Direction Pertaining to TAC's Recommendations Regarding the Modeling of CAW's Replenishment Program (Bob Jaques)	14
6. HydroMetrics RFS No. 2013-03 to Perform Modeling of Replenishment Injection at Sites Near the Coast (Bob Jaques)	15
7. Discussion of Water Supply to the Laguna Seca Subarea (Bob Jaques)	20
8. Schedule (Bob Jaques)	24
9. Other Business	29
10. Set Next Meeting Date:	
The next regular meeting will be held on Wednesday May 8, 2013 at 1:30 p.m. at the MRWPCA Board Room	

**SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE**

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

MEETING DATE:	April 10, 2013
AGENDA ITEM:	2.A
AGENDA TITLE:	Approve Minutes from March 13, 2013
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
March 13, 2013**

Attendees: TAC Members

City of Seaside – No Representative
California American Water – Eric Sabolsice
City of Monterey – Norm Green
Laguna Seca Property Owners – Gary Cursio
MPWMD – Joe Oliver
MCWRA – Howard Franklin
City of Del Rey Oaks – Leon Gomez
City of Sand City – Leon Gomez
Coastal Subarea Landowners – No Representative

Watermaster

Technical Program Manager - Robert Jaques

Consultants

HydroMetrics – Derrick Williams (via telephone)

Others:

Jon Lear – MPWMD
Mike McCullough - MRWPCA

The meeting was called to order at 1:36 p.m. after waiting for a quorum to arrive.

1. Public Comments

There were no public comments.

2. Administrative Matters:

A. Approve Minutes from February 13, 2013 Meeting

On a motion by Mr. Franklin, seconded by Mr. Gomez, the minutes were unanimously approved as presented.

B. Progress Update on Abandonment and Conversion of CAW Wells

Mr. Oliver said he would submit the proposed well conversion plans to Monterey County for their review. Mr. Sabolsice said that CAW was ready to proceed with the conversion work pending Monterey County approval. Mr. Jaques will send the draft board agenda transmittal on this matter to Mr. Sabolsice and Mr. Oliver for their review before it goes to the Board for their April 3rd meeting.

C. Progress Update on Investigation of Water Quality Issues at Sand City Public Works Well

Mr. Oliver offered to visit CAW's offices to help locate older well data. Mr. Sabolsice said that CAW has some new personnel including a wastewater treatment supervisor and an operations manager, and it will be a few weeks of transition for them before he recommended Mr. Oliver come to their offices for this purpose. Mr. Sabolsice asked Mr. Oliver to contact Mike Magretto in April to discuss getting this information.

D. Progress Update on Seaside Basin Salt and Nutrient Management Plan Basin Boundary Question

Mr. Jaques summarized the agenda packet materials on this item. Mr. Sabolsice noted that HydroMetrics has asked CAW for information on reject water from the Sand City Desalination Plant and wondered if this was part of the work on the Salt and Nutrient Management Plan. Mr. Williams responded that they consider this to not add to Basin salt buildup, as the brine immediately leaves the Basin. Mr. Oliver said the brine flow goes into the Aromas Sands formation, not the Paso Robles or Santa Margarita formations.

Mr. Lear said the Plan will respond to input from stakeholders.

Mr. Oliver said he had had an informal Basin boundary discussion with the RWQCB staff. They seemed to be receptive to using whatever boundary makes the most sense, but favored use of the Yates boundary.

E. Progress Report on Migrating Cross-Aquifer Contamination Study Data into the Watermaster's Database

Mr. Lear said the data has already been entered into the database. A list of wells has been added to the database, and the work is now complete. These wells do not appear on the Watermaster's web site, but are in the database and available if needed for future investigations.

3. Discussion on Updated Results of Modeling of CAW's Replenishment Program

Mr. Jaques introduced this agenda item.

Mr. Williams, using PowerPoint slides, then proceeded to describe Scenario 3, and the results of modeling of that scenario. He stressed that CAW's replenishment program is intended to repay CAW's overpumping, but not necessarily to achieve protective water levels.

Scenario 2 would require elimination of all Basin pumping, which means that about 2,000 acre feet per year of additional water would be needed to supply these demands. Scenario 3 would be the same as Scenario 1 plus additional water injected at the existing two ASR well locations. Currently ASR is injecting about 1,445 AFY annually, and this water is recovered by pumping back out of the Basin. To reach protective water levels one would need to inject an additional 1,000 acre feet per year that would be left in the Basin. This approach would achieve protective water levels in all wells in 25 years.

Seasonal fluctuations are greater in Scenario 3 than in Scenario 1, due to injection. Water levels reach protective water levels at different rates depending on which aquifer they are in as well as their geographic locations. In Scenario 3 only 1,000 acre feet per year is needed. Whereas Scenario 2 would require about 2,000 acre feet per year, so Scenario 3 has some technical advantages.

Mr. Sabolsice said that CAW will consider these findings in finalizing its replenishment program. In response to a question from Mr. McCullough, Mr. Sabolsice clarified the terms "in-lieu" and "replenishment".

Mr. Green asked why less water was needed for injection under Scenario 3. Mr. Williams responded that the areas where protective water levels needed to be reached benefitted more rapidly from direct injection than from natural replenishment from rainfall. Mr. Williams said he would develop a graphic to help clarify this concept when making his presentation to the Board.

Mr. Green asked if the groundwater replenishment project water could be injected into the ASR wells. Mr. Jaques responded that he understood from Mr. Holden of MRWPCA that this cannot be done because it was not allowed by the Department of Public Health's Groundwater Recharge Regulations.

Mr. Jaques said MRWPCA is considering paying HydroMetrics to model impacts of GWRP on the Basin.

Mr. Cursio said that according to the prior TAC meeting minutes, CAW might have an initial excess water supply from such things as lots of record, PBC entitlements, and tourism bounce-back, and wondered if the injection option would be able to use this excess water. Mr. Sabolsice said that on initial startup the demand will likely be less than the desalination plant's capacity, and that CAW will need to discuss with MPWMD and the Watermaster how best to help replenish the Basin.

Mr. Cursio recommended being cautious and sensitive to the fact that the business community needs to be clearly informed that lots of record would not lose out if water were initially used for injection purposes.

Mr. Green said he felt work should be done to determine what funding sources could be available to support any of these possibilities.

Mr. Sabolsice recommended combining Findings 3 and 4 from the staff report, and to edit Finding 2 to describe CAW's replenishment plan as "Board-approved", rather than "proposed". There was also a recommendation about rewording Finding 6 to change "seawater intrusion to "rate of advance of the seawater-freshwater front".

Mr. Franklin recommended stressing that Scenarios 2 and 3 keep the seawater/freshwater front from advancing into the Basin, which would mean that the mechanism for seawater intrusion to occur would no longer exist.

There was much discussion on how/what to say with a regard to Finding No. 6. Mr. Williams said that it was found from a modeling that the rate of advance of the seawater/freshwater front was not accurately determinable using the model.

Mr. Williams said he would prefer to remove Finding No. 6, and simply say that the rate of advance is slower than the baseline. Mr. Cursio recommended not saying anything about this in the Board presentation, because it has the potential to be confusing.

There was discussion about the TAC's role in terms of technical issues, and not political issues.

Mr. Franklin suggested it would be beneficial to clarify whether or not the Watermaster's primary objective is to achieve protective water levels. There was much discussion on this point

There was consensus to:

1. Delete Recommendation Nos. 1 and 2.
2. Prioritize potential outside-Basin artificial replenishment water sources for injection
3. Use Recommendation No. 3 as presented, but to delete the specifics within this recommendation.
4. Use Recommendation No. 4 as presented.

Mr. Jaques said he would send out the final proposed Recommendations and findings for TAC review before incorporating them into the agenda transmittal for the Board's April 3 meeting.

4. Schedule

Mr. Jaques said there were no significant updates in the Schedule, but that he would be recommending that the TAC skip its October 2013 meeting, as there are routinely few if any action items for the TAC at that meeting.

5. Other Business

Mr. Sabolsice discussed water supply to Laguna Seca beginning in year 2021. He asked if CAW's Operating Yield for this subarea would drop to zero at that time. He wondered how CAW should provide for this. There was discussion with regard to supplying the Laguna Seca subarea when this occurs. This will be continued for discussion at the TAC's next meeting.

Mr. Jaques will include background information from the Decision on the agenda transmittal for this item.

6. Set Next Meeting Date

The next regular meeting was set for Wednesday April 10, 2013 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:	April 10, 2013
AGENDA ITEM:	2.B
AGENDA TITLE:	Notice of Opportunity for Public Comments on CAW's Monterey Peninsula Water Supply Project
PREPARED BY:	Robert Jaques, Technical Program Manager
SUMMARY:	<p>The SWRCB has issued the attached "Notice of Opportunity for Public Comments on CAW's Monterey Peninsula Water Supply Project." The Notice indicates that the SWRCB will hold a Board meeting in Monterey this summer on this project.</p>
ATTACHMENTS:	Notice of Opportunity for Public Comments on CAW's Monterey Peninsula Water Supply Project
RECOMMENDED ACTION:	None required – information only

State Water Resources Control Board

April 3, 2013

NOTICE OF OPPORTUNITY FOR PUBLIC COMMENT

DRAFT REVIEW OF CALIFORNIA AMERICAN WATER COMPANY'S MONTEREY PENINSULA WATER SUPPLY PROJECT

NOTICE IS HEREBY GIVEN THAT the State Water Resources Control Board (State Water Board) will accept public comments on a draft report requested by the California Public Utilities Commission (Commission) on water right issues associated with California American Water Company's (Cal-Am) proposed Monterey Peninsula Water Supply Project (Project). The draft report and other information concerning this matter can be found at:

http://www.waterboards.ca.gov/waterrights/water_issues/programs/hearings/caw_mpws/index.shtml

In a memo dated September 26, 2012, the Commission requested assistance from the State Water Board in reviewing water right issues associated with a pending application before the Commission from Cal-Am for the Project. As proposed, the Project would consist of a 9.6 million gallon per day desalination facility combined with planned groundwater replenishment or recharge and aquifer storage and recovery. Feedwater for the desalination facility would be extracted from subsurface slant wells extending offshore beneath Monterey Bay that would extract groundwater from one of two different aquifers (Dune Sand or 180-Foot Aquifer). The Commission requested an assessment from the State Water Board on whether Cal-Am has the legal right to extract groundwater for the Project. Water from this Project is intended to replace the portion of Cal-Am's water supply from the Carmel River that becomes unavailable in December 2016 under the State Water Board's October 20, 2009 Cease and Desist Order (WR-2009-0060 found at:

http://www.waterboards.ca.gov/waterrights/board_decisions/adopted_orders/orders/wro2009.shtml).

In response to the request for review of the Project, the State Water Board completed and transmitted an initial draft report to the Commission on December 21, 2012. In a memo dated February 14, 2013, the Commission responded to the initial draft report and requested that the State Water Board prepare a final report that evaluates additional information and responds to additional questions provided by the Commission. State Water Board staff reviewed the additional information and prepared a revised draft report. This revised draft report is now available for public review and comment. Following public comment, the State Water Board will make any needed revisions to the report. That report will then be discussed at a State Water Board meeting to receive additional input from the public and Board members prior to

finalization. The State Water Board is tentatively scheduled to hold a Board Meeting in Monterey this summer to consider the report. A public notice for the meeting will be released in the near future.

In order to be fully considered, all written comments on the draft report must be received by the Board by **12 Noon on May 3, 2013**. Persons submitting comments are encouraged to submit their comments electronically. Documents submitted electronically should be in Adobe Portable Document Format (PDF). Electronic submittals to the State Water Board of documents less than 11 megabytes in total size (incoming mail server attachment limitation) may be sent via electronic mail to: Wr_Hearing.Unit@waterboards.ca.gov, with a subject of "Comments on MPWSP Draft Report."

Written comments may also be sent to:

Paul Murphey
Division of Water Rights
State Water Resources Control Board
P.O. Box 2000
Sacramento, CA 95812-2000

You may also submit your comments to Mr. Murphey by hand delivery to the following address:

Paul Murphey
Division of Water Rights File Room
State Water Resources Control Board
Cal/EPA Headquarters
1001 "I" Street, 2nd Floor
Sacramento, CA 95814-2828

Couriers delivering comments must check in with lobby security and have them contact the 2nd floor file room at 916-341-5300.

Please direct any questions about this notice to Paul Murphey, Engineering Geologist, at (916) 341-5435 or by email at Paul.Murphey@waterboards.ca.gov, or Nathan Jacobsen, Staff Counsel, at (916) 341.5181 or by email at Nathan.Jacobsen@waterboards.ca.gov.

Sincerely,



Michael Buckman, Chief
Hearings Unit
Division of Water Rights

**SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE**

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

MEETING DATE:	April 10, 2013
AGENDA ITEM:	2.C
AGENDA TITLE:	Discuss Attendance at Meetings
PREPARED BY:	Robert Jaques, Technical Program Manager

SUMMARY:

At the Board's April 3, 2013 meeting Mr. Sabolsice inquired about how Watermaster staff members determine whether it is appropriate for them to sometimes attend meetings of other entities or organizations. Watermaster Executive Officer Evans responded that those decisions are deferred to the individual staff members, depending on the topics to be covered at such meetings and the staff members' areas of expertise and responsibility.

As the Watermaster's Technical Program Manager I understand a part of my duties to include keeping abreast of technical and scheduling aspects of projects, regulatory issues, and other matters that could have an impact on the Seaside Groundwater Basin. In order to do this I believe it is appropriate and necessary for me to occasionally attend meetings where other projects, such as Cal Am's Monterey Peninsula Water Supply Project and MRWPCA/MPWMD's Groundwater Replenishment Project, are being discussed, since those projects will obviously have a significant impact on the Basin.

To date I have attended only one or two meetings of the Monterey Peninsula Regional Water Authority's (MPRWA) TAC, and one or two of the MPRWA's Board meetings, where there were agenda items such as project updates or other topics which I felt were important to stay abreast of. Unlike most TAC's and other bodies, the MPRWA TAC meeting agenda packets rarely contain any written materials on their agenda items. Instead the agenda packet often just states "There is no written report for this item. There will be written materials distributed before or at the meeting." Hence, it is generally not possible to get the information that is presented and discussed at those meetings by reading the agenda packets. Meeting minutes are prepared, but of course that is done after the meeting has been held, and relying on them rather than attending the meeting precludes the opportunity to hear details of the discussions or to provide input or ask questions.

There are also occasional workshops or meetings conducted by the PUC or the SWRCB in the local area where information on these projects is presented to the public and where there is an opportunity to provide input and ask questions.

For these reasons I request the TAC's support of my using my discretion, based on my 35+ years of involvement with local water recycling and water supply projects, to determine when it is beneficial to the Watermaster for me to attend meetings of these types, with the understanding that such meeting attendance will be occasional, not routine, and will involve a minimum amount of my time.

ATTACHMENTS:	None
RECOMMENDED ACTION:	Concur with meeting attendance policy as described in this Agenda item or provide other direction on this matter

**SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE**

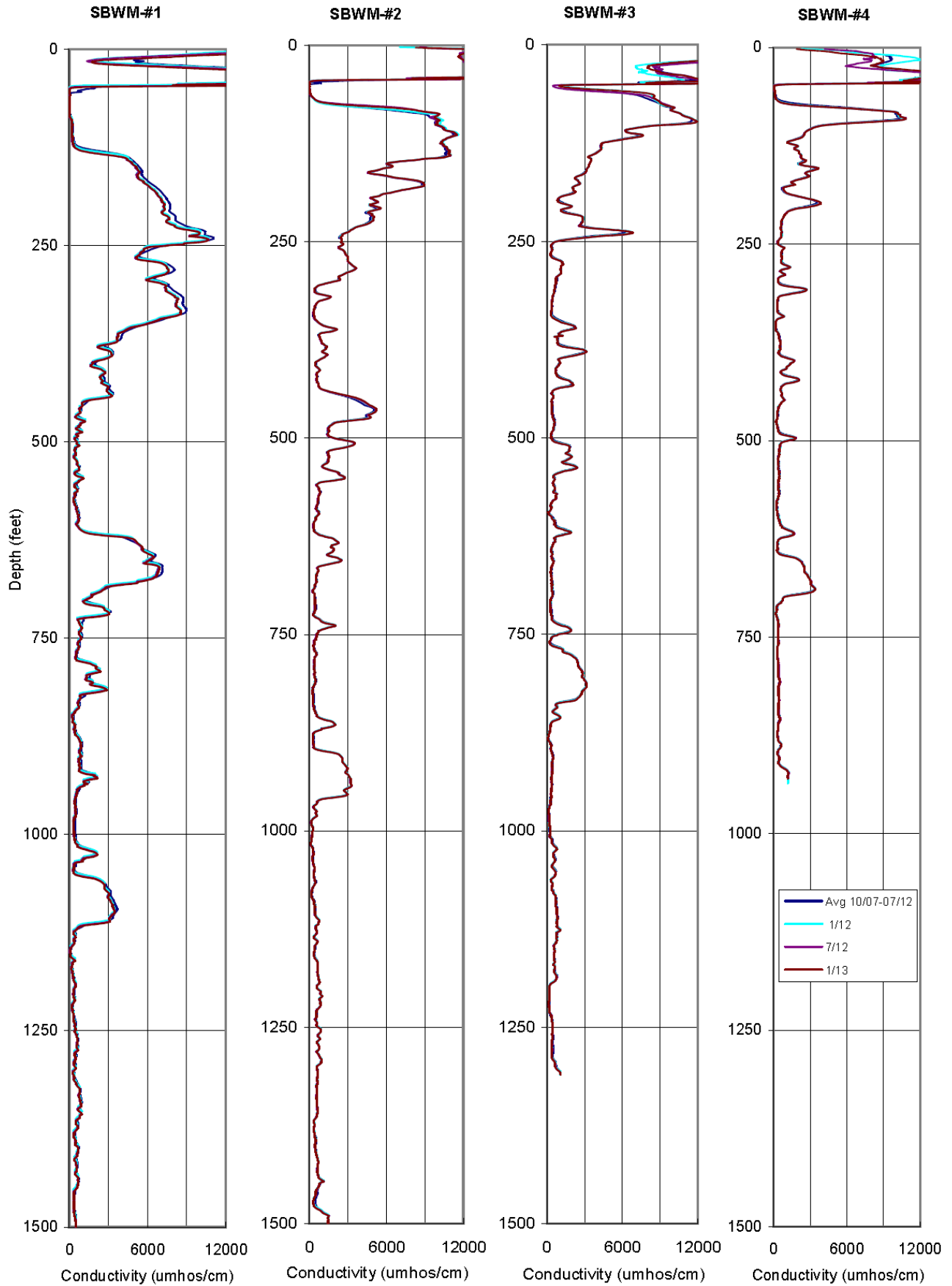
***** AGENDA TRANSMITTAL FORM *****

MEETING DATE:	April 10, 2013
AGENDA ITEM:	3
AGENDA TITLE:	Progress Update on Seaside Basin Salt and Nutrient Management Plan Basin Boundary Question
PREPARED BY:	Robert Jaques, Technical Program Manager
SUMMARY:	
<p>At its February 13, 2013 meeting the TAC it received a presentation from MPWMD and HydroMetrics on their work to prepare a Salt and Nutrient Management Plan for the Seaside Basin, and at the March 13 meeting received an oral update from MPWMD on this. One issue that was discussed was what boundary should be used for the Basin in that Plan.</p> <p>Accordingly, HydroMetrics is in the process of compiling a list of questions that can be sent to the RWQCB staff to get clarification. MPWMD will also be requesting an update regarding the Seaside Basin boundary depiction.</p> <p>Mr. Oliver said he had had an informal Basin boundary discussion with the RWQCB staff., and that they seemed to be receptive to using whatever boundary makes the most sense, but favored use of the Yates boundary.</p> <p>Mr. Oliver will provide an oral update on this at today's meeting.</p>	
ATTACHMENTS:	None
RECOMMENDED ACTION:	None required – information only

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

MEETING DATE:	April 10, 2013
AGENDA ITEM:	4
AGENDA TITLE:	Sentinel Well Induction Logging Results for January 2013
PREPARED BY:	Robert Jaques, Technical Program Manager
<p>SUMMARY: Martin Feeney has provided the attached Sentinel Well induction log data for the January 2013 logging event, and the data is plotted along with all of the cumulative data from the start of the program.</p> <p>Mr. Feeney reports that the data does not show anything out of the ordinary or that would be indicative of seawater intrusion. These wells will be logged and sampled again in July.</p>	
ATTACHMENTS:	Induction Log Plots from the Sentinel Wells from 2007 through January 2013
RECOMMENDED ACTION:	None required – information only

Seaside Groundwater Basin Watermaster
Sentinel Wells
Induction Logs
2007-2013



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

MEETING DATE:	April 10, 2013
AGENDA ITEM:	5
AGENDA TITLE:	Discussion of Board Direction Pertaining to TAC's Recommendations Regarding the Modeling of CAW's Replenishment Program
PREPARED BY:	Robert Jaques, Technical Program Manager
SUMMARY:	
<p>After receiving a presentation from HydroMetrics on the results of modeling CAW's Replenishment Program at its April 3 meeting, and reviewing the TAC's recommendations on this matter (as developed by the TAC at its March 13 meeting), the Board approved the following TAC Recommendations:</p> <ol style="list-style-type: none"> 1. Identify and prioritize other potential sources of water that could be acquired and injected to replenish the Basin and help to achieve protective water level elevations. 2. Determine if injection sites closer to the coast could (1) more rapidly reach protective levels and/or (2) reach protective levels using less outside-Basin water, than injecting at the existing ASR sites. 3. Report back to the Board on the findings of the 2 items and identify potential further work to be done at that time. <p>The TAC Recommendations pointed out that some of this work could be done by staff, but some of it (for example Recommendation 2) would likely require the assistance of an outside consultant.</p> <p>I will begin work on Recommendation No. 1 and report my findings to the TAC as soon as that work has been completed. I anticipate seeking input from TAC members and local entities in order to compile information about potential sources of replenishment water.</p> <p>Under Agenda Item No. 6 on today's Agenda, the TAC will be asked to approve a contract with HydroMetrics to perform the work described under Recommendation No. 2.</p>	
ATTACHMENTS:	None
RECOMMENDED ACTION:	None required – information only

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

MEETING DATE:	April 10, 2013
AGENDA ITEM:	6
AGENDA TITLE:	HydroMetrics RFS No. 2013-03 to Perform Modeling of Replenishment Injection at Sites Near the Coast
PREPARED BY:	Robert Jaques, Technical Program Manager
SUMMARY:	
<p>At its April 3, 2013 meeting the Board approved the TAC's recommendation to determine if replenishment water injection sites closer to the coast could (1) more rapidly reach protective levels and/or (2) reach protective levels using less outside-Basin water, than injecting at the existing ASR sites.</p> <p>The attached RFS No. 2013-03 to HydroMetrics would authorize groundwater modeling work to be performed in order to make these determinations.</p> <p>If approved by the TAC, this RFS will go to the Budget and Finance Committee for its approval and for its recommendation on how to provide funds for this work. This work was unanticipated, and therefore not included, when the FY 2013 Watermaster M&MP Operations Budget was prepared. However, the Contingency line item in the M&MP Budget, in the amount of \$39,844, would be more than sufficient to fund this work.</p>	
ATTACHMENTS:	HydroMetrics RFS No. 2013-03
RECOMMENDED ACTION:	Approve HydroMetrics RFS No. 2013-03

SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: May 1, 2013

RFS NO. 2013-03

(To be filled in by WATERMASTER)

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. 2013-03.

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

Total Price Authorized by this RFS: \$ 9,900.00 (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

April 4, 2013

Subject: Scope and Cost Estimate to Model Coastal Injection

Dear Mr. Jaques:

HydroMetrics Water Resources Inc. is pleased to submit this scope and cost estimate for using the Seaside groundwater model to determine if there is an advantage to locating injection wells along the coast as opposed to inland locations.

The number of wells required, their general locations, and the amounts to be injected will be determined by an iterative modeling process that will entail dozens of model runs. The measure of success will be if protective groundwater elevations are met in all six monitoring wells used for protective elevation monitoring.

The scope will also include time for two meetings, one to present the results to the Technical Advisory Committee by teleconference, and the other to present results to the Watermaster Board in person. A summary technical memorandum will be prepared to document the assumptions and results of the modeling effort.

The estimated cost for the work discussed is \$9,990, as shown on the attached table.

Sincerely,

A handwritten signature in black ink that reads "Derrik Williams". The signature is written in a cursive, flowing style.

Derrik Williams, President
HydroMetrics Water Resources Inc.

**Cost Estimate for Seaside Groundwater Basin Watermaster
Coastal Injection Modeling**

Tasks	HydroMetrics WRI Labor					Other Direct Costs	TOTALS
	Derrick Williams	Georgina King	Stephen Hundt	Labor Total			
	President	Senior Hydrogeologist	Staff Hydrogeologist	Hours	(\$)		
Rates	\$190	\$160	\$115	Hours	(\$)	(\$)	(\$)
Task 1. Coastal Injection Well Modeling							
3B.1. Iterate Modeling to Determine How Much Water is Needed to Achieve Protective Elevations	3	4	34	41	\$ 5,120	\$ -	\$ 5,120
3B.2. Produce Tabular and Graphical Output on Protective Elevations	0	1	4	5	\$ 620	\$ -	\$ 620
Subtotal Task 1				46	\$ 5,740	\$ -	\$ 5,740
Task 2. Meetings							
Assume Two Meetings - One to Present Results to TAC (by teleconference) and, One to Present Results to Board	8	4	0	12	\$ 2,160	\$ 100	\$ 2,260
Subtotal Task 2				12	\$ 2,160	\$ 100	\$ 2,260
Task 3. Reporting							
Prepare Technical Memorandum describing Assumptions and Results	2	4	8	14	\$ 1,940	\$ 50	\$ 1,990
Subtotal Task 3				14	\$ 1,940	\$ 50	\$ 1,990
TOTAL				72	\$ 9,840	\$ 150	\$ 9,990

Notes

Other Direct Costs includes mileage, postage, office supplies

*HydroMetrics Water Resources Inc. • 519 17th Street, Suite 500 • Oakland, CA 94612
(510) 903-0458 • (510) 903-0468 (fax)*

**SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE**

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

MEETING DATE:	April 10, 2013
AGENDA ITEM:	7
AGENDA TITLE:	Discussion of Water Supply to the Laguna Seca Subarea
PREPARED BY:	Robert Jaques, Technical Program Manager
SUMMARY:	
<p>At the March 13, 2013 TAC meeting Mr. Sabolsice raised the topic of water supply to the Laguna Seca subarea beginning in year 2021, and whether or not CAW's Operating Yield for this subarea would drop to zero at that time as a result of the 10% pumping cutbacks mandated by the Adjudication Decision. There was a brief discussion with regard to supplying the Laguna Seca subarea in the future, and consensus to continue this discussion at the TAC's next meeting.</p> <p>Attached is a Discussion Paper describing the sections of the Adjudication Decision that pertain to water production from the Laguna Seca Subarea as well as from the Basin as a whole.</p> <p>As is apparent from the Discussion Paper, the Adjudication Decision is a complex document. It takes making some assumptions and performing some calculations in order to determine how much water Cal Am will be entitled to pump from the Basin once the 10% pumping reductions have lowered the Operating Yield to match the NSY of 3,000 AFY.</p> <p>From the analysis contained in the Discussion Paper it appears that Cal Am would be entitled to pump 1,474 AFY of the 3,000 AFY NSY from wherever in the Basin it wished to pump and still be in compliance with the Decision. I reviewed the Discussion Paper with Dewey Evans and Laura Dadiw of the Watermaster staff and they concurred with its content and findings.</p>	
ATTACHMENTS:	Discussion Paper on Adjudication Decision Sections Pertaining to Water Production from the Laguna Seca Subarea
RECOMMENDED ACTION:	Determine if any follow-up actions by the TAC should be taken

DISCUSSION PAPER

ADJUDICATION DECISION SECTIONS PERTAINING TO WATER PRODUCTION FROM THE LAGUNA SECA SUBAREA

The Adjudication Decision that created the Seaside Basin Watermaster is a complex document. The Decision contains a range in values for the NSY of the Coastal Subarea, and a specific value for the Laguna Seca Subarea, in “II. Findings” Section B.1 “Perennial Natural Safe Yield” and again in “III. Decision” Section A.17, both of which read, in part (emphasis added):

“...the Natural Safe Yield of the Basin as a whole, assuming no action is taken to capture subsurface flow exiting the northern boundary of the Basin, is from 2,581 to 2,913 acre feet per year. The Natural Safe Yield for the Coastal Subarea is estimated from 1,973 to 2,305 acre feet per year, and the Natural Safe Yield for the Laguna Seca Subarea is 608 acre feet per year.”

This 608 AFY of Natural Safe Yield (NSY) for the Laguna Seca Subarea is less than the 644 AFY the Decision specifically provides as a water right to the Alternative Producers in that Subarea in “III. Decision” Section B.2 and in Table 2 in that same Section. Thus, there is a conflict within the Decision regarding the Laguna Seca Subarea production allowances.

However, “III. Decision” Section A.21 establishes a total-Basin NSY figure of 3,000 AFY, and does not break down this value between the two Subareas, as follows (emphasis added):

*“‘Over-Production’ and other variations of the same term means (1) **with regard to all Production from the Seaside Basin, that quantity of Production which exceeds an initially assumed Natural Safe Yield of 3,000 afy** (or such adjusted calculation of Natural Safe Yield as further study of the Basin by the Watermaster shall justify); or (2) with regard to each Producer, that quantity of Water Produced in any Water Year in excess of that Producer’s Base Water Right, **as applied to an initially assumed Natural Safe Yield of 3,000 afy** (subject to adjustment as further study shall justify). For a Party producing under the Alternative Production Allocation, the calculation shall be based upon the Base Water Right assigned to them in Table 1, *infra*, only to the extent that Party has elected to convert all or part of an Alternative Production Allocation into a Standard Production Allocation, pursuant to Section III.B.3.e.”*

The first set of figures pertaining to NSY for the Basin as a whole (a range from 2,581 to 2,913 AFY) is less than this 3,000 AFY figure which the Decision establishes for purposes of determining whether or not over-production has occurred. Thus, there is also a conflict within the Decision regarding the NSY figures. Due to the conflict described above regarding the NSY of the Laguna Seca Subarea, it would not be reasonable to calculate the NSY of the Coastal Subarea by subtracting the NSY of the Laguna Seca Subarea from the Basin’s NSY of 3,000 AFY.

For these reasons the Watermaster has interpreted the water rights impacts of the 10% Decision-mandated triennial pumping reductions as being applied to the Basin as a whole, not separately by Subareas, using the 3,000 AFY NSY value established in the Decision.

Under the Decision-mandated 10% triennial pumping reductions, only the Standard Producers are required to reduce their pumping. The Alternative Producers can continue pumping up to their full initial allocations.

Hence, once the 10% reductions have lowered the allowable Basinwide pumping quantity down to the Decision-established 3,000 AFY NSY, the Standard Producers’ pumping allocations for the Basin as a

whole would be calculated by subtracting from 3,000 AFY the total of all of the Alternative Producers' allocations, and then distributing the remaining amount between the Standard Producers in proportion to their share of their total base water rights. The total of all of the Alternative Producers' allocations is 1,387 AFY (743 AFY in the Coastal Subarea and 644 AFY in the Laguna Seca Subarea, per "III. Decision" Section B.2). This means that the amount of water available for pumping by the Standard Producers after the 3,000 AFY NSY level has been reached is 1,613 AFY (3,000 AFY less 1,387 AFY for the Alternative Producers).

The Decision defines "Base Water Right" to be the percentage figure or the fixed amount assigned to each Party as provided in Table 1 of "III. Decision" Section B.2, which is shown below with columns added to show which producers are Standard and which are Alternative, and what portion of the pumping allocation in each Subarea is assigned to each Standard Producer.

Table 1

Coastal Subarea (Initial Operating Yield = 4,611 AFY)			
Party	Producer Type	Percentage of Operating Yield in the Coastal Subarea	Percentage of the Total Standard Producers' Percentages in this Subarea
California American Water	Standard	77.55%	90.5958%
City of Seaside (Municipal)	Standard	6.36%	7.4299%
City of Seaside (Golf Courses)	Alternative	10.47%	---
City of Sand City	Alternative	0.17%	---
Granite Rock Company	Standard	0.60%	0.7009%
SNG	Alternative	2.89%	---
D.B.O. Development No. 27	Standard	1.09%	1.2734%
Calabrese	Alternative	0.27%	---
Mission Memorial Park (Alderwood)	Alternative	0.60%	---
TOTAL	---	100.00%	100.0000%
Total of the Standard Producers' Percentages in the Coastal Subarea = 85.60%.			
Laguna Seca Subarea (Initial Operating Yield = 989 AFY)			
Party	Producer Type	Percentage of Operating Yield in the Laguna Seca Subarea	Percentage of the Total Standard Producers' Percentages in this Subarea
California American Water	Standard	45.13%	100.0000%
Pasadera Country Club	Alternative	22.65%	---
Bishop	Alternative	28.88%	---
York School	Alternative	2.89 %	---
Laguna Seca County Park	Alternative	0.45%	---
TOTAL	---	100.00%	100.0000%
Total of the Standard Producers' Percentages in the Laguna Seca Subarea = 45.13%.			

Prior to any 10% pumping reductions, the total base water right in the Basin available to the Standard Producers is 4,213 AFY (5,600 AFY Total Operating Yield for the Basin, less 1,387 AFY allocated to

Alternative Producers = 4,213 AFY). Of this 4,213 AFY, Cal Am has a base water right of 3,849 AFY, calculated as follows:

Coastal Subarea: Total initial Operating Yield available for Standard Producers = 4,611 - 743 = 3,868 AFY. Cal Am portion = 90.5958% x 3,868 = 3,504 AFY.

Laguna Seca Subarea: Total initial Operating Yield available for Standard Producers = 989 - 644 = 345 AFY. Cal Am portion = 100.0000% x 345 = 345 AFY.

Total Initial Operating Yield Allocation to Cal Am in the Basin = 3,504 + 345 = 3,849 AFY.

Since the total base water right available to all of the Standard Producers is 4,213 AFY, Cal Am's 3,849 AFY water right represents 91.4% of the total base water rights allocated to Standard Producers. If a series of 10% reductions was imposed to the point that the 3,000 AFY NSY would not be exceeded, the total quantity the Standard Producers could pump would be 1,613 AFY as discussed above, and Cal Am's 91.4% share of this would be 1,474 AFY for the Basin as a whole, with no distinction made between the two Subareas.

Based on this analysis Cal Am would be entitled to pump 1,474 AFY of water from wherever in the Basin it wished to pump and still be in compliance with the Decision.

**SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE**

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

MEETING DATE:	April 10, 2013
AGENDA ITEM:	8
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>Attached is the most recent update of the Work Schedule for FY 2013.</p> <p>I will be out-of-town from June 4 through June 18, 2013, and am proposing to schedule the June TAC meeting for Wednesday June 19, rather than its normal date of June 12, if that is acceptable to the TAC. One item that should be on the agenda for that meeting will be the presentation of findings by HydroMetrics from the modeling work it will be doing during the month of May, assuming the TAC and Board approve RFS No. 2013-03 (see item number 6 on today's Agenda).</p>	
ATTACHMENTS:	Schedule of Work Activities for FY 2013
RECOMMENDED ACTION:	Provide Input to Technical Program Manager Regarding Any Corrections or Additions to the Schedule

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
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)																					
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 2013 (Same as Task 43)																					
10	Replenishment Assessment Unit Costs for Water Year 2014																					
11	B&F Committee Develops Replenishment Assessment Unit Cost for 2014 Water Year																					
12	If Requested, TAC Provides Assistance to B&F Committee in Development of 2014 Water Year Replenishment Assessment Unit Cost																					
13	Board Adopts and Declares 2014 Water Year Replenishment Assessment Unit Cost																					
14	Replenishment Assessments for Water Year 2013																					
15	Watermaster Prepares Replenishment Assessments for Water Year 2013																					
16	Watermaster Board Approves Replenishment Assessments for Water Year 2013 (At November Meeting)																					
17	Watermaster Levies Replenishment Assessment for 2013																					

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
18	Monitoring & Management Program (M&MP) Budgets for 2012 and 2013																						
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																						
21	TAC approves Draft 2014 and 2015 M&MP O&M and Capital Budgets																						
22	Board approves 2014 and 2015 M&MP O&M and Capital Budgets																						
23	2013 Annual Report (Note: Schedule Reflects Court Approval of Later Submittal Date for Annual Report)																						
24	Prepare Preliminary Draft 2013 Annual Report																						
25	TAC Provides Input on Draft 2013 Annual Report																						
26	Prepare Revised Draft 2013 Annual Report (Incorporating TAC Input)																						
27	Board Provides Input on Revised Draft 2013 Annual Report (At November Board Meeting)																						
28	Prepare Final 2013 Annual Report (Incorporating Board Input)																						
29	Watermaster Submits Final 2013 Annual Report to Judge																						
30	MANAGEMENT																						
31	M.1 PROGRAM ADMINISTRATION (All Work Performed by Watermaster Staff)																						
32	Prepare Initial Consultant Contracts for 2014																						
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	I.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

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							
37	I.2.a.1 Conduct Ongoing Data Entry/Database Maintenance					[Blue shaded bar from Jan to Dec]																								
38	I.2.b DATA COLLECTION PROGRAM					[Blue shaded bar from Jan to Dec]																								
39	I.2.b.2 Collect Monthly Water Levels (MPWMD)					[Blue shaded bar from Jan to Dec]																								
40	I.2.b.3 Collect Quarterly Water Quality Samples (MPWMD)					[Blue shaded bar from Jan to Dec]																								
41	I.2.b.6 Reports (from MPWMD)					[Blue shaded bar from Jan to Dec]																								
42	Watermaster Prepares Combined Quarterly Water Production, Water Level, and Water Quality Reports for 1st & 2nd Quarters																													
43	Watermaster Prepares Annual Water Production, Water Level, and Water Quality Report for 2013																													
44	I.3.a ENHANCED SEASIDE BASIN GROUNDWATER MODEL																													
45	I.3.a.2 Develop Protective Water Levels																													
46	Board Approves RFS to HydroMetrics																													
47	HydroMetrics Revises Protective Water Levels																													
48	HydroMetrics Progress Report to TAC																													
49	HydroMetrics Presents Draft Revised Protective Water Levels Report to TAC																													
50	HydroMetrics Presents Report to Board																													
51	I.3.a.3 Evaluate Replenishment Scenarios and Develop Answers to Basin Management Questions																													
52	Board Approves RFS to HydroMetrics																													
53	HydroMetrics Models Replenishment Scenarios																													
54	HydroMetrics Presents Draft Replenishment Modeling Report to TAC																													

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
55	HydroMetrics Presents Replenishment Modeling Report to Board								Completed														
56	TAC Approves Additional RFS to HydroMetrics for Additional Modeling								◆ 4/10														
57	Board Approves Additional RFS to HydroMetrics for Additional Modeling								◆ 5/1														
58	HydroMetrics Models Replenishment Scenarios																						
59	HydroMetrics Presents Draft Replenishment Modeling Report to TAC																						
60	HydroMetrics Presents Replenishment Modeling Report to Board																						
61	I.3.c Refine and/or Update the BMAP	NO WORK SCHEDULED UNTIL TAC DIRECTION PROVIDED TO RESUME DISCUSSION																					
62	I.3.d Evaluate Coastal Wells for Cross-Aquifer Contamination Potential																						
63	MPWMD Migrates Well Data from Newly Identified Wells into Watermaster's Database					Completed																	
64	I.4.a HydroMetrics & MPWMD Provide Oversight of Seawater Intrusion Detection and Tracking																						
65	I.4.b MPWMD Performs Focused Hydrogeologic Investigation in Vicinity of Sand City Public Works Well																						
66	I.4.c Annual Seawater Intrusion Analysis Report (SIAR)																						
67	HydroMetrics Provides Draft SIAR to Watermaster																						
68	TAC Approves Annual Seawater Intrusion Analysis Report (SIAR)																						
69	Board Approves Annual Seawater Intrusion Analysis Report (SIAR)																						
70	I.4.c Annual Seawater Intrusion Analysis Report (SIAR)																						
71	I.4.d Complete Preparation of Seawater Intrusion Response Plan (SIRP)	WORK COMPLETED - NO FURTHER WORK PLANNED IN 2013																					
72	I.4.e Refine and/or Update the SIRP	NOT NECESSARY																					

**SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE**

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

MEETING DATE:	April 10, 2013
AGENDA ITEM:	9
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