M E E T I N G N O T I C E AND A G E N D A

TECHNICAL ADVISORY COMMITTEE OF THE SEASIDE BASIN WATER MASTER

DATE: Wednesday, November 13, 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

SEASIDE BASIN WATER MASTER TECHNICAL ADVISORY COMMITTEE

** * * AGENDA TRANSMITTAL FORM * * **

MEETING DATE:	November 13, 2013
AGENDA ITEM:	2.A
AGENDA TITLE:	Approve Minutes from the September 11, 2013 Meeting
PREPARED BY:	Robert Jaques, Technical Program Manager

SUMMARY:
Draft Minutes from this meeting were emailed to all TAC members. Any changes requested by TAC members have been included in the attached version.

ATTACHMENTS:	Minutes from this meeting
RECOMMENDED ACTION:	Approve the minutes

D-R-A-F-T
MINUTES

Seaside Groundwater Basin Watermaster
Technical Advisory Committee Meeting
September 11, 2013

Attendees: TAC Members

City of Seaside – Rick Riedl
California American Water – Eric Sabolsice
City of Monterey – Norm Green
Laguna Seca Property Owners – Bob Costa
MPWMD – Joe Oliver
MCWRA – Rob Johnson (initially by phone, then in person)
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
None

Others:
MPWMD – Jon Lear

The meeting was called to order at 1:38 p.m., once a quorum was present.

1. Public Comments

There were no public comments.

2. Administrative Matters:

A. Approve Minutes from the June 19, 2013 and August 14, 2013 Meetings

On a motion by Mr. Gomez, seconded by Mr. Costa, the minutes of the June 19, 2013 meeting were unanimously approved as presented. On a motion by Mr. Costa, seconded by Mr. Green, the minutes of the August 14, 2013 meeting were unanimously approved as presented.

B. MPRWA TAC Agenda Item re: Storm Water

Mr. Jaques briefly summarized the agenda packet material for this item. He reported that he had met earlier on today's date to discuss these issues with Mr. Cullem, and that he would maintain contact with Mr. Cullem at MPRWA and would report to the Watermaster TAC on any issues of interest on this matter. There was no further discussion.

3. Discuss Issues Pertaining to HydroMetrics Work Using the Groundwater Model

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

Mr. Johnson reported that MCWRA did not currently have any work in progress in which climate change would be involved. However, he mentioned that through the Integrated Regional Water Management Program (IRWMP) planning process, there might be a way to gain information on this

matter. Mr. Lear noted that the current MPWMD IRWMP projects do not incorporate climate change, but that the topic is still being discussed.

Mr. Sabolsice questioned whether the Watermaster should take the lead on sea level rise and climate change issues, and recommended instead that the Watermaster defer to other agencies that are more involved in these issues and to follow their lead on these matters. There was support by Mr. Johnson and Mr. Lear of Mr. Sabolsice's recommendation with regard to deferring to other agencies.

Mr. Oliver suggested it would be a good idea to update the Seaside Basin Groundwater Model with more recent data, but not until a significant new modeling assignment is to be undertaken. Mr. Riedl questioned Mr. Oliver as to what a significant modeling assignment might be. Mr. Oliver responded that this would not apply to the current Laguna Seca modeling which has already been started, but to any significant future modeling which is authorized by the Watermaster.

Mr. Sabolsice suggested that for now the Watermaster defer taking any action on any of the three issues discussed under this Agenda item, and there was a consensus in support of Mr. Sabolsice's recommendation.

4. Approve Work Plan for FY 2014 Management and Monitoring Program (M&MP) and FY 2014 and 2015 M&MP Operations and Capital Budgets

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

Mr. Sabolsice recommended updating the Seaside Basin Groundwater Model in 2014, and then seeing if recalibration would be necessary. He further recommended that the full cost of this task, including recalibration if necessary, be included in the proposed Work Plan and Budget for the Management and Monitoring Plan for Fiscal Year 2014.

Mr. Oliver asked Mr. Jaques if modeling of future scenarios had been included in the budget, and Mr. Jaques responded that it had been included under Task I.3.a.3.

Mr. Riedl asked for clarification as to whether recalibration would only be pursued if found to be necessary after updating the Model and validating its results compared to actual measured water levels for wells in the Basin. Mr. Jaques confirmed that this was the recommendation before the TAC.

On a motion by Mr. Johnson, seconded by Mr. Riedl, the TAC unanimously approved the Work Plan and Budgets for the Management and Monitoring Program as presented in the Agenda packet.

5. Schedule

Mr. Jaques reported that there would be no need to have an October TAC meeting.

Mr. Oliver and Mr. Lear reported that in early October they would be working on obtaining data for modeling of the Laguna Seca Subarea by HydroMetrics.

6. Other Business

Mr. Sabolsice described Cal Am's Commercial rate design changes which are now being implemented. He explained that the new rate is going to a flat rate rather than the tiered rate, and that there are several "Divisions" based on user characteristics and other factors in the new rate design. Commercial entities need to submit their survey forms by September 25, 2013 in order to be categorized into the proper Divisions.

7. Set Next Meeting Date

The next meeting was set for Wednesday November 13, 2013. There will be no October 2013 TAC meeting.

The meeting adjourned at 2:19 p.m.

SEASIDE BASIN WATER MASTER TECHNICAL ADVISORY COMMITTEE

** * * AGENDA TRANSMITTAL FORM * * **

MEETING DATE:	November 13, 2013
AGENDA ITEM:	2.B
AGENDA TITLE:	Update on Storm Water Issues
PREPARED BY:	Robert Jaques, Technical Program Manager

SUMMARY:

A meeting of the MRWPCA TAC was held by on October 24, 2013 to discuss a letter from Monterey City Manager Fred Meurer regarding groundwater recharge and the role of storm and non-storm water flows, and also to provide an update on the Groundwater Replenishment Project and to discuss different water sources that may be considered for treatment. This is in concert with discussions recently held by the MPRWA TAC on some of these same topics.

Attached is the Agenda packet from that meeting, with my notes inserted in ***boldface italics***.

Some additional notes from Mr. Israel's comments pertaining to the GWR Project:
1. Cal Am's tiered rate structure has resulted in many water bills doubling in cost.
2. Between 2008 and 2013 Peninsula wastewater flows have dropped from ~6 MGD to ~4 MGD due to conservation and Cal Am's change in rate structure.
3. "Excess capacity" in the Regional Wastewater Treatment Plant (RTP) of up to 6 MGD has thus been created. It therefore may be possible for MRWPCA to waive the capacity (connection) fee for stormwater to be allowed to flow into the RTP. There may only be a charge for the incremental increase in cost to treat the stormwater flows.
4. MRWPCA plans to use an aggressive design-build approach to try to meet the December 2016 SWRCB Cease and Desist Order deadline.

Some notes from the discussion regarding the City of Monterey's letter:
1. The Cities of Monterey and Pacific Grove are starting to look at ways to harvest and reuse stormwater.
2. Monterey is asking that a large-scale study be done to identify opportunities and constraints to reusing stormwater. One question to be answered is whether or not it would be beneficial to use satellite treatment plants rather than putting stormwater into the sanitary sewer system flowing to the RTP.
3. MRWPCA would like MPWMD and MCWRA to partner with it in performing such a study.
4. The City of Monterey feels MRWPCA is the logical entity to perform the study.
5. The City of Monterey feels that it, and other cities, will ultimately have to put at least some of their stormwater into the sanitary sewer to comply with State discharge regulations.
6. MPWMD has identified a 50% matching-share Grant opportunity that could be used to help fund such a study.
7. MRWPCA's Joint Powers Authority (JPA) does not allow it to take on stormwater responsibilities, but a study could be done within the current JPA's scope of authority.
8. A motion was made and approved by the TAC to recommend that the MRWPCA Board approve undertaking such a study.

SEASIDE BASIN WATER MASTER TECHNICAL ADVISORY COMMITTEE

** * * AGENDA TRANSMITTAL FORM * * **

AGENDA ITEM:	2.B (Continued)

I have invited Mr. Cullem, Executive Officer of the Monterey Peninsula Regional Water Authority, to attend one of our near-future TAC meetings so the TAC can discuss with him his thoughts regarding the use of storm water as part of an overall solution to the area's water shortage problem. He was unavailable for today's meeting, but is hopeful of attending either the January or February TAC meeting.

ATTACHMENTS:	Agenda and Notes from October 24, 2013 MRWPCA TAC Meeting
RECOMMENDED ACTION:	None required – information only

MEETING
NOTICE

TECHNICAL ADVISORY COMMITTEE

DATE: Thursday, October 24, 2013

TIME: 2:30 p.m. – 4:00 p.m.

LOCATION: Monterey Regional Water Pollution Control Agency
Board Room – Ryan Ranch
5 Harris Court, Building D
Monterey, CA

NOTE: Staff Reports will be provided prior to the meeting. Presentations and handouts will be provided at the meeting as needed.

1.	**INTRODUCTIONS**
2.	**GROUNDWATER REPLENISHMENT PROJECT UPDATE** An update on the Groundwater Replenishment Project activities including the potential for dry-weather diversions.
3.	**CITY OF MONTEREY LETTER – DATED AUGUST 29, 2013** A discussion on City of Monterey's Letter to MRWPCA regarding Groundwater Recharge and the Role of Storm Water and Non-Storm-Water Flows.
4.	**OTHER BUSINESS**
5.	**ADJOURN**

Monterey Regional Water Pollution Control Agency

"Dedicated to meeting the wastewater and reclamation needs of our member agencies, while protecting the environment."

Administration Office:
5 Harris Court, Bldg. D, Monterey, CA 93940-5756
(831) 372-3367 or 422-1001, FAX: (831) 372-6178
Website: www.mrwpca.org

MEMORANDUM

TO: TECHNICAL ADVISORY COMMITTEE

FROM: KEITH ISRAEL, GENERAL MANAGER
(via BOB HOLDEN, PRINCIPAL ENGINEER)

DATE: OCTOBER 24, 2013

SUBJECT: **GROUNDWATER REPLENISHMENT PROJECT UPDATE**

The Groundwater Replenishment Project (GWR) has been making significant progress in several areas.

Source Water Sampling

The first two quarterly samples of source waters have been taken. The Salinas Produce Wash water has high salt, and very high phosphate and total organic carbon concentrations. Blanco Drain has high salt, very high nitrates, and a legacy pesticide was found. Stormwater will be sampled when we have rain. Nothing has been found that will not easily be removed by the proposed advanced treatment plant.

dieldrin →

All the water sources will need to go through the secondary treatment process before they go through the Advanced Water Treatment Plant

Monitoring Well

After a very long process, MRWPCA obtained permission from FORA and the City of Seaside to drill a monitoring well in the bike lane of Eucalyptus Road in Seaside. The sonic drill rig should arrive in mid-November and the well should be installed within a month or two. Core samples from this well will be used for various analyses to better design the vadose zone wells for GWR. Water samples from the well will be analyzed as well.

The sonic drill rig will obtain a core sample approximately 550 feet deep and the sample will be tested for transmissivity and other parameters to aid in well design. Water taken from this site will also be tested.

Advanced Treatment Pilot

An advanced treatment plant pilot plant is being constructed at the Regional Treatment Plant. Treatment will include ozone and possibly biologically active carbon filtration, micro-filtration or ultra-filtration, and reverse osmosis (RO). The pilot plant will enable testing to determine the design parameters for the full size

plant and compare two technologies (inside/out and outside/in) membrane filtration prior to RO. The ozone portion is operational. One membrane filtration unit will not be delivered until mid-November, but the rest will be operational this month.

CEQA

Every aspect of the project description has been carefully reviewed and compared with the goal stated in the Notice of Preparation: "The primary goal of the project is to produce 3,500 AFY to be used by Cal Am in order to reduce its Carmel River diversions by that same amount." The current project is a 3,500 acre-feet per year injection project into the Seaside Groundwater Basin.

The project includes four source waters:

- Wastewater not treated for agricultural irrigation
- Salinas Ag Wash water
- Salinas urban runoff
- Monterey Peninsula urban runoff from Lake El Estero

Reclamation Ditch water, storage of Ag wash water and Salinas urban runoff in the Salinas ponds, and Blanco Drain will be considered in the alternatives section of the EIR. ***These could be part of the Project, but may not be.***

The Advance Treatment Facilities will use the existing Regional Treatment Plant (RTP) primary and secondary treatment followed by pretreatment, micro- or ultra-filtration, reverse osmosis, advanced oxidation, and post treatment.

The existing SVRP treatment process will not be used in order to reduce treatment costs. The secondary effluent is very filterable, so the SVRP is not needed.

Three product water conveyance alternatives from the RTP to the injection sites are being considered:

- A new pipeline and pump stations along the Regional Urban Water Augmentation Project (RUWAP) alignment.
- Utilize MCWD's RUWAP pipeline
- Follow the MPWSP desalination product water alignment (TAMC to 1st Street, to Lightfighter, to General Jim Moore Blvd.

Four deep injection wells, four shallow vadose zone well, monitoring wells, and a backwash percolation pit would be built in the Seaside Groundwater basin proposed inland site.

Finally, GWR must consider construction of the Seaside and Monterey Pipelines ("Cal Am-only" facilities) in order to be a "stand alone" project that meets its project goal.

The GWR Project does not work without the "Cal Am Only" facilities to deliver 3,500 AFY of water, because of distribution system limitations.

Agreements for Source Waters, Injection Sites, and Use of Ocean Outfall

3,500 AFY of GWR product water requires a net of 4,320 AFY of new water to enter the reverse osmosis units with 820 AFY of concentrate being discharge to the ocean outfall. The desire is to obtain more than the 4,320 AFY of additional water. Several sets of negotiation are proceeding:

City of Salinas. An MOU between the City of Salinas and MRWPCA is complete. Detailed negotiations will look at Ag wash waster, storm water, and winter storage in Salinas' existing ponds.

MCWRA. Negotiations continue to resolve Amendment 3 issues and work to increase the amount of water available for irrigation while obtaining the source water needed for GWR.

MCWD. Negotiations are needed to utilize MCWD's RUWAP pipeline or right-of-way. Also may consider potential utilization of some of their recycled water rights.

City of Seaside. MRWPCA will request a permanent easement from the City for the GWR facilities within their City limit.

Cal Am. MRWPCA and Cal Am are working on agreements related to MRWPCA's ocean outfall.

Independent Advisory Panel (IAP) on October 21 and 22, 2013

MPWMD provided information about their organization and the water situation on the Peninsula. MRWPCA provided information about our organization and the water situation in the Monterey County setting. Various consultants described our progress in source water monitoring, analyses, and bench testing. The pilot treatment plant and Seaside Groundwater Basin and modeling were also described. Presentations ended with a description of the Public Outreach plan. The Panel provided some preliminary input and requested lots of information that they will utilize in preparing their initial report, which we expect in early December. ***The IAP is provided by the National Water Research Institute (NWRI), which also consults to Orange County Water District and other water reuse agencies. The IAP acts as a surrogate to help get an advance indication of approvability by the California Department of Public Health.***

GWR Tasks

As part of the settlement agreement this last summer, GWR was bifurcated from desal and proposed as separate phase of the proceeding. As a result, GWR has a number of tasks that must be completed prior to the CPUC testimony in December 2014. If these are deemed completed and sufficient by the CPUC, they may determine that the proposed 3,500 AFY GWR Project can move

MRWPCA is working to meet this deadline.

forward along with a smaller desal. Attached is a brief description of these tasks along with an associated timeline.

GWR Roadmap
A revised and updated GWR "Roadmap" will be provided at the meeting.

Attachment: GWR Tasks – estimated completion dates

GWR TASKS	DATES	RESPONSIBLE PARTY	NOTES
Source water agreements	June 2014	MRWPCA	• In progress • Financial/capacity studies needed
Draft WPA	Mar 2014	MRWPCA and MPWMD	• Priority to source water negotiations
DPH input on use of extracted GWR water	Oct 2014	MRWPCA	• Interim IAP Report – May 2014 • Final IAP Report – Nov 2014
RWQCB input on use of extracted GWR water	Oct 2014	MRWPCA	Same as above
Storage agreement with Seaside WM	July 2014	MRWPCA and MPWMD	• Priority to source water negotiations
GWR basis of design (10%)	July 2014	MRWPCA	• Need source water MOU's and pilot work completed
GWR financing plan for SRF funding	Aug 2014	MRWPCA and MPWMD	• Need source water MOU's and 10% design first

GWR TASKS	DATES	RESPONSIBLE PARTY	NOTES
Agreement on WPA terms	May 2014	Cal Am, MRWPCA and MPWMD	• Priority to source water negotiations
Revenue requirements analysis	July 2014	MRWPCA and MPWMD	• Need 10% design first
GWR Externalities Study	June 2014	MRWPCA and MPWMD	• Good to have 10% design first
DEIR circulated	July 2014	MRWPCA	
Cal Am dilution water requirement	July – Oct 2014	MRWPCA	
Project and FEIR approvals	Oct 2014	MRWPCA	
GWR construction permits	?	MRWPCA	• Confirm as part of GWR design/build
GWR testimony	Dec 2014	Parties	
GWR proposed decision	June 2015	CPUC	• Allows only 18 months for GWR design/build

CITY OF MONTEREY

REC'D SEP 03 2013

August 29, 2013

Keith Israel, General Manager
Monterey Regional Water Pollution Control Agency
5 Harris Court, Building D
Monterey, CA 93940

Subject: Ground Water Recharge and the Role of Storm and Non-Storm Water Flows

Dear Mr. Israel, Keith

We are excited with the prospects of MRWPCA becoming a significant producer of water in our region and that the agency is leading the region in innovative solutions to our water shortage dilemma. Sewage is certainly one of the most reliable sources of any raw water that would be used to provide the needed water. Another source though is the region's storm water and dry-weather flows (SW/DWF).

Subsequent to our letter of comment to the Notice Of Preparation (NOP) dated July 2, 2013, you met with a number of City staff to discuss our comments. We are unambiguously supportive of the MRWPCA's Ground Water Recharge (GWR) project as it was described in the NOP for the Environmental Impact Report for that project.

The purpose of this letter is to encourage your agency to support a significant regional water planning effort. The City of Monterey is dedicated to support such an effort in any way that we can. This planning effort should have specific and focused goals laid out such that it does not take a decade to complete, nor result in a ream of expensive to produce, but worthless paper.

We have performed some large-scale and very preliminary analysis of the quantity of water that could be provided just by water bodies within the City of Monterey's control taking into account only storm water. Our preliminary analysis shows that with as little as ten inches of annual precipitation which is a severe drought year, if just the 85th percentile storms were captured and treated, it would provide approximately 2000 acre feet of water per year. Of course the challenge is being able to transport and treat the flows which we estimate would have a peak flow rate of 300 MGD. As we understand, the Monterey sewage pump station has a reserve capacity of around 10 MGD, which is far below the capacity needed. Clearly, there is not capacity for MRWPCA to convey the 85th percentile SW flows from the Pacific Grove/Monterey Peninsula region unless there is an integrated, controlled system that can temporarily store as much water as possible so that the flows can be moderated to match the existing system's capacity or the system capacity is increased to accommodate the flows or some combination of both approaches. It also shows that prior to capacity being apportioned to any one entity for SW flows; there should be a rationale and an agreement around how that capacity is apportioned.

SW/DWF has the potential for providing a significant source of raw water that could be fed into a regional potable water treatment system and it could benefit the efforts to use a reverse osmosis water treatment system. Once again though, a study needs to be conducted to determine how best to transport the water to the treatment plant (whether

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Web Site • http://www.monterey.org

through the sewerage system or a new dedicated system); how much water could be gained; what would it cost (especially in relation to using saline water); what would be the environmental impacts and benefits and how could such a system be optimized. This may require the centralized control of reservoirs and lakes so that the scarcest commodity, storage, can be properly managed and therefore also require inter-agency agreements.

To summarize:

- A regional study is needed to examine the opportunities to harvest as much of our SW/DWF as possible considering all factors.
- Storage capacity is the weakest link in any SW/DWF use scenario and we need a plan to determine how best to manage the surface and sub-surface reservoirs in our area.
- Prior to any commitments to convey and treat SW flows via the existing sewerage systems, agreements need to be reached on how to apportion the existing capacity.
- We ask that the MRWPCA support the effort to fund and accomplish the above-mentioned study through grant funds, providing technical support and information.

Sincerely,

Fred Meurer
City Manager

c: Mike McCarthy, Assistant City Manager
Hans Uslar, Deputy City Manager Plans & Public Works
Chip Rerig, Chief of Planning, Engineering & Environmental Compliance
Tom Reeves, City Engineer
Jeff Krebs, Senior Engineer
Jim Cullem, Executive Director, MPRWA
Lesley Milton, Water Authority Clerk
Thomas Frutchey, City Manager, City of Pacific Grove,
300 Forest Avenue, Pacific Grove, CA 93950
Robert MacLean, President, California American Water,
1033 B. Avenue, Suite 200, Coronado, CA 92118
David Stoldt, General Manager, Monterey Peninsula Water Management District,
5 Harris Court, Bldg. G, Monterey, CA 93940

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

MEETING DATE:	November 13, 2013
AGENDA ITEM:	3
AGENDA TITLE:	Approve Initial RFSs for MPWMD and HydroMetrics for 2014
PREPARED BY:	Robert Jaques, Technical Program Manager

SUMMARY: Attached are the proposed initial contracts for each of the Watermaster's consultants that are expected to work on M&MP activities during 2014. Each of these firms is currently working under a master form of agreement with the Watermaster called a "Professional Services Agreement" (PSA). Actual work assignments are made through the issuance of Requests for Service (RFS) under the umbrella language of the PSA. The attached RFSs constitute the proposed initial 2014 work assignments for MPWMD and HydroMetrics as follows:

- MPWMD RFS No. 2014-01 covering their normal M&MP tasks as in preceding years.
- MPWMD RFS No. 2014-02 covering their obtaining water quality and water level data from private producers who ask the Watermaster collect this data for them. The costs for this work are reimbursed by the private producers, and there is no net cost to the Watermaster for work performed under this RFS.
- HydroMetrics RFS No. 2014-01 covering their providing general hydrogeologic consulting services.
- HydroMetrics RFS No. 2014-02 covering their preparing the 2014 SIAR.

These consultants have reviewed the cost and scope details of these proposed contracts and their input has been included in the attached versions of the contracts.

With regard to MPWMD RFS No. 2014-01 MPWMD reports that although this task budget should not be changed yet, they are planning to review the Water Quality data and will probably make a recommendation regarding reducing the frequency of Water Quality monitoring at the BLM site monitoring wells (SBWM-5 Shallow & Deep), as a result of having built up a Water Quality baseline of annual results since these wells were constructed and first sampled in 2009. Subject to confirming the stability of the data, MPWMD anticipates that the frequency could be reduced to once every 3 years, unless some other indications of changing Water Quality in that area of the Basin are observed. If this change is made during 2014, it will simply lower the cost of this work. However, making this change may require Court approval, since it would be a change to the previously-approved monitoring program. It will be included in the 2013 Annual Report to provide the Watermaster with the flexibility to make this change in 2014 if the data justifies it.

If requested by the TAC, I will develop additional RFSs for HydroMetrics during 2014 to perform further groundwater modeling or other work.

These contracts are on today's TAC meeting agenda to provide the TAC with the opportunity to raise questions or make suggestions for changes to the scopes-of-work or costs, before they are presented to the Board for approval at the Board's December 2013 meeting, to ensure the contacts can be in effect at the start of 2014.

ATTACHMENTS:	4 - Proposed Consultant Contracts for FY 2014 (2 -MPWMD & 2-HydroMetrics)
RECOMMENDED ACTION:	Discuss and either modify or approve the proposed contracts

SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: January 1, 2014 **RFS NO.** 2014-01 .
(To be filled in by WATERMASTER)

TO: Joe Oliver **FROM**: Robert Jaques .
Monterey Peninsula Water Management District WATERMASTER
PROFESSIONAL

Services Needed and Purpose:
Perform certain Tasks contained within the Watermaster's Monitoring and Management Plan for 2014 (See detailed Scope of Work in Attachment 1).

Completion Date: The work of this RFS No. 2014-01 shall be completed in accordance with the schedule contained in Attachment 2.

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

Total Price Authorized by this RFS: $ 68,850.00 (See Attachment 3 for a Breakdown of this Total Price. Cost is authorized only when evidenced by signature below.)

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

Requested by: _____ Date:_____.
WATERMASTER Technical Program Manager

Authorized by: _____ Date:_____.
WATERMASTER Chief Executive Officer

Agreed to by: _____ Date:_____.
PROFESSIONAL

ATTACHMENT 1

Detailed Scope of Work for RFS No. 2014-01

Background:

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

This RFS No. 2014-01 authorizes PROFESSIONAL to perform certain work on certain of the Tasks described in the 2014 M&MP Work Plan. The Task numbers listed in Table 1 of this Detailed Scope of Work for RFS No. 2014-01 correspond to the Task numbers in the 2014 M&MP Work Plan.

Table 1

M&MP TASK NO.	TASK DESCRIPTION	WORK TO BE PERFORMED
I. 2. a.1	Conduct ongoing data entry/ database maintenance	PROFESSIONAL will perform water production, water level, and water quality data entry into WATERMASTER's database, and data editing as necessary, and will provide appropriate quality control and quality assurance for this data. Upon request from WATERMASTER, PROFESSIONAL will also enter other data into the database, such as updated information pertaining to well records. WATERMASTER will provide PROFESSIONAL with water production data. PROFESSIONAL will review the water production data provided by WATERMASTER for quality assurance and quality control purposes, and will notify WATERMASTER of any discrepancies PROFESSIONAL observes in this data. WATERMASTER will followup as appropriate with the water producers to resolve any such discrepancies. PROFESSIONAL will also host and maintain the Watermaster's Database. Any changes to WATERMASTER's database will be authorized under a separate agreement for performing such work for WATERMASTER. That agreement will either be with PROFESSIONAL or with another consultant. PROFESSIONAL will prepare quarterly water production, water level, and water quality tabulations in Excel format and will provide those tabulations to another WATERMASTER Consultant who will post them to the WATERMASTER's website, so it will be accessible to the public and other interested parties.

M&MP TASK NO.	TASK DESCRIPTION	WORK TO BE PERFORMED
I. 2. b. 2	Collect Monthly Water Levels	The monitoring wells from which water level data is to be collected by PROFESSIONAL are listed under the heading "MONITORING TO BE PERFORMED BY PROFESSIONAL" in the column titled "Level" in Table 2. PROFESSIONAL will visit each of the indicated wells at the frequencies shown in Table 2 in order to obtain the water level data. At these visits PROFESSIONAL will measure and record water levels by either taking manual water levels using an electric sounder, or by dataloggers. Dataloggers which have been installed on the four Coastal Sentinel, the four ASR monitoring, and the inland (BLM site) monitoring wells will be used to measure the levels at those wells. Pursuant to Section 4(a) on page 9 of the Management and Monitoring Plan approved by the Court on September 25, 2006, in 2013 wells at 2 additional sites in the Laguna Seca Subarea were equipped with dataloggers taking measurements in two aquifers at each site. Included in the cost for this Task is the purchase of two replacement dataloggers @ $500. All of the other wells will be manually measured.

M&MP TASK NO.	TASK DESCRIPTION	WORK TO BE PERFORMED
I. 2. b. 3	Collect Quarterly Water Quality Samples	The monitoring wells from which water quality data is to be collected by PROFESSIONAL are listed under the heading "MONITORING TO BE PERFORMED BY PROFESSIONAL" in the column titled "Quality" in Table 2. PROFESSIONAL will visit each of the indicated wells at the frequencies shown in Table 2 in order to obtain the water quality samples, and will perform water quality analyses on these samples. The water quality constituents that will be measured in these analyses are: Specific Conductance (micromhos/cm), Total Alkalinity (as $CaCO_3$), Bicarbonate (as HCO_{3-}), pH, Chloride, Sulfate, Ammonia Nitrogen (as NH_3), Nitrate Nitrogen (as NO_3), Total Organic Carbon, Calcium, Sodium, Magnesium, Potassium, Iron, Manganese, Orthophosphate, Total Dissolved Solids, Hardness (as $CaC0_3$), Boron, Bromide, and Fluoride. For the following wells listed in Table 2, Barium and Iodide will also be measured annually: SBWM MW-1 Deep (from two discrete depth zones), SBWM MW-2 Deep (from two discrete depth zones), SBWM MW-3 Deep (from two discrete depth zones), SBWM MW-4 Deep (from two discrete depth zones), MSC Shallow, MSC Deep, PCA-W Shallow, PCA-W Deep, MPWMD #FO-09 Shallow, and MPWMD #FO-09 Deep. The data may either come from water quality samples that are collected by the airlift method, by the positive displacement method during induction logging of these wells and/or other data gathering techniques, or combinations of these methods, at the discretion of PROFESSIONAL, and will be submitted to a State-certified analytical laboratory for analysis. Under this Task in prior years, PROFESSIONAL has completed retrofitting the wells that are sampled quarterly and on an annual basis to use the new low-flow purge approach for collecting water quality samples. No costs are included in this Task to retrofit any additional wells in 2014. The dedicated devices sit in the water column and may periodically need to be replaced or repaired. A not-to-exceed amount of $1,000 is included in the costs contained in Attachment 3 for performing ongoing maintenance and/or replacement of the sample collection equipment.

M&MP TASK NO.	TASK DESCRIPTION	WORK TO BE PERFORMED
I. 2. b. 6	Reports	PROFESSIONAL will prepare and submit reports to WATERMASTER summarizing and analyzing the data that is collected, according to the following schedule: 1. One combined report summarizing the water production data and summarizing and analyzing the water quality and water level data from the 1st & 2nd Quarters of the Water Year. 2. One annual report summarizing the water production data and summarizing and analyzing the water quality and water level data from the 3rd & 4th Quarters of the Water Year, and containing tables consolidating the data from the quarterly reports and a narrative summarization of the findings, conclusions, and recommendations from the quarterly reports. This annual report may include, as attachments, each of the quarterly reports.
I. 4. a	Review Seawater Intrusion Analyses	WATERMASTER will have another consultant perform analyses and prepare mapping and other documents pertaining to seawater intrusion detection. PROFESSIONAL will participate in meetings with that consultant during the course of its work, and will provide review comments and recommendations to WATERMASTER regarding this work as it is being carried out by that consultant.

Table 2

WELL NAME AND SUBAREA LOCATION[8]	MONITORING NETWORK[1]		MONITORING REQUIRED BY DECISION[2]		MONITORING CURRENTLY BEING PERFORMED BY PROFESSIONAL NOT SUBJECT TO THIS RFS[3]		MONITORING TO BE PERFORMED BY PROFESSIONAL UNDER THIS RFS[4]			
					Level		Level		Quality	
					Frequency		Frequency		Frequency	
	Professional's	Watermaster's	Level (Monthly)	Quality (Annually)	Monthly	Quarterly	Monthly	Quarterly	Annually	Quarterly
Northern Coastal Subarea (and vicinity)										
MSC-Shallow		X					X			X
MSC-Deep		X					X			X
PCA-W Shallow		X						X		X
PCA-W Deep		X						X		X
PCA-E (Multiple) Shallow	X				X				X	
PCA-E (Multiple) Deep	X				X				X	
Ord Grove Test-Shallow/Deep	X				X					
Paralta Test-Shallow/Deep	X				X					
Ord Terrace-Shallow	X				X				X	
Ord Terrace-Deep	X				X				X	
MPWMD #FO-09-Shallow	X				X					X
MPWMD #FO-09-Deep	X				X					X
MPWMD #FO-10-Shallow		X					X		X	
MPWMD #FO-10-Deep		X					X		X	
Fort Ord Monitor MW-B-23-180-Dune/Aromas		X					X		X	
CDM MW-1-Dune/Aromas		X					X			
CDM MW-2-Dune/Aromas		X					X			
CAW Del Monte Observation-Shallow		X							X	
SBWM MW-1-Deep (Purisima)[6]		X						X	X	
SBWM MW-2-Deep (Purisima)[6]		X						X	X	
SBWM MW-3-Deep (Purisima)[6]		X						X	X	
SBWM MW-4-Deep (Purisima/Santa Margarita)[6]		X						X	X	
Northern Inland Subarea (and vicinity)										
MPWMD #FO-01-Shallow	X					X				
MPWMD #FO-01-Deep	X					X				
MPWMD #FO-07-Shallow	X					X				
MPWMD #FO-07-Deep	X					X				
MPWMD #FO-08-Shallow	X					X				
MPWMD #FO-08-Deep	X					X				
MPWMD #FO-11-Shallow	X					X				
MPWMD #FO-11-Deep	X					X				
SBWM MW-5-Shallow (Paso Robles)[6]		X						X	X	
SBWM MW-5-Deep (Santa Margarita)[6]		X						X	X	

Table 2 (Continued)

WELL NAME AND SUBAREA LOCATION[8]	MONITORING NETWORK[1]		MONITORING REQUIRED BY DECISION[2]		MONITORING CURRENTLY BEING PERFORMED BY PROFESSIONAL NOT SUBJECT TO THIS RFS[3]		MONITORING TO BE PERFORMED BY PROFESSIONAL UNDER THIS RFS[4]			
					Level Frequency		Level Frequency		Quality Frequency	
	Professional's	Watermaster's	Level (Monthly)	Quality (Annually)	Monthly	Quarterly	Monthly	Quarterly	Annually	Quarterly
Southern Coastal Subarea (and vicinity)										
Plumas '90 Test-Deep		X					X			
K-Mart-Dune/Aromas		X					X			
CDM MW-3-Dune/Aromas		X					X			
CDM MW-4-Dune/Aromas		X					X			
MW-BW-08A-Dune/Aromas		X					X			
MW-BW-09-180-Shallow		X					X			
Laguna Seca Subarea (and vicinity)										
MPWMD #FO-03-Shallow	X					X				
MPWMD #FO-03-Deep	X					X				
MPWMD #FO-04-Shallow (E)	X					X				
MPWMD #FO-04-Deep (W)	X					X				
MPWMD #FO-05-Shallow	X					X				
MPWMD #FO-05-Deep	X					X				
MPWMD #FO-06-Shallow	X					X				
MPWMD #FO-06-Deep	X					X				
Justin Court (RR M2S)-Shallow	X					X				
LS Pistol Range (Mo Co TH-1)-Deep	X					X				
York Rd-West (Mo Co MW-1 D)-Deep	X					X				
Seca Place (Mo Co MW-2)-Deep	X					X				
Robley Shallow (North) (Mo Co MW-3S)-Shallow	X					X				
Robley Deep (South) (Mo Co MW-3D)-Deep	X					X				
LS No. 1 Subdivision-Deep	X					X				
Blue Larkspur-East End-Believed to be Deep	X					X				
York School-Shallow		X	X						X	
Laguna Seca Driving Range (SCS-Deep)-Shallow		X						X	X	
Laguna Seca County Park #2-Shallow		X	X						X	
CAW Granite Construction-Deep		X					X			
CAW Ryan Ranch (RR) #7-Deep		X	X						X	
Laguna Seca Golf New #12-Deep[9]		X							X	
Pasadera Main Gate-Deep		X	X						X	
No. of Wells in Each Network[5]=	32	29	4	0	8	24	14	9	20	6

Notes:

(1) The wells within the Professional's Monitoring Well Network are the wells that PROFESSIONAL monitors as part of PROFESSIONAL's own monitoring program. The wells within the Watermaster's Monitoring Well Network are the wells to be monitored under this RFS.

(2) Monitoring required by the Decision is the monitoring described in the Monitoring and Management Program which was incorporated by reference in the Decision of the Court dated February 9, 2007.

(3) Monitoring currently being performed by PROFESSIONAL not subject to this RFS is monitoring work PROFESSIONAL is performing under other monitoring programs. This monitoring is not a part of this RFS.

(4) Monitoring to be performed by PROFESSIONAL is the monitoring to be performed under this RFS.

(5) The Watermaster's Monitoring Well Network includes the wells recommended in the Enhanced Monitoring Well Network report prepared by PROFESSIONAL, dated October 23, 2007, plus the 4 new Sentinel Wells installed in 2007 and the BLM well installed in 2011.

(6) The Seaside Basin Watermaster (SBWM) wells are all equipped with dataloggers that obtain measurements at least daily, but will be manually sounded for water level on a quarterly basis for calibration purposes. SBWM MW-4 Deep is to be sampled for water quality semi-annually.

(7) Not used.

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

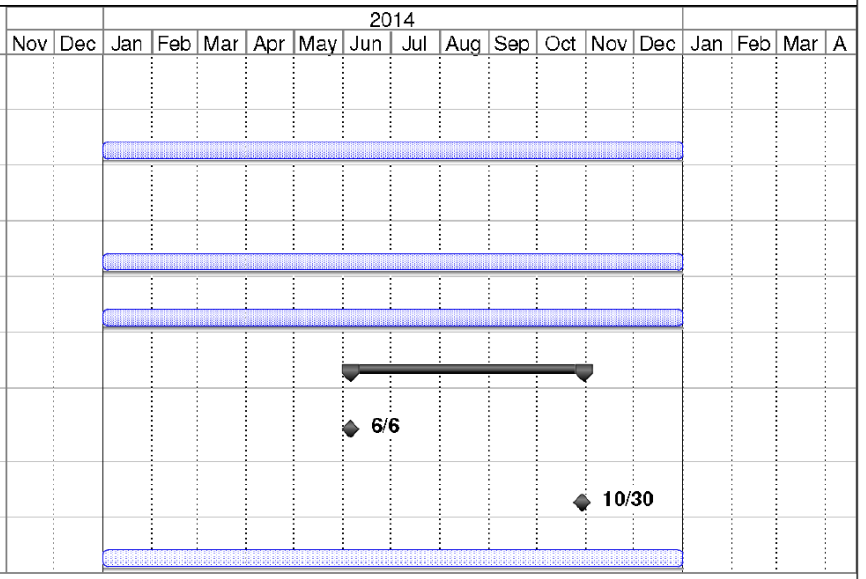
(9) This well is so close to the Laguna Seca Old No. 12 well that no water level monitoring is necessary.

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

ATTACHMENT 2

MPWMD RFS No. 2014-01
Work Schedule

ID	Task Name
1	**I.2.a DATABASE MANAGEMENT**
2	**I.2.a.1 Conduct Ongoing Data Entry/Database Maintenance (MPWMD)**
3	**I.2.b DATA COLLECTION PROGRAM**
4	**I.2.b.2 Collect Monthly Water Levels (MPWMD)**
5	**I.2.b.3 Collect Quarterly Water Quality Samples (MPWMD)**
6	**I.2.b.6 Reports (from MPWMD)**
7	MPWMD Prepares Combined Quarterly Water Production, Water Level, and Water Quality Reports for 1st & 2nd Quarters
8	MPWMD Prepares Annual Water Production, Water Level, and Water Quality Report
9	**I.4.a HydroMetrics & MPWMD Provide Oversight of Seawater Intrusion Detection and Tracking**



Work Schedule for MPWMD RFS No 2014-01 9-16-13 Page 1

ATTACHMENT 3 SUMMARY OF ESTIMATED COSTS

M&MP TASK NO.	LABOR HOURS		HOURLY	SUPPLIES AND MATERIALS		TOTAL
	BREAKDOWN	TOTAL	RATE	BREAKDOWN	TOTAL	
I. 2. a. 1	12 mo. @ 8 hrs/mo.	96	$94	Other services needed to host and maintain Watermaster's Database, estimate $300 for the year.	$300	$9,324
I. 2. b. 2.	12 mo. @ 4 hrs/mo.	48	$87	2 replacement dataloggers @ $500	$1,000	$5,176
I. 2. b. 3.	Quarterly WQ wells (Table 2): MPWMD Coastal wells (6 wells - shallow and deep aquifers @ 3 sites: MSC, PCA-W, FO-09), plus one additional quarterly WQ well sample. Labor: 4 events @ 16 hrs/event	64	$87	Fuel: 4 events @ $10/site x 3 sites = $120; Lab costs: 4 events @ $250/well x 7 wells = $7000	$7,120	$12,688
	Annual WQ wells (Table 2): 1 event @ 28 hrs/event = 28 hrs	28	$87	Eductor setup for BLM well site (use MPWMD portable unit): $0 x 1 site = $0; Airlift equip.: $100 x 1 site x 1 event = $100; Fuel: $20 x 1 site x 1 event = $20; Lab cost (annual WQ wells): $250 x 15 wells x 1 event = $3,750; Maintenance on previously installed sample collection equipment = $1,000.	$4,870	$7,306
	WM Sentinel and Northern Inland wells: download/store dataloggers, 4 events @ 2 hrs/event	8	$87	N/A	$0	$696
	WM Sentinel wells: Semi-annual induction logging -- all 4 sites; annual WQ samples from each aquifer at each site (2 per well site) -- all 4 sites; semi-annual WQ samples -- SBWM MW-4 site only. Total labor = 2 events @ 4 hr/event.	8	$87	Induction logging: 2 events = $15,500; Lab cost (annual samples): $250 x 4 sites x 2 samples = $2,000; Lab cost (semi-annual sampling @ SBWM MW-4 site only): $250 x 1 site x 2 samples = $500	$18,000	$18,696
	Compile data: 4 events @ 24 hours/event	96	$87	N/A	$0	$8,352
I. 2. b. 6	1 - combined Q1 and Q2 quarterly report @ 18 hrs	18	$94	N/A	$0	$1,692
	1- annual report @ 24 hrs	24	$94	N/A	$0	$2,256
I. 4. a	Provide SWI supplemental data and review	24	$111	N/A	$0	$2,664
					TOTAL ESTIMATED COST =	**$68,850**

Notes:

1. Vehicle mileage is included in the labor costs above.
2. Regardless of the use of the term "Estimated Cost" in this RFS, if the work of this RFS is to be compensated for using Lump Sum Payment method, it is understood and agreed to by PROFESSIONAL that the Total Price listed on page A-1 of this RFS is binding and limiting as defined in Section V of the Agreement.

SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: January 1, 2014 **RFS NO.** 2014-02 .
(To be filled in by WATERMASTER)

TO: Joe Oliver **FROM**: Robert Jaques .
Monterey Peninsula Water Management District WATERMASTER
PROFESSIONAL

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

Completion Date: The work of this RFS No. 2014-02 shall be completed on an as-directed basis from the Watermaster during 2014. All work under this RFS will be completed not later than December 31, 2014.

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

Total Price Authorized by this RFS: $5,154.00 (See Attachment 1 for details regarding this Total Price, and how costs will be authorized on an as-directed basis. Cost is authorized only when evidenced by signature below.)

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

Requested by: _____ Date:_____.
WATERMASTER Technical Program Manager

Authorized by: _____ Date:_____.
WATERMASTER Chief Executive Officer

Agreed to by: _____ Date:_____.
PROFESSIONAL

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

Background:

The WATERMASTER Board authorized its staff to contract with the PROFESSIONAL to collect water level and water quality data from certain wells located within the Seaside Basin, if the owners/operators of those wells expressed this desire to the WATERMASTER. The procedures for this data collection are described in the January 17, 2008 "Notice to Well Owners" that was sent out by the Watermaster to well owners in the Seaside Groundwater Basin..

This RFS No. 2014-02 authorizes PROFESSIONAL to perform this data collection work on an as-directed basis, with formal authorization from the WATERMASTER to the PROFESSIONAL being required prior to the PROFESSIONAL performing such work on any specified well. This will provide the WATERMASTER with full control over which wells are provided this service, as well as over the costs for having this work performed.

The wells to which these services may be provided are listed in Table 1.

The estimated costs, per well, to perform these services are as follows:

Monthly Water Levels - It is estimated that it will take approximately 0.5 hour/well to perform a water level measurement. This time estimate is based on the assumption that the water level measurements will be performed at the time that a field person is already out and about collecting data from other wells, and the fact that the distance between wells located within the Basin is not that great. This labor would be billed at the field rate of $87/hr, so the estimated cost per water level measurement would be $43.50.

The total estimated cost would be $522 per year per well for 12 monthly measurements.

Annual Water Quality Sampling - Assuming that annual water sample collection would coincide with water level collection at a well, it is estimated that it will take approximately 0.5 hr to collect the water quality sample, including sampling time, bottle labeling, custody forms, delivery to laboratory, etc. There will also be an estimated 0.5 hr for receipt, review and computer entry of laboratory data, and an estimated $250 per sample for the laboratory analysis. The sampling work would be billed at the field rate of $87/hr, so the estimated cost per annual water quality sample would be $87 for labor, and $250 for laboratory services, for a total cost per sample of $337. Only one sample per well per year will need to be collected and analyzed. This sample will be collected in the fall.

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

Combined Water Level Measurements and Water Quality Sampling: For combined water level and water quality monitoring, the total estimated cost, per well, for the 12-month period is $859.

Of the wells listed in Table 1 it is assumed that not more that 6 will ask to have data collected for them by the WATERMASTER, the total estimated cost would be:

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

Table 1

APN	DETAILS	COMPANY	Watermaster "Producer" Well?	MPWMD Assigned Well #	Monthly Water Levels Required	Monthly Water Levels Being Collected?	Annual Water Quality Analyses Required?	Annual Water Quality Data Being Collected?
Within MPWMD Boundaries								
012-432-004	CAW - Plumas #4	California American Water Co.	Y	T15S/R1E-27Jg	Y	Y	Y	N
012-843-013	CAW - Darwin	California American Water Co.	Y	T15S/R1E-23Ea	Y	Y	Y	N
011-041-018	CAW - Military	California American Water Co.	Y	T15S/R1E-14Nd	Y	Y	Y	N
011-061-004	CAW - Ord Grove #2	California American Water Co.	Y	T15S/R1E-23Bc	Y	Y	Y	N
011-071-018	CAW - New Luzern	California American Water Co.	Y	T15S/R1E-23De	Y	Y	Y	N
011-091-017	CAW - Playa #3	California American Water Co.	Y	T15S/R1E-22Bc	Y	Y	Y	N
011-091-017	CAW - Playa #4	California American Water Co.	Y	T15S/R1E-22Bf	Y	Y	N	
011-493-028	CAW - Paralta	California American Water Co.	Y	T15S/R1E-14Ra	Y	Y	Y	N
031-151-010	Reservoir Well	City of Seaside	Y	T15S/R1E-13Na	Y	?	Y	N
031-231-062	Coe Avenue Well	City of Seaside	Y	T15S/R1E-14Ma	Y	?	Y	N
011-181-014	Public Works Corp. Yard	City of Sand City	Y	T15S/R1E-22Ed	Y	?	Y	N
011-011-020	Cypress Pacific	Monterey Peninsula Engineering	Y	T15S/R1E-22Dd	Y	N	Y	N
011-236-010	Robinette -Design Ctr.	City of Sand City	Y	T15S/R1E-22Mc	Y	?	Y	N
011-041-043	(in front of Target)	DBO Development	Y	T15S/R1E-22Ce	Y	N	N	
011-061-022	MMP prod well	Mission Memorial Park	Y	T15S/R1E-23Ab	Y	Y	N	
011-061-022	PRTIW -operated by MMP	Mission Memorial Park	Y	T15S/R1E-23Ac	Y	N	Y	N
011-501-014-500		Security National Guaranty, Inc.	Y	T15S/R1E-15K1	Y	N	Y	N
011-532-005		Granite Rock Company	Y	T15S/R1E-22Eb	Y	?	N	
012-511-005	Shea Well	City of Del Rey Oaks	Y	T15S/R1E-26Mc	Y	N	N	
012-115-017	City #4	Seaside Municipal Water System	Y	T15S/R1E-23Gc	Y	?	Y	?
012-653-003	City #2	Seaside Municipal Water System	Y	T15S/R1E-23Pb	Y	?	N	
012-664-017	City #1	Seaside Municipal Water System	Y	T15S/R1E-23Lb	Y	?	N	
012-115-017	City #3	Seaside Municipal Water System	Y	T15S/R1E-23Ga	Y	?	Y	?
173-071-052	East Well (Lot #9)	CAW - Bishop Unit	Y	T16S/R2E-05Fa	Y	N	N	
173-072-034	well lot Bishop #1 (west)	CAW - Bishop Unit	Y	T16S/R2E-05Ea	Y	Y	N	
173-072-041	well lot Bishop #2 (east)	CAW - Bishop Unit	Y	T16S/R2E-05Fb	Y	Y	N	
416-111-002	Mutual	CAW - Hidden Hills Unit	Y	T16S/R2E-09Cb	Y	N	N	
416-111-004	Standex	CAW - Hidden Hills Unit	Y	T16S/R2E-09Cc	Y	N	N	
416-111-004	Bay Ridge	CAW - Hidden Hills Unit	Y	T16S/R2E-09Cd	Y	Y	N	
259-031-011	RR#7	CAW - Ryan Ranch #7	Y	T15S/R1E-36Nb	Y	Y	N	
259-031-012	RR#8	CAW - Ryan Ranch #8	Y	T16S/R1E-01Cb	Y	Y	N	
259-031-012	RR#11	CAW - Ryan Ranch #11	Y	T16S/R1E-01Cd	Y	Y	N	
173-071-056	Old Main Gate (Lot #12)	Pasadera - New Cities Developme	Y	T16S/R2E-05Mg	Y	Y	N	
173-071-051	Paddock #1(Lot #11)	Pasadera - New Cities Developme	Y	T16S/R2E-05Mf	Y	N	N	
203-031-034	01-349	York School	Y	T15S/R1E-36Qa	Y	?	N	
173-071-048	(new #12)	Laguna Seca Golf Resort	Y	T16S/R2E-06Hb	Y	Y	N	
173-071-048	(racetrack)	Laguna Seca Golf Resort	Y	T16S/R2E-06Ga	Y	Y	N	
Outside MPWMD Boundaries								
173-011-025, -026	LS Cnty Park #3	MPRPD	Y	T16S/R2E-05Gd	Y	?	N	
173-011-025, -026	LS Cnty Park #4	MPRPD	Y	T16S/R2E-05Ge	Y	?	N	
					Y = 38	**N or ? = 21**	**Y = 16**	**N or ? = 16**

SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: January 1, 2014 **RFS NO**. 2014-01
(To be filled in by WATERMASTER)

TO: Derrik Williams
HydroMetrics WRI
PROFESSIONAL

FROM: Robert Jaques
WATERMASTER

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

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

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

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

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

Requested by: _____ Date:_____.
WATERMASTER Technical Program Manager

Authorized by: _____ Date:_____.
WATERMASTER Chief Executive Officer

Agreed to by: _____ Date:_____.
PROFESSIONAL

ATTACHMENT 1

SCOPE OF WORK

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

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

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

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

ESTIMATED COSTS

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

Derrik Williams = $215.00/hour Georgina King = $185.00/hour

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

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

ATTACHMENT 2
SCHEDULE

HydroMetrics RFS No. 2014-01
Work Schedule

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

Work Schedule for HydroMetrics RFS No 2014-01 9-16-13 Page 1

SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: 1/1/2014

RFS NO. 2014-02
(To be filled in by WATERMASTER)

TO: Derrik Williams
HydroMetrics WRI
PROFESSIONAL

FROM: Robert Jaques
WATERMASTER

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

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

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

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

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

Requested by: _____ Date:_____.
WATERMASTER Technical Program Manager

Authorized by: _____ Date:_____.
WATERMASTER Chief Executive Officer

Agreed to by: _____ Date:_____.
PROFESSIONAL

ATTACHMENT 1

SCOPE OF WORK

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

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

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

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

ATTACHMENT 2

HydroMetrics RFS No. 2014-02
Work Schedule

ID	Task Name	2014												2015					
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Ju
1	**I.4.c Annual Seawater Intrusion Analysis Report (SIAR)**																		
2	HydroMetrics Provides Draft SIAR to Watermaster											◆ **11/4**							
3	TAC Approves Annual Seawater Intrusion Analysis Report (SIAR)											◆ **11/12**							
4	Board Approves Annual Seawater Intrusion Analysis Report (SIAR)											◆ **11/19**							

Work Schedule for HydroMetrics RFS No 2014-02 9-16-13 Page 1

ATTACHMENT 3

DETAILED BREAKDOWN OF ESTIMATED COSTS

Note: Regardless of the use of the term "Estimated Cost" in this RFS, if the work of this RFS is to be compensated for using Lump Sum Payment method, it is understood and agreed to by PROFESSIONAL that the Total Price listed on page 1 of this RFS is binding and limiting as defined in Section V of the Agreement.

DETAILED BREAKDOWN OF ESTIMATED COSTS

HOURLY RATES: Derrik Williams = $215.00 Georgina King = $185.00

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

SEASIDE BASIN WATER MASTER TECHNICAL ADVISORY COMMITTEE

** * * AGENDA TRANSMITTAL FORM * * **

MEETING DATE:	November 13, 2013
AGENDA ITEM:	4
AGENDA TITLE:	Update on HydroMetrics Modeling of Laguna Seca Subarea
PREPARED BY:	Robert Jaques, Technical Program Manager

SUMMARY:
HydroMetrics, with assistance from MPWMD on collecting field data, is performing modeling of the Laguna Seca Subarea under RFS 2013-04 to:

1. Describe the influence on groundwater levels of discontinuing pumping from California American Water (Cal-Am) wells located within the Laguna Seca subarea.
2. Determine the Natural Safe Yield of the Laguna Seca subarea.
3. Estimate the Operational Safe Yield of the Laguna Seca Subarea.

Update from HydroMetrics on Status of Laguna Seca Subarea Modeling

HydroMetrics WRI is refining estimates of the natural safe yield and the operational safe yield of the Laguna Seca Subarea.

Natural Safe Yield
The results obtained from the flow model simulation of the baseline scenario were used to calculate the natural safe yield. We estimated the natural safe yield as the amount of groundwater recharge and subsurface inflow that could be pumped while maintaining stream flows and subsurface outflows to neighboring basins. The natural safe yield was calculated with the formula:

Natural Safe Yield = Aerial Recharge + Subsurface Inflow – Required Subsurface Outflow – Required Stream flow

By extracting the water balance components for the Laguna Seca subarea, the average annual natural safe yield that resulted from this calculation was 240 acre-feet per year. [Bob's note: The natural safe yield stated in the Decision is 608 AFY, so this finding is a significant difference from the Decision-stated natural safe yield.]

The natural safe yield is a net value that treats the entire basin as an isolated reservoir that is uniform over its geographic area and throughout time. Ideally, pumping at the natural safe yield would result in a stable water balance for the subarea. However, there is both spatial and temporal variability in the true inputs and outputs of water to the subarea, and this prevents the natural safe yield from the providing a stable water balance.

Operational Safe Yield
A second modeling task was undertaken to estimate the operational safe yield for the basin. Operational safe yield is the amount of water that can be pumped from existing wells without unwanted detrimental effects. This task aims to find an operational pumping rate for standard and alternate producers that results in meeting the following three criteria for the Laguna Seca subarea:

SEASIDE BASIN WATER MASTER TECHNICAL ADVISORY COMMITTEE

** * * AGENDA TRANSMITTAL FORM * * **

AGENDA ITEM:	4 (Continued)

1) Groundwater levels do not decline,
2) Pumping groundwater levels remain above the well pump intake and top of screen for each well, and
3) Existing subsurface outflows determined from the natural safe yield are achieved.

The first criterion of meeting stable water levels was explored by looking at the hydrographs from a number of monitoring wells throughout the basin. This was done for the baseline simulation, for a scenario in which pumping is reduced to the previously calculated natural safe yield, and for the most severe pumping reduction possible – dropping all standard and alternate producer pumping to zero.

It was discovered that groundwater levels do not stabilize for several wells even under the most extreme pumping reductions. The baseline scenario sees declining groundwater levels in most wells. Reducing pumping helps a number of wells recover, but a few wells on the eastern side of the basin continue to decline.

This inability to achieve stable water levels is caused by the large amount of pumping from wells located outside but near the eastern edge of the Laguna Seca subarea. Under the baseline scenario, wells outside the Laguna Seca subarea pump roughly twice as much as all of the wells within the Laguna Seca subarea. Furthermore, some of these production wells, such as Cal-Am's Toro 1, 2 and 3 wells, lie extremely close to the subarea boundary and close to the easternmost monitoring well (FO-6). This is the monitoring well that shows the largest and most persistent groundwater level declines under all scenarios. The impact that these outside wells appear to have draws into question the ability of establishing an operational safe yield for the Laguna Seca subarea as it is defined in the scope of work for this modeling.

An oral progress report on this work will be provided by HydroMetrics at today's meeting, and some potential approaches to overcoming these issues will be discussed. Input from TAC members is encouraged. Copies of the PowerPoint slides that HydroMetrics will be using in its progress report are attached.

ATTACHMENTS:	PowerPoint Slides from HydroMetrics Presentation
RECOMMENDED ACTION:	Provide input on the work that has been performed and in particular with regard to addressing the significant findings of this work to date.

November 13, 2013

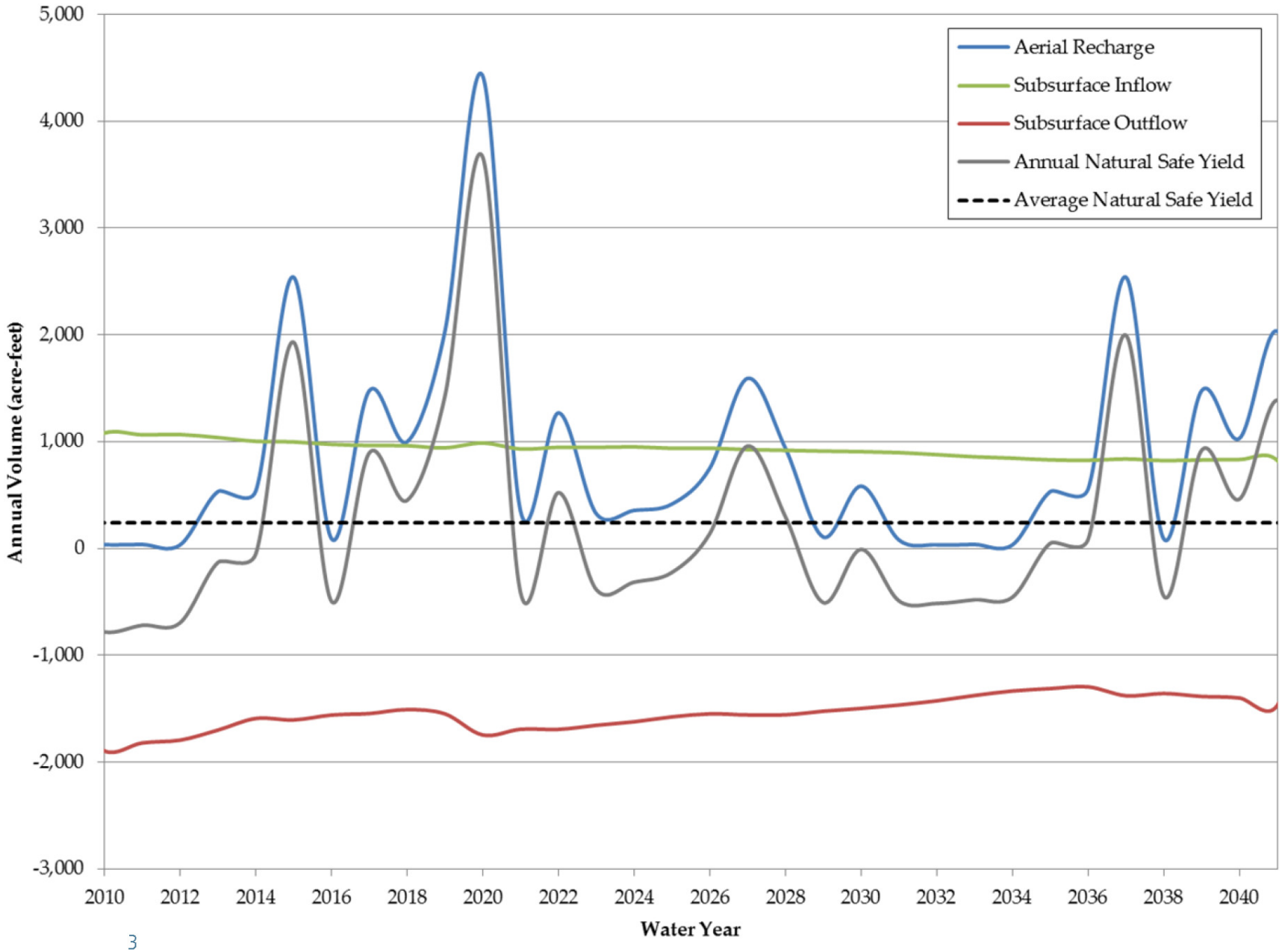
Results of Laguna Seca Safe Yield Modeling

Baseline Scenario Establishes Safe Yield

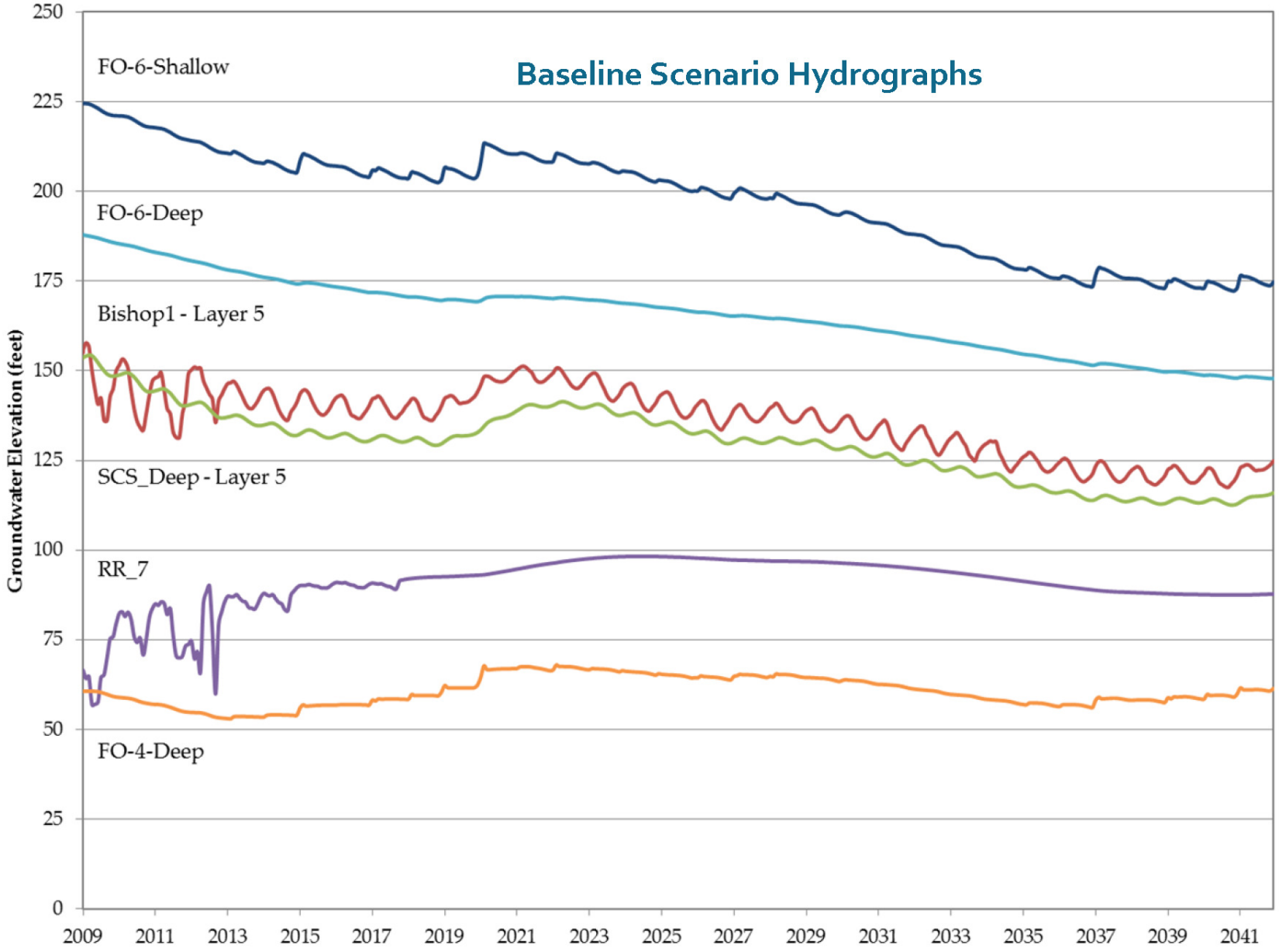
- Cal-Am's 25 Year Replenishment Scenario from Replenishment Repayment Modeling

  Yield = Recharge + Inflow – Subsurface Outflow

- Annual average natural safe yield = 240 acre-feet/year


5,000
4,000
3,000
2,000
1,000
0
-1,000
-2,000
-3,000
Annual Volume (acre-feet)
2010
2012
2014
2016
2018
2020
2022
2024
2026
2028
2030
2032
2034
2036
2038
2040
Water Year
Aerial Recharge
Subsurface Inflow
Subsurface Outflow
Annual Natural Safe Yield
Average Natural Safe Yield

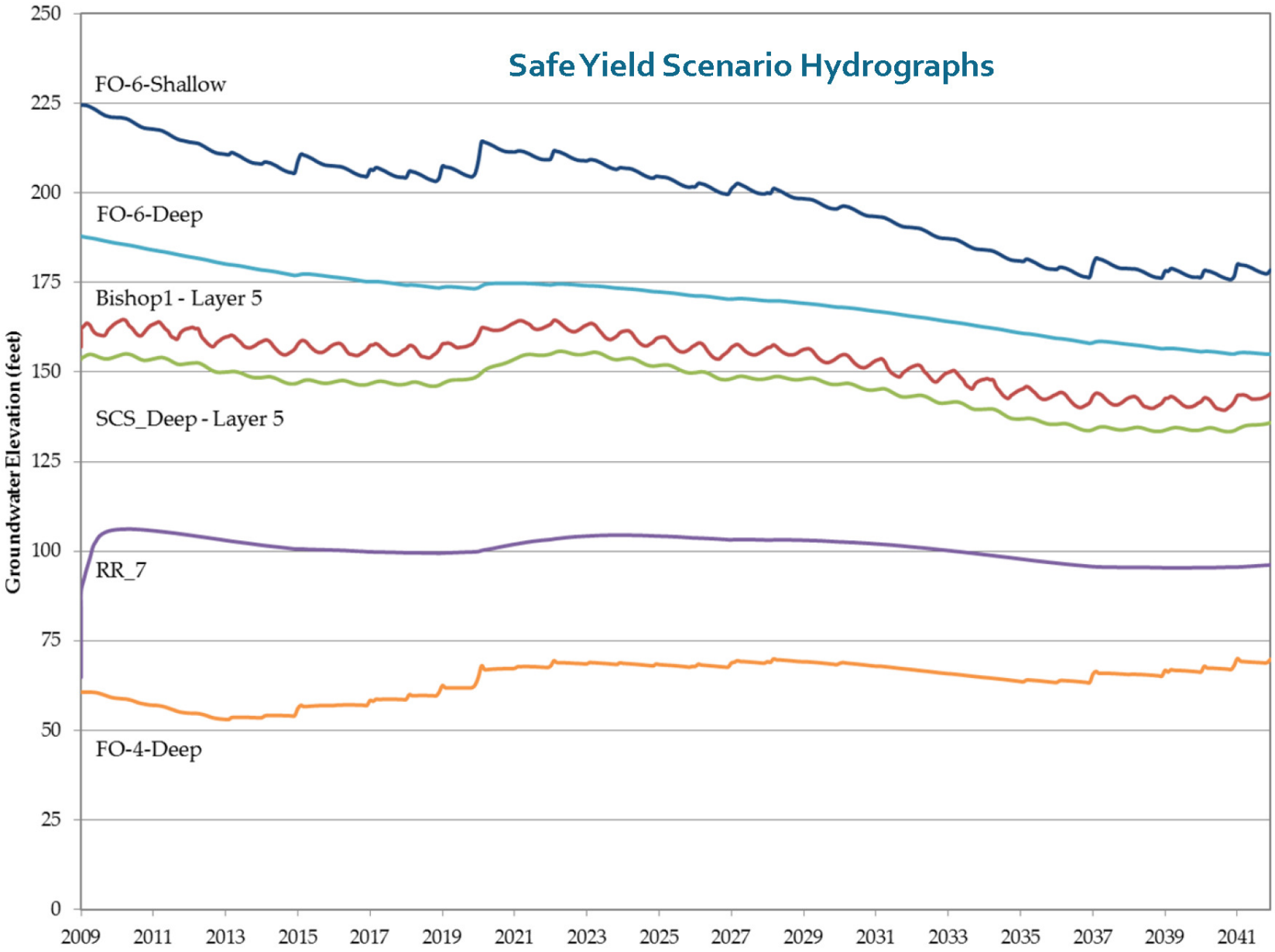
3


Baseline Scenario Hydrographs
FO-6-Shallow
FO-6-Deep
Bishop1 - Layer 5
SCS_Deep - Layer 5
RR_7
FO-4-Deep
Groundwater Elevation (feet)
250
225
200
175
150
125
100
75
50
25
0
2009
2011
2013
2015
2017
2019
2021
2023
2025
2027
2029
2031
2033
2035
2037
2039
2041

4

Simulate Pumping Natural Safe Yield

- Set standard and Alternate pumping average to 240 AF/yr
  - Standard pumpers reduced to zero
  - Alternate pumpers reduced by 50%
- Groundwater levels in many monitoring wells continue to drop, although at a slower rate.


Safe Yield Scenario Hydrographs
FO-6-Shallow
FO-6-Deep
Bishop1 - Layer 5
SCS_Deep - Layer 5
RR_7
FO-4-Deep
Groundwater Elevation (feet)
250
225
200
175
150
125
100
75
50
25
0
2009
2011
2013
2015
2017
2019
2021
2023
2025
2027
2029
2031
2033
2035
2037
2039
2041

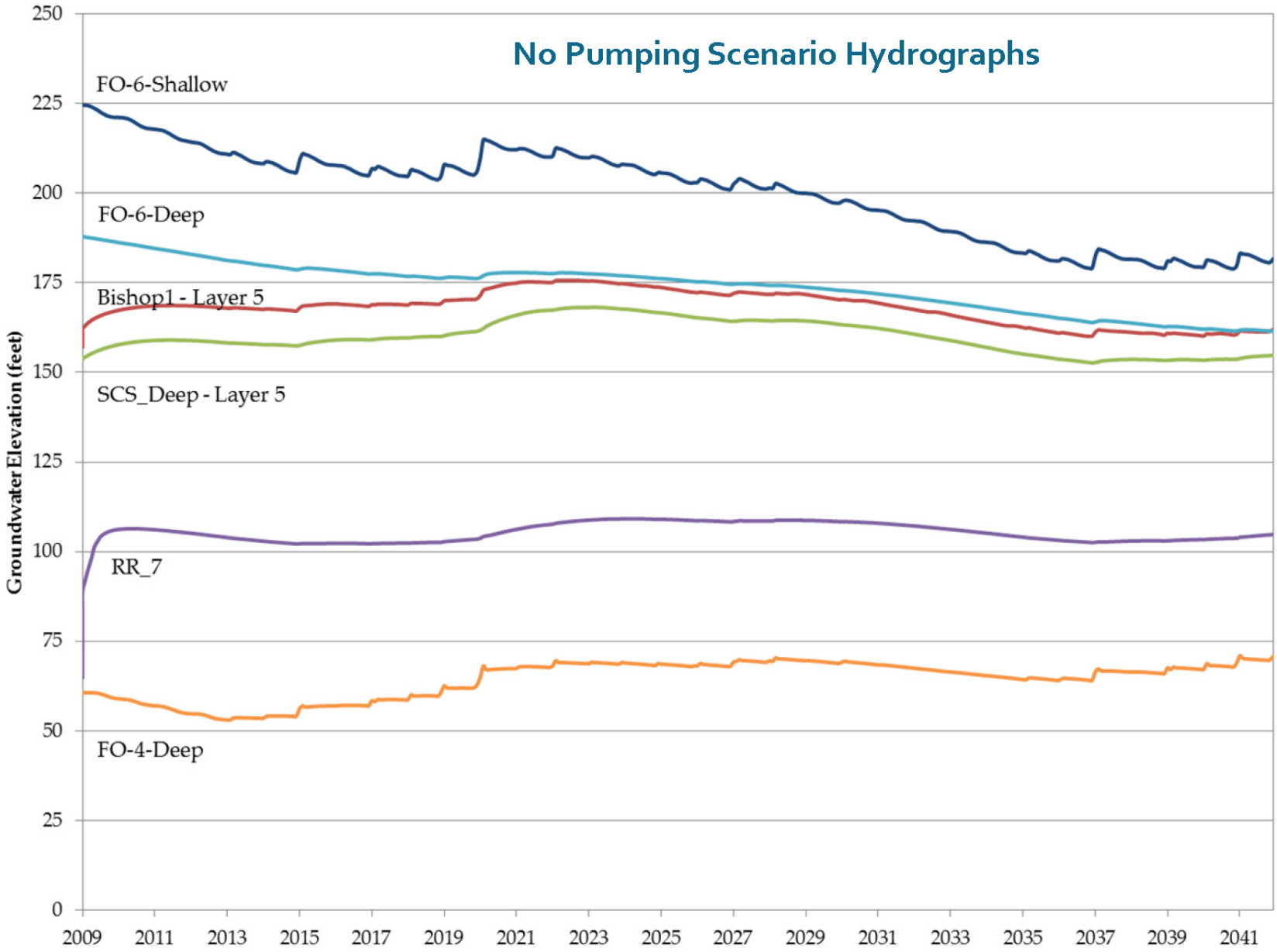
6

Operational Safe Yield Simulation

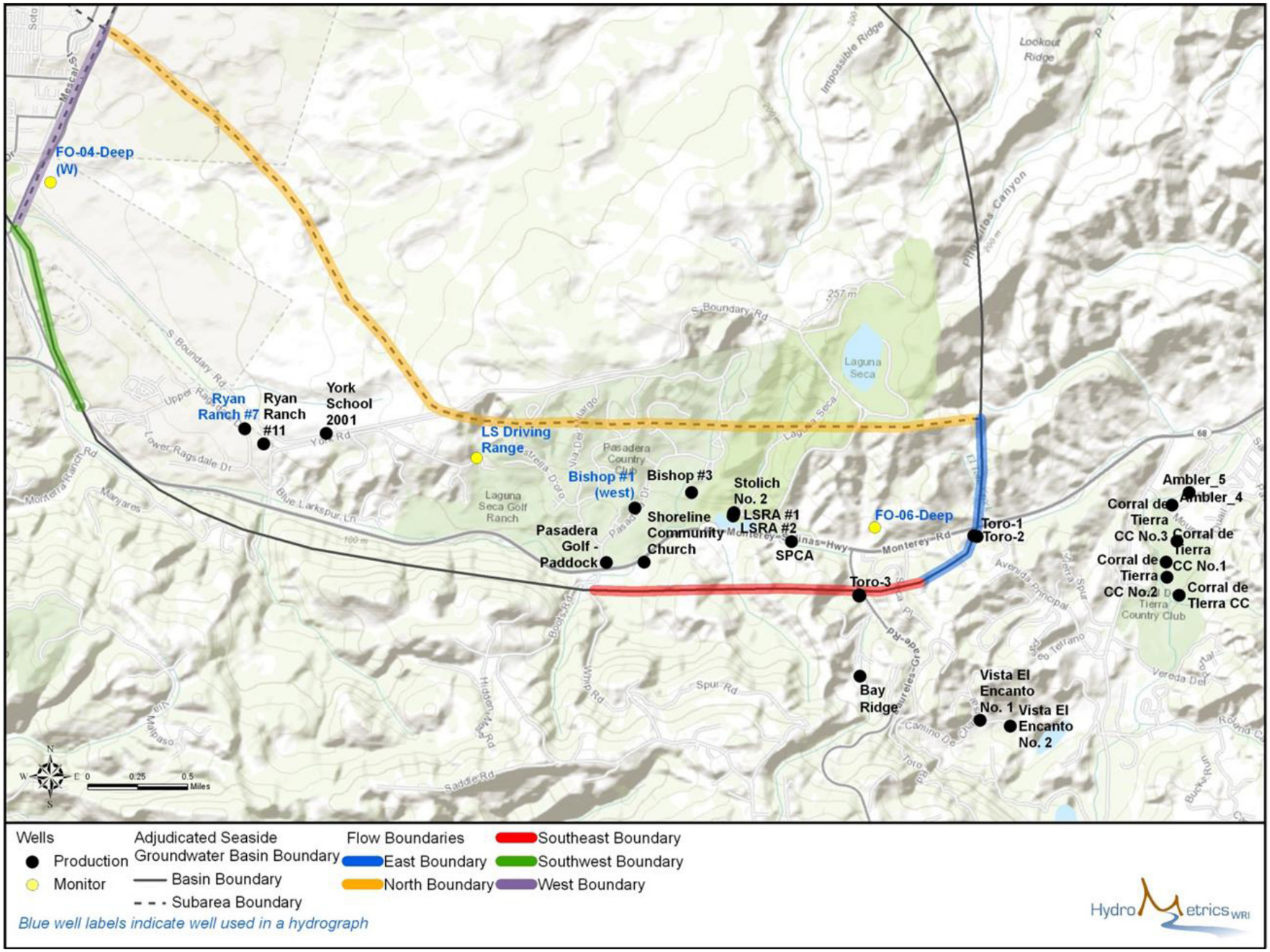
1) Operational Safe Yield Criteria
   - Groundwater elevations stop declining
   - Maintain subsurface outflows at present levels
   - Maintain groundwater levels above pump intakes
2) No Standard or Alternate Producer Pumping in Laguna Seca Subarea
   - Both standard and alternate reduced to zero

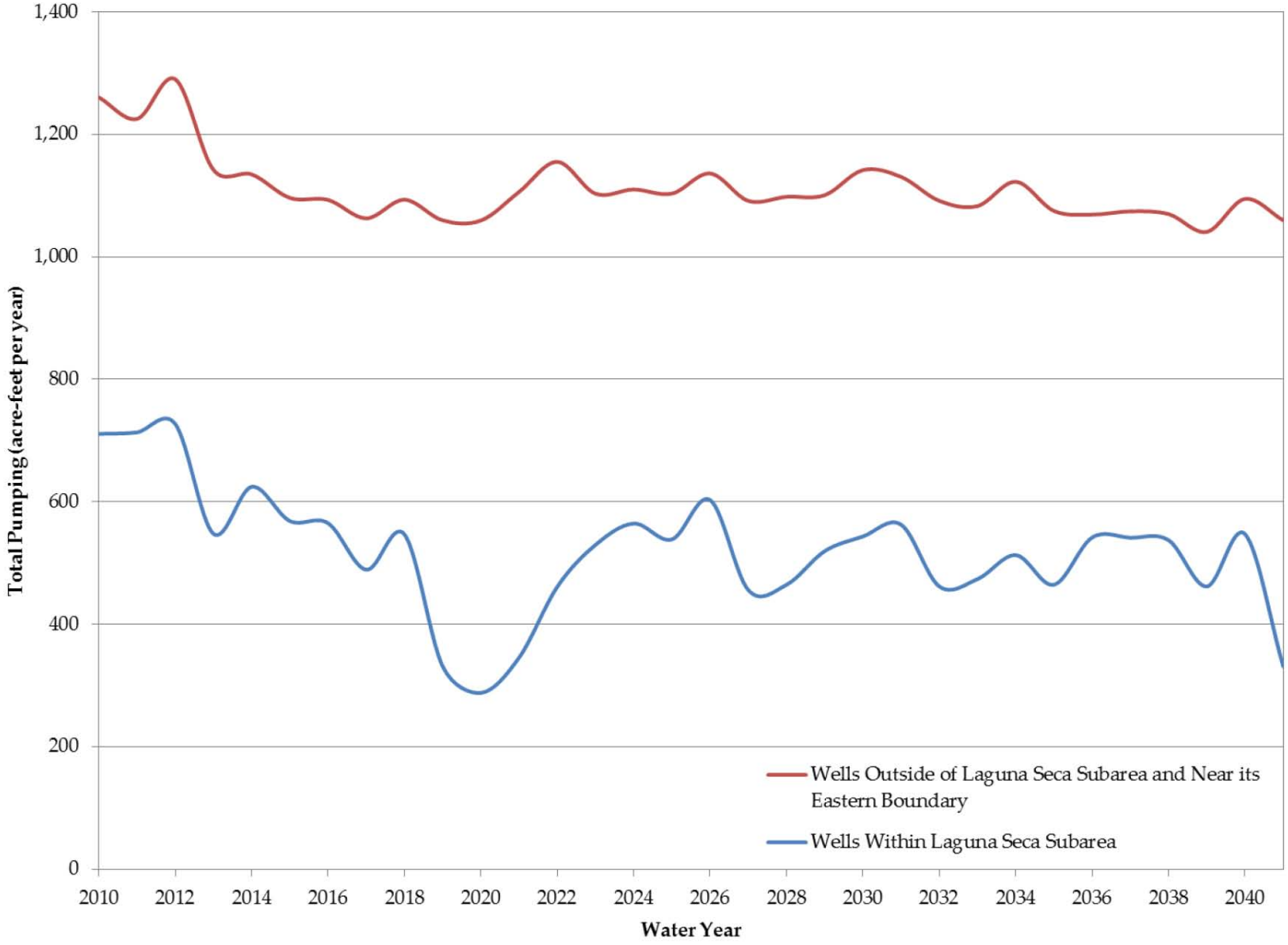
Can We Get to anOperational Safe Yield?

- Pumping of both standard producers and alternate producers is reduced to zero.
- Groundwater levels in eastern monitoring wells continues to drop.
- Can't meet at least one of the criteria.

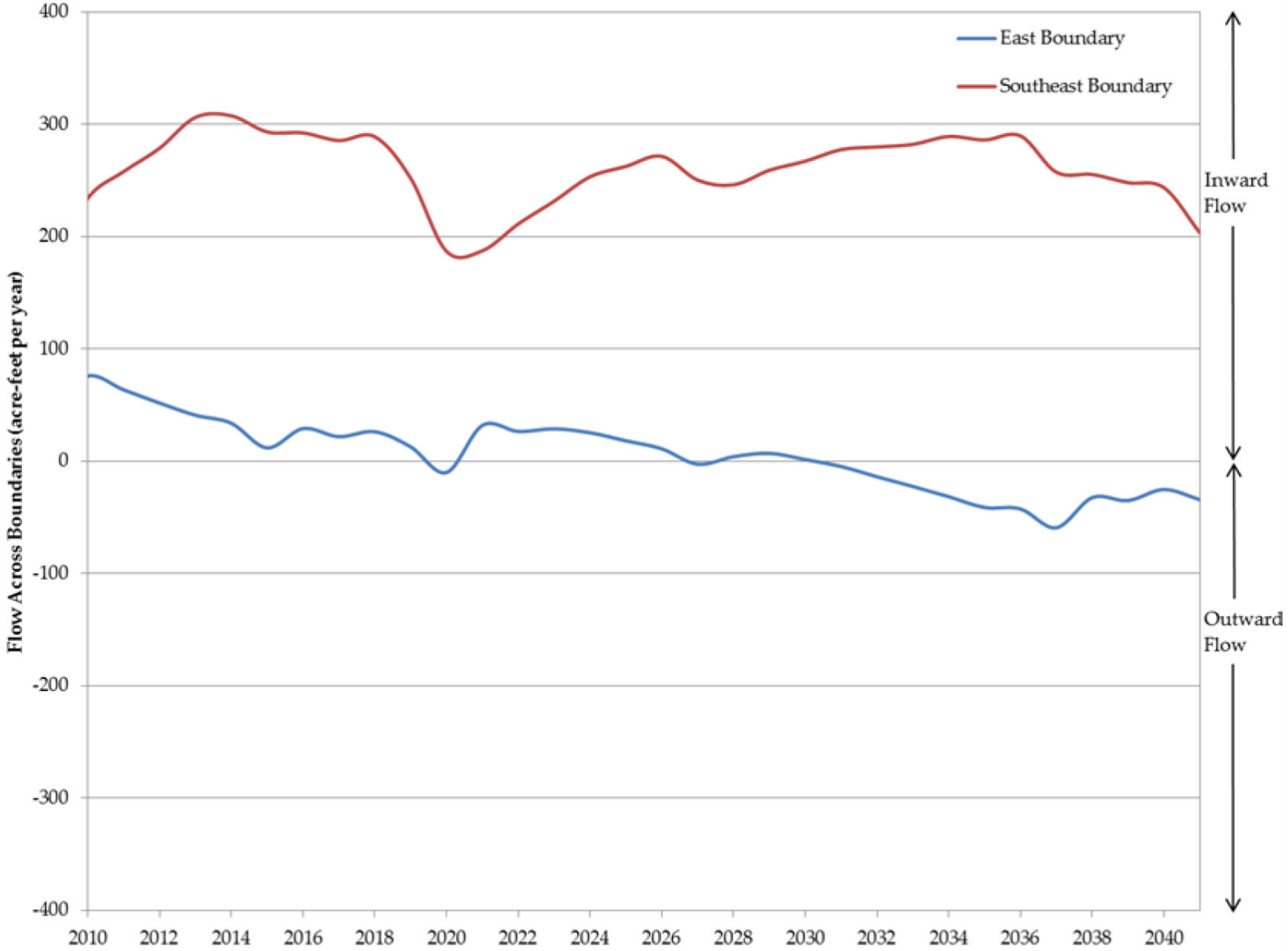

No Pumping Scenario Hydrographs
FO-6-Shallow
FO-6-Deep
Bishop1 - Layer 5
SCS_Deep - Layer 5
RR_7
FO-4-Deep
Groundwater Elevation (feet)
250
225
200
175
150
125
100
75
50
25
0
2009
2011
2013
2015
2017
2019
2021
2023
2025
2027
2029
2031
2033
2035
2037
2039
2041

9

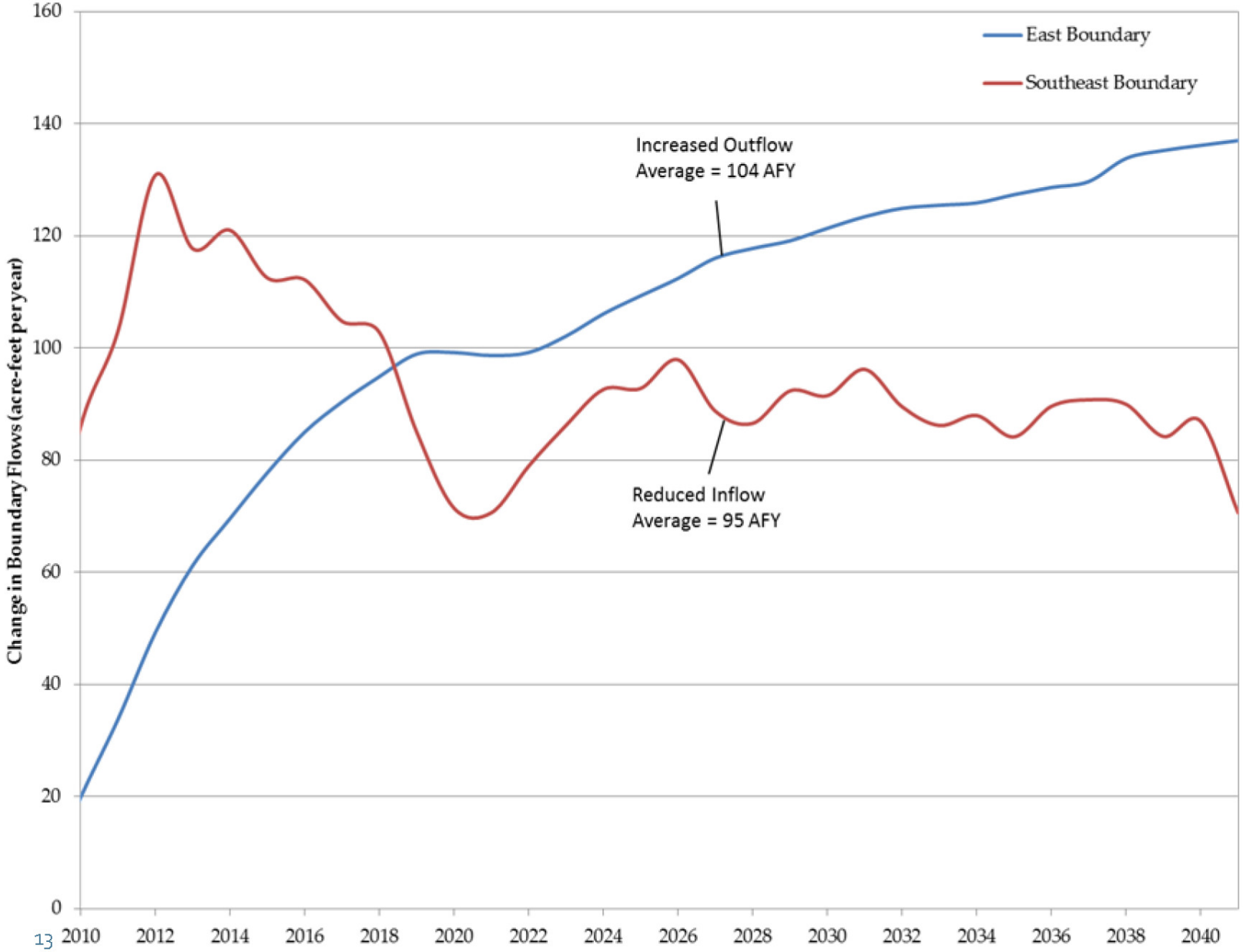

FO-04-Deep (W)
Ryan Ranch #7
Ryan Ranch #11
York School 2001
LS Driving Range
Bishop #1 (west)
Bishop #3
Stolich No. 2
LSRA #1
LSRA #2
Shoreline Community Church
Pasadera Golf - Paddock
SPCA
FO-06-Deep
Toro-1
Toro-2
Toro-3
Bay Ridge
Vista El Encanto No. 1
Vista El Encanto No. 2
Ambler_5
Ambler_4
Corral de Tierra CC No.3
Corral de Tierra CC No.1
Corral de Tierra CC No.2
Corral de Tierra CC
Laguna Seca
Laguna Seca Golf Ranch
Pasadera Country Club
Impossible Ridge
Lookout Ridge
Pilarcitos Canyon
S Boundary Rd
Monterey-Salinas Hwy
0 0.25 0.5 Miles
Wells
Production
Monitor
Adjudicated Seaside Groundwater Basin Boundary
Basin Boundary
Subarea Boundary
Flow Boundaries
East Boundary
North Boundary
Southeast Boundary
Southwest Boundary
West Boundary
Blue well labels indicate well used in a hydrograph
HydroMetrics WRI


1,400
1,200
1,000
800
600
400
200
0
Total Pumping (acre-feet per year)
2010
2012
2014
2016
2018
2020
2022
2024
2026
2028
2030
2032
2034
2036
2038
2040
Water Year
Wells Outside of Laguna Seca Subarea and Near its Eastern Boundary
Wells Within Laguna Seca Subarea

11


East Boundary
Southeast Boundary
Flow Across Boundaries (acre-feet per year)
400
300
200
100
0
-100
-200
-300
-400
2010
2012
2014
2016
2018
2020
2022
2024
2026
2028
2030
2032
2034
2036
2038
2040
Inward Flow
Outward Flow

12


East Boundary
Southeast Boundary
Increased Outflow
Average = 104 AFY
Reduced Inflow
Average = 95 AFY
Change in Boundary Flows (acre-feet per year)
160
140
120
100
80
60
40
20
0
2010
2012
2014
2016
2018
2020
2022
2024
2026
2028
2030
2032
2034
2036
2038
2040

13

Next Steps

- Can we define a safe yield if groundwater levels continue to drop?
- Should we define a safe yield by limiting inflows and outflows to neighboring basins **IN THE MODEL**?
- Is showing difficulty reaching safe yield enough for our current needs?

SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE

** * * AGENDA TRANSMITTAL FORM * * **

MEETING DATE:	November 13, 2013
AGENDA ITEM:	5
AGENDA TITLE:	Discuss and Provide Input on the 2013 Seawater Intrusion Analysis Report (SIAR)
PREPARED BY:	Robert Jaques, Technical Program Manager

SUMMARY:

HydroMetrics had nearly completed preparing the Draft Seawater Intrusion Analysis Report (SIAR) for Water Year 2012-2013 on November 7, 2013 when their computer system was disabled by a major virus problem. Consequently it was not possible to either include the Executive Summary from the Draft SIAR in today's TAC agenda packet, or to post the complete Draft SIAR on the Watermaster's website, as originally planned. HydroMetrics is working on resolving the virus problem and should hopefully be able to provide the Draft SIAR in the near future.

The SIAR examines the "health" of the Basin with regard to whether or not there are any indications that seawater intrusion is either occurring or is imminent. Previous SIARs have stated that depressed groundwater levels, continued pumping in excess of recharge and fresh water inflows, and ongoing seawater intrusion in the nearby Salinas Valley all suggest that seawater intrusion could occur in the Seaside Groundwater Basin. In spite of these factors, the previous SIARs stated that neither the Piper nor the Stiff Diagrams indicated the presence of seawater intrusion in the existing monitoring wells. HydroMetrics will be reporting these same findings and conclusions in the 2013 SIAR.

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

A representative from HydroMetrics will attend today's TAC meeting to provide an oral summary of the report and to respond to questions by TAC members.

ATTACHMENTS:	None
RECOMMENDED ACTION:	Discuss and either modify the Draft SIAR findings and recommendations or recommend that the Board approve the Draft SIAR

SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE

** * * AGENDA TRANSMITTAL FORM * * **

MEETING DATE:	November 13, 2013
AGENDA ITEM:	6
AGENDA TITLE:	Discuss and Provide Input on Preliminary Draft Annual Report for 2013
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 2013 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, one of which (Attachment 7) is 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:

- MPWMD is still compiling the data for the WY 2013 Water Level/Water Quality Monitoring Report which constitutes Attachment 7 to the Annual Report. Some of the Water Quality data were collected late in the Water Year and are not yet worked up. The Monitoring Report will be included in the Annual Report as soon as it becomes available.
- The Preliminary Draft Annual Report does not include the Draft 2013 Seawater Intrusion Analysis Report (SIAR) due to a virus problem which disabled HydroMetrics' computer system just prior to their completing the Draft SIAR. The Draft SIAR will be inserted into the Draft Annual Report before it goes to the Board at its December 4, 2013 meeting, and will subsequently be replaced with the Final SIAR to reflect any changes or additions made by the Board at that meeting.

ATTACHMENTS:	Preliminary Draft 2013 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

PRELIMINARY DRAFT ANNUAL REPORT – 2013

Note: Within this Preliminary Draft of the 2013 Annual Report there are several items highlighted in blue. These items will be edited once the associated documents have been completed. The edited text will appear in the Draft 2013 Annual Report that will be posted on the Watermaster's website to replace this Preliminary Draft 2013 Annual Report. This will likely occur in late November or early December, 2013.

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

A. Groundwater Extractions

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

B. Groundwater Storage

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

Also during WY 2013, MPWMD continued work under contract with CAW for construction of all facilities at the Seaside Middle School ASR site. This work included

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

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

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

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

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

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

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

Replenishment Assessment Credit has either been used by the City, or by another party if the City transfers its Replenishment Assessment Credit. A copy of the extended MOU is contained in Attachment 13.

D. Leases or sales of Production Allocation and Administrative Actions

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

At its April 4, 2013 meeting the Watermaster Board approved a request by California American Water (CAW) to convert three of its production wells to monitoring wells and to retire and destroy one of its production wells in the Seaside Basin. These wells (CAW's Hilby, Military, Luxton, and Darwin wells) are no longer needed by CAW for use as production wells. Converting three of the wells to monitoring wells avoids creating a gap in the spatial distribution of water level monitoring data. Such a data gap could reduce the accuracy of modeling and other evaluations of the Basin's water levels. The proposed conversion plans for these three wells would include completing two inch diameter schedule 80 PVC monitoring wells within the existing well casings, with each monitoring well having a sand pack and a sanitary seal for the upper 50 feet. Pressure transducer dataloggers may be purchased and installed on these wells to collect data. Destruction of the Darwin well can proceed because data from that well is not critical, since there are numerous other monitoring wells located in this same part of the Basin.

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

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

MEMBER	ALTERNATE	REPRESENTING
Director Paul Bruno	N/A	Coastal Subarea Landowner
Director Craig Anthony	Eric Sabolsice	California American Water
Director Eric Sabolsice	Brian Bruce (effective January 2012)	
Director Bob Costa	Gary Cursio	Laguna Seca Subarea Landowner
Director Bob Brower	Jeanne Byrne	MPWMD
Mayor Dave Pendergrass	Steve Matarazzo	City of Sand City
Supervisor Dave Potter	Jane Parker	Monterey County (MCWRA)
Mayor Jerry Edelen	Kristin Clark	City of Del Rey Oaks

Mayor Chuck Della Sala	Libby Downey	City of Monterey
Mayor Felix Bachofner succeeded by		
Mayor Ralph Rubio	Dennis Alexander	City of Seaside

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

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

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

As reported in Section E of the 2010 and 2011 Annual Reports, the MPWMD, City of Seaside, MCWD, and Watermaster developed an MOU to add an additional 68.8 acre-fee of in lieu replenishment to the City of Seaside's total in lieu replenishment for Water Year 2009/2010. This MOU was finalized and executed in early 2012 and resulted in a revision to the Replenishment Account balance sheet for Water Year 2009/2010.

F. Violations of the Decision and any corrective actions taken

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

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

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

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

G. Watermaster administrative costs

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

H. Replenishment Assessments

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

Alternative and Standard Producers report their production amounts from the Basin to the Watermaster on a quarterly basis. Based upon the reported production for WY 2013, CAW's Replenishment Assessment for Overproduction in excess of its share of the Natural Safe Yield is $1,656,612.48, and for Overproduction in excess of its share of the Operating Yield is $724,229.48. The City of Seaside's Replenishment Assessment for its Municipal System for Overproduction in excess of its share of the Natural Safe Yield is $128,755.48, and for overproduction in excess of its share of the Operating Yield is $108,026.23. The City of Seaside did not exceed its Alternative Production Allocation for its Golf Course System production. A summary of the calculations for Replenishment Assessment for WY 2013 is contained in Attachment 5.

I. All components of the Watermaster budget

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

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

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

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

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

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

Copies of the sampling results are contained in Attachment 7. Analysis of the results indicate no evidence of water quality changes indicative of seawater intrusion at the locations and depths sampled in the coastal areas of the basin. [NOTE: DATA TO COMPLETE THE REPORT THAT WILL GO INTO ATTACHMENT 7 WAS STILL BEING RECEIVED AND COMPILED BY MPWMD AS OF 11/8/13. THE REPORT

WILL LIKELY NOT BE FINISHED UNTIL NEARLY THE END OF NOVEMEBER. IT WILL BE INSERTED INTO THE ANNUAL REPORT AT THAT TIME.]

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

Management and Monitoring Program Work Plan

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

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

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

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

Basin Management Database

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

Enhanced Monitoring Well Network

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

Basin Management Action Plan (BMAP)

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

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

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

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

Seawater Intrusion Response Plan

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

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

Seawater Intrusion Analysis Report

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

HydroMetrics had nearly completed preparing the Draft Seawater Intrusion Analysis Report (SIAR) for Water Year 2012-2013 on November 7, 2013 when their computer system was disabled by a major virus problem. Consequently it was not possible to either include the Executive Summary from the Draft SIAR in this Preliminary Draft of the Annual Report, or to post the complete Draft SIAR on the Watermaster's website, as originally planned. HydroMetrics is working on resolving the virus problem and should hopefully be able to provide the Draft SIAR in the near future.

The SIAR examines the "health" of the Basin with regard to whether or not there are any indications that seawater intrusion is either occurring or is imminent. Previous SIARs have stated that depressed groundwater levels, continued pumping in excess of recharge and fresh water inflows, and ongoing seawater intrusion in the nearby Salinas Valley all suggest that seawater intrusion could occur in the Seaside Groundwater Basin. In spite of these factors, the previous SIARs stated that neither the Piper nor the Stiff Diagrams indicated the presence of seawater intrusion in the existing monitoring wells. HydroMetrics will be reporting these same findings and conclusions in the 2013 SIAR.

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

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

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

Aquifer Cross-Contamination Investigation

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

- For the 261 wells that were assessed, no problems related to maintenance or abandonment were evident from this work.
- 18 wells in the coastal zone were found to either have been completed in two aquifer zones or to have been drilled through the upper aquifer and completed in the deeper aquifer. These are potential conduits for seawater intrusion, as wells screened in two aquifers potentially provide a direct connection and wells completed in the deeper zone could contribute to cross-aquifer contamination through improperly constructed or failed seals. The 18 identified wells are currently being used as production, backup production, or monitoring wells.
- If seawater intrusion is detected in the locality of one or more of these wells at some future date, it will be necessary to perform focused evaluation to inspect the integrity of well materials and determine the effects of well completions on the movement of seawater between aquifers at specific wells on a case by case basis. Seawater

intrusion has not been detected or reported in the locality of any of these wells. Therefore, no further investigative work is warranted at this time.

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

Groundwater Modeling

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

Revising Protective Water Levels

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

California American Water Replenishment Repayment Plan

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

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

CALIFORNIA AMERICAN WATER REPLENISHMENT SCHEDULE

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

A2. Watermaster and California American Water agree that the volume of artificial or in-lieu replenishment shall be based on a running five (5) Water Year average. Should the average volume of artificial or in-lieu replenishment calculated by the Watermaster be less than 700 acre-feet annually and if the Watermaster declares that water for Artificial Replenishment is available from sources other than the CAW Water Supply Project, Watermaster shall have the option of requiring CAW to pay a part of CAW's Outstanding Replenishment Assessment for the purpose of providing Watermaster with funds to obtain Artificial Replenishment in sufficient quantities to replenish that quantity not provided via in-lieu replenishment.

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

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

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

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

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

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

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

1. Protective Elevations Unchanged. The protective groundwater level elevations developed for the Watermaster by HydroMetrics in 2009 remain reasonable targets for groundwater management based on the most recent modeling and should not be modified.
2. Replenishment Schedule Goal. Cal Am's Board-approved 25 year repayment replenishment program consists of Cal-Am pumping 700 Acre Feet per Year (AFY) less than its Decision-allowed natural safe yield amount (774 AFY rather than the Decision-allowed 1,474 AFY). The Replenishment Schedule is estimated to begin sometime in 2018, following completion of the Monterey Peninsula Water Supply Project. The purpose of Cal-Am's Replenishment Schedule is to return to the Basin the quantity of water that Cal-Am has over pumped from the Basin. Cal-Am's Replenishment Schedule is not intended to achieve protective water level elevations in the Basin.
3. 25-Year Replenishment Schedule Simulation. Cal-Am's 25-year Replenishment Schedule will increase groundwater elevations in the shallow and deep aquifer coastal wells compared to the Baseline (i.e., no replenishment water), but in almost all locations falls short of achieving protective elevations in these wells within the replenishment period.
4. 25 Years to Achieve Protective Elevations Simulation. To achieve protective groundwater level elevations within 25 years would require the complete elimination of all Standard and all Alternative Producer pumping from the Basin at all wells. This in-lieu replenishment approach would require an overall pumping reduction of just over 2,000 AFY.
5. 25-Year Replenishment Schedule with Injection Simulation. When combined with Cal-Am's 700 AFY Replenishment Schedule, protective elevations can be achieved at all of the coastal wells by injecting and leaving in the Basin an additional 1,000 AFY of artificial replenishment water. This simulation injected water at the existing ASR wells located at the Santa Margarita and Seaside Middle School sites. Standard Producers, other than Cal Am, could continue to pump at their Decision-allowed levels. Alternative Producers could continue pumping at their 2011 rates.
6. Simulation Results Comparison. Injection of artificial replenishment water appears to require less water to achieve protective elevations than the in-lieu replenishment approach described above in item 4.

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

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

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

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

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

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

quantity of water for replenishment. However, any water savings would have the potential to indirectly provide a source of water to replenish the Seaside Basin by injection, by reducing the amount of water Cal Am would need from the Regional desalination plant to meet its demands.

7. City Diversions of Stormwater to MRWPCA to Increase GWRP Quantities. If MRWPCA is successful in increasing the quantity of water that its GWRP can supply by accepting diversions of flows from its member entities, this would increase the GWRP's potential to provide a source of water that could be injected and left in the Basin.
8. Possible Initially Unused Capacity of Cal Am's Regional Desalination Plant. If it is found that there is unused capacity in the Regional desalination plant in its early years of operation that unused capacity could provide a source of water that could be injected and left in the Basin.

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

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

The principle conclusions resulting from this modeling work are:

1. Two injection locations near the coast were modeled and it was found that either site would be equally suitable as a coastal injection location. Thus, the specific location near the coast does not appear to be a critical issue.

2. Average groundwater elevations in the coastal monitoring wells are similar regardless of whether coastal injection occurs seasonally (December through May) or year around (each month of the year). Thus, either year around or seasonal injection would produce similar results in terms of raising groundwater levels.

3. Coastal groundwater levels reach protective elevations faster in response to coastal injection than in response to injection at existing inland ASR sites. Depending on the well, protective groundwater elevation monitoring wells in the deep Santa Margarita aquifer reach protective elevations one to ten years sooner in response to coastal injection compared to their response to inland injection. The shallow protective groundwater elevation monitoring wells reach protective elevations at similar times with both coastal and inland injection.

4. Approximately 850 AFY of coastal injection would be needed to achieve results similar to injecting 1,000 AFY at the inland location over a 25 year injection period (until 2041). After protective groundwater elevations have been reached by injecting 1,000 AFY at the coast, 900 AFY for 7.5 years, and then 850 AFY is required to maintain groundwater levels above protective elevations.

5. Protective elevations can be achieved within five years if 1,900 AFY is injected at the coastal location. After protective groundwater elevations have been reached by injecting 1,900 AFY at the coast for five years, injection rates can be ramped down to 850 AFY by year 2029 to maintain protective elevations. No evaluation was made as to how much water would need to be injected at the inland location in order to achieve protective elevations within five years.

6. After protective groundwater elevations have been reached, it will be necessary to continue injecting water beyond 2041 to maintain groundwater levels above protective elevations. This quantity will very slowly decrease as natural recharge replenishes the Basin. No evaluation was made of how much continued injection would be required after year 2041.

7. While coastal injection appears to have some small benefits compared to inland injection, there would be substantial additional land acquisition and infrastructure costs to install coastal injection wells compared to using the inland injection wells which are already included in Cal Am's Monterey Peninsula Water Supply Project.

8. While the injection of large amounts of water can relatively rapidly achieve protective elevations, the cost to purchase this water would likely be substantial.

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

K. Conclusions and Recommendations

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

As described in Section J above, information from the Enhanced Monitoring Well Network is being utilized to detect any seawater intrusion. The response actions described in the Watermaster's Seawater Intrusion Response Plan, which was contained 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 13, 2013
AGENDA ITEM:	7
AGENDA TITLE:	Further Discussion of Geophysical Imaging of Saltwater Intrusion
PREPARED BY:	Robert Jaques, Technical Program Manager

SUMMARY:

At its June 2013 meeting the TAC received a presentation from Adam Pidlisecky, a Professor from the University of Calgary who is collaborating with Professor Rosemary Knight of Stanford University on the research she is doing in the Monterey Bay area related to saltwater intrusion.

This research focuses on the development of geophysical methods for groundwater evaluation and management, and the challenge of imaging (non-invasively mapping out) saltwater intrusion along the California coast. The attached background information was provided in the June TAC agenda packet.

Ms. Knight and Mr. Pidlisecky report that the geophysical data set produced by their work from a section of the coast between Marina and Seaside clearly shows the spatial distribution of saltwater and freshwater underlying the coastal region, and that these imaging results are in excellent agreement with what is seen in the Watermaster's four Sentinel wells. Based on this they feel that this method could potentially be used to map out saltwater intrusion over large distances along the coast and inland.

Following that presentation the TAC briefly discussed the topic with Professor Pidlisecky, but did not appear to indicate an interest in pursuing this technology at this time, other than Mr.Sabolsice's comment that it might be useful to Cal Am in siting the intake wells its proposed desalination plant. However, at the October Budget and Finance Committee meeting Mr. Matarazzo of Sand City asked that the TAC further research this matter. Consequently, a conference call was arranged with Ms. Knight, Mr. Pidlisecky, Derrik Williams, Joe Oliver, and me participating to discuss this topic. Notes from that conference call are attached.

This item is on today's agenda for TAC discussion and to provide the Technical Program Manager with direction on what the TAC would like to do regarding this technology.

ATTACHMENTS:	1. Background Information 2. Notes from conference call
RECOMMENDED ACTION:	None required – information only

Looking Beneath A Salt-Water Intrusion: Geophysics For Improved Groundwater Management

Prepared by Adam Pidlisecky
Associate Professor
Department of Geoscience
University of Calgary

In the Summer of 2011 and Fall of 2012, two large scale electrical resistivity tomography (ERT) surveys were performed along the coast of Monterey Bay between Seaside CA, and Marina, CA. The surveys covered approximately 7-km and were designed to image the salt-water intrusion, and associated geology in the Salinas and Seaside basins. ERT is a non-invasive geophysical imaging approach that enables evaluation of the sub-surface electrical resistivity structure, which is largely dependent on fluid chemistry (e.g. salt water), and lithology (e.g. clay) and is therefore an ideal tool for understanding the extent and controls on saltwater intrusion. The survey line intersected four deep monitoring wells that were installed in 2007 as part of a groundwater-monitoring program aimed at detecting saltwater intrusion. The coincident ERT data were acquired at a fraction of the cost required for monitoring well installation. Moreover these ERT data provide a continuous 2D image along the entire transect, to a depth of approximately 150m. In this study, the ERT models allow us to: 1) delineate saltwater impacted regions of the upper aquifer, and 2) show the impact of changing depositional environments on the distribution of saltwater. The ERT data suggest that the geologic heterogeneity is far greater than expected based on the 1-D profiles provided by the four boreholes.

For this application, the ERT data collection represents a tremendous value-added component to the study of this, and any groundwater basin impacted by saltwater intrusion. It is clear that there are hydrogeologically significant features that are missed in the borehole-based interpretation.

Teleconference Call Notes

Topic: Geophysical Imaging
Date: October 23, 2013
Participants: Watermaster – Bob Jaques
Stanford University – Rosemary Knight
University of Calgary – Adam Pidlisecky
HydroMetrics- Derrik Williams
MPWMD – Joe Oliver

1. Mr. Jaques opened the discussion and described the Watermaster's interest in determining if there were opportunities for the Watermaster to benefit from, and potentially coordinate with Ms. Knight and Mr. Pidlisecky on, work to locate seawater intrusion in the coastal groundwater basins.
2. Ms. Knight said that it might be possible to get a sense of the location of the seawater intrusion front offshore from the on-land imaging data.
3. Mr. Pidlisecky said that off-shore imaging is still in the basic research phase. Imaging can take into account what is adjacent to the monitoring plane. With stratigraphic data the imaging may be sensitive to up to 500 meters away from the monitoring plane. More work considerably deeper will need to be performed to see how well this can be done. Seismic survey data may be needed to get better results.
4. Mr. Pidlisecky said that in Watsonville his group instrumented the casing of a well with a permanently installed resistivity array to continuously, rather than intermittently as is the case with induction logging, look for small changes in water quality over time. He explained that a resistivity array can detect much smaller changes in water quality than other measurement technologies can.
5. Ms. Knight said she would like to partner with agencies doing groundwater management and help them manage groundwater basins by assisting with locating seawater intrusion fronts using geophysical imaging. She said that nuclear magnetic resonance (NMR) imaging can be used to assess hydraulic conductivity in existing wells, but that resistivity arrays are not practical for retrofitting into existing wells. She said that wells need to have a PVC casing in order to use NMR imaging. Mr. Oliver said that the MPWMD monitoring wells are 2" in diameter and are PVC cased in both the Santa Margarita and Paso Robles aquifers up to 850' deep.
6. Mr. Williams asked when Mr. Pidlisecky would be completing his current work on doing 300 meter deep monitoring, and Mr. Pidlisecky responded that would probably be around November 11. Mr. Williams suggested that the Watermaster TAC invite Mr. Pidlisecky back to make a presentation on this work once it is completed.
7. Mr. Jaques asked if this technology could be field-evaluated using the already-intruded Salinas Groundwater Basin where the location of the seawater intrusion interface is already known based on monitoring well data. Mr. Pidlisecky said that it would be necessary to have transect stations at about 20 meter intervals to do this, and that they need to be connected to each other, so getting the necessary right-of-way and permissions to set up such an would be a challenge.
8. Mr. Williams said that getting more hydraulic conductivity data would be helpful in improving the accuracy of the Watermaster's groundwater model. Currently the model has to rely on assumed values from the existing well data.
9. Mr. Williams said he was most interested in the differential data between geophysical imaging done at periodic intervals. The change in groundwater salinity from one year to the next is more informative than the groundwater salinity in any one year. This is particularly true if the geophysical imaging is able to see offshore salinity. If there is high salinity groundwater offshore, the annual change in offshore salinity will give the Watermaster a good indication of how quickly seawater might be moving towards the basin.
10. Mr. Pidlisecky said he has no work currently planned for out-of-plane imaging, but would like to pursue this once his November work is completed.
11. Mr. Jaques suggested having a further presentation to the Watermaster TAC in January 2014, and Ms. Knight said she could attend to make the presentation. Mr. Jaques said he would prepare notes

from today's conference call and send them out to the participants to have them edited so they can be included in the TAC agenda materials.

SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE

** * * AGENDA TRANSMITTAL FORM * * **

MEETING DATE:	November 13, 2013
AGENDA ITEM:	8
AGENDA TITLE:	Schedule
PREPARED BY:	Robert Jaques, Technical Program Manager

SUMMARY:

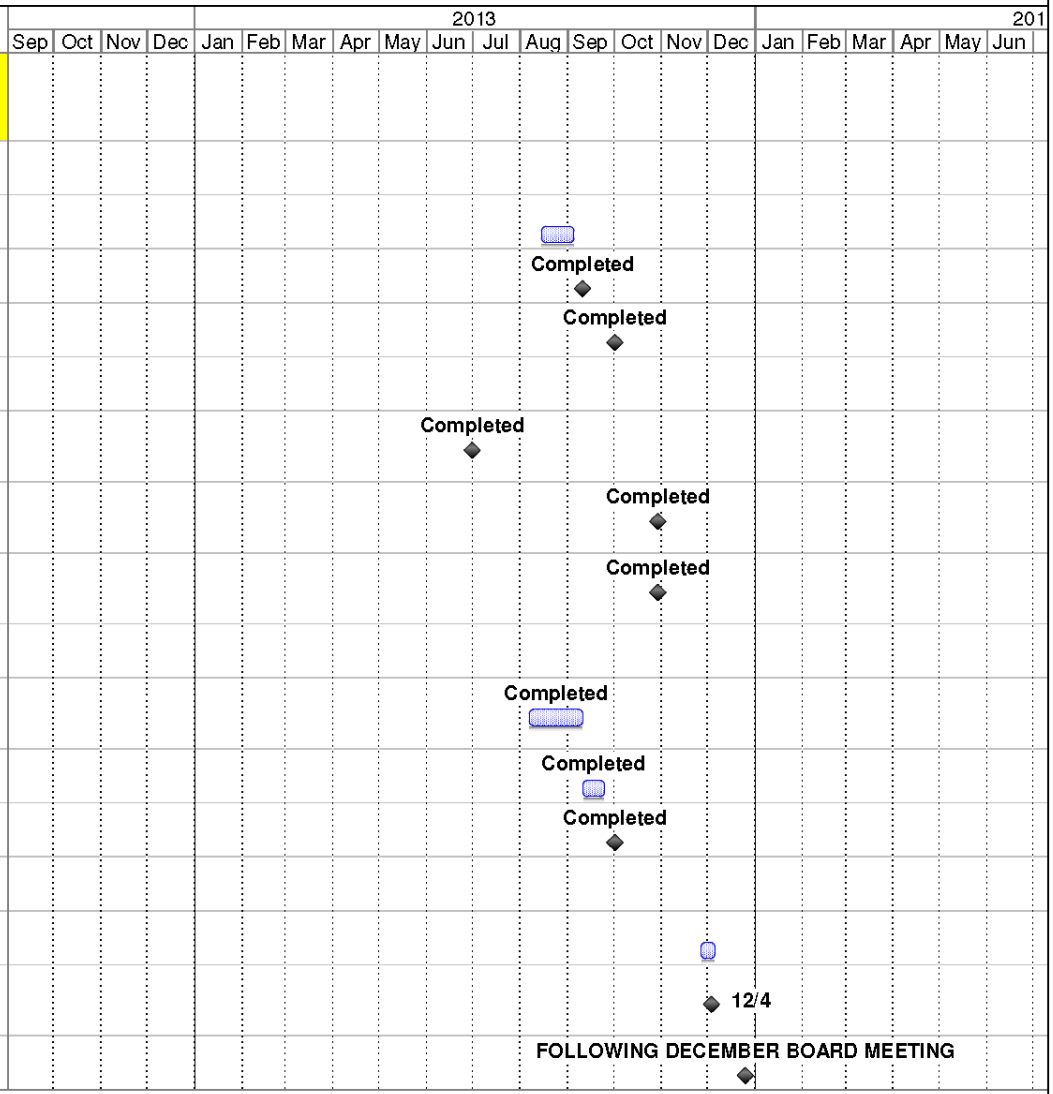
As a regular part of each monthly TAC meeting, I will provide the TAC with an updated Schedule of the activities being performed by the Watermaster, its consultants, and the public entity, MPWMD, which is performing certain portions of the work.

A. Attached is the most recent update of the Work Schedule for the remainder of FY 2013.

B. Attached is the proposed Work Schedule for FY 2014.

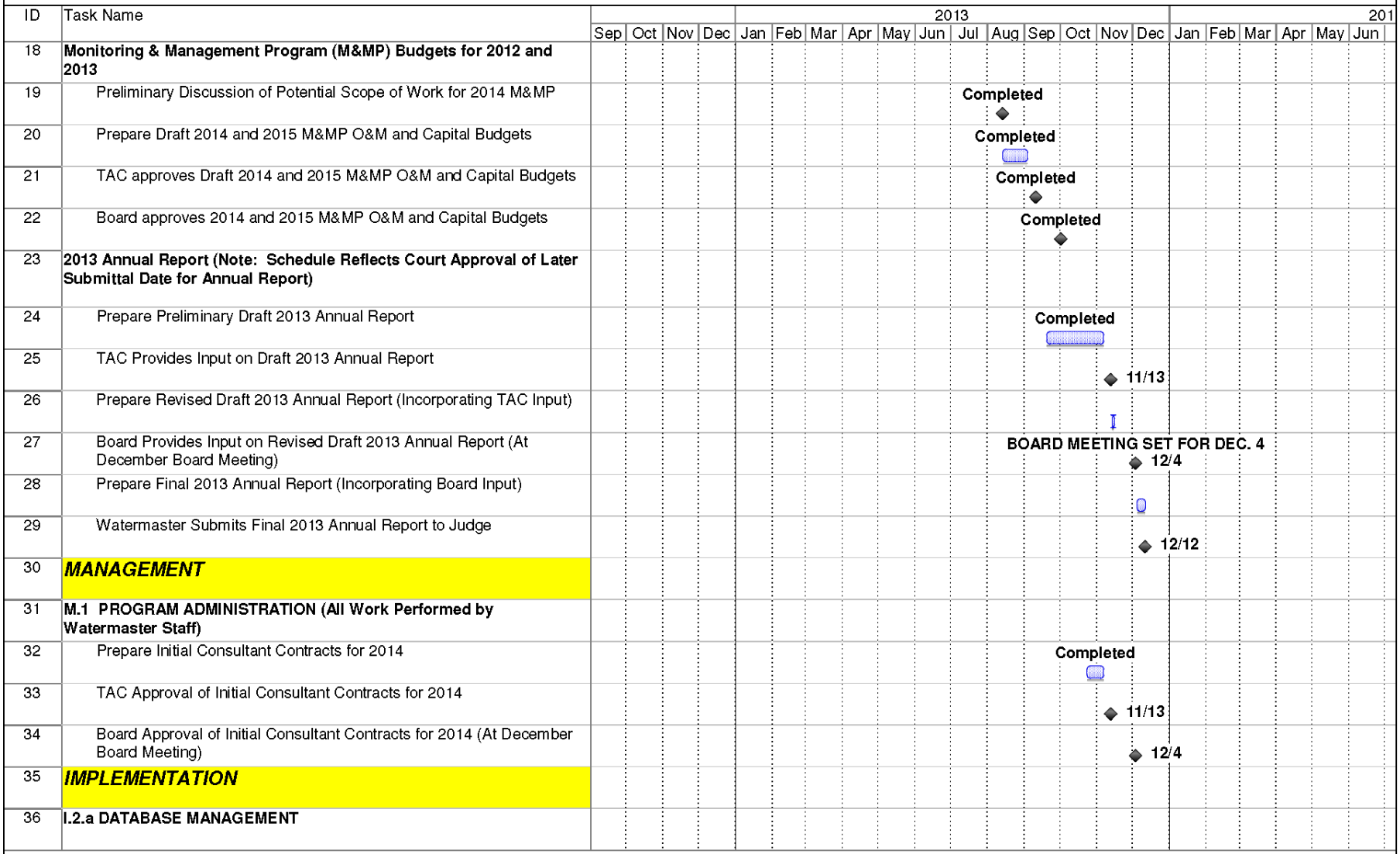
ATTACHMENTS:	Schedules of Work Activities for FY 2013 and FY 2014
RECOMMENDED ACTION:	Provide Input to Technical Program Manager Regarding Any Corrections or Additions to these Schedules

Seaside Basin Watermaster
Monitoring and Management Program
2013 Work Schedule

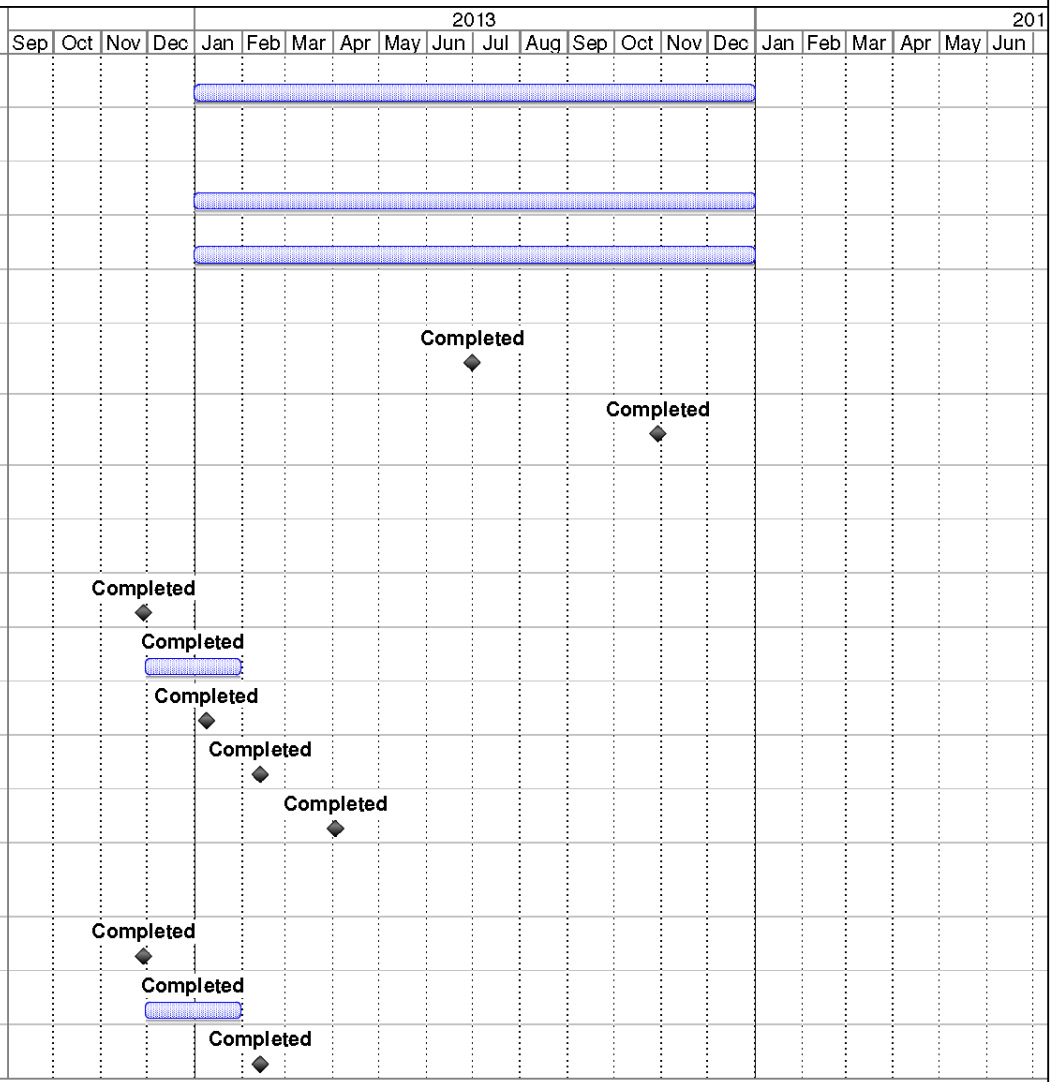


ID	Task Name
1	***CRITICAL PROJECT MILESTONES ASSOCIATED WITH TAC, BOARD, AND/OR CONSULTANT WORK***
2	**2014 Administration, Operations and Replenishment Budgets**
3	Prepare M&MP Draft Budgets (Same as Task 19)
4	TAC Approves M&MP Budgets (Same as Task 20)
5	Board Approves M&MP Budgets (Same as Task 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	TAC Provides Assistance to B&F Committee in Development of 2014 Water Year Replenishment Assessment Unit Cost
12	B&F Committee Develops Replenishment Assessment Unit Cost for 2014 Water Year
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 December Meeting)
17	Watermaster Levies Replenishment Assessment for 2013

Seaside Basin Watermaster
Monitoring and Management Program
2013 Work Schedule

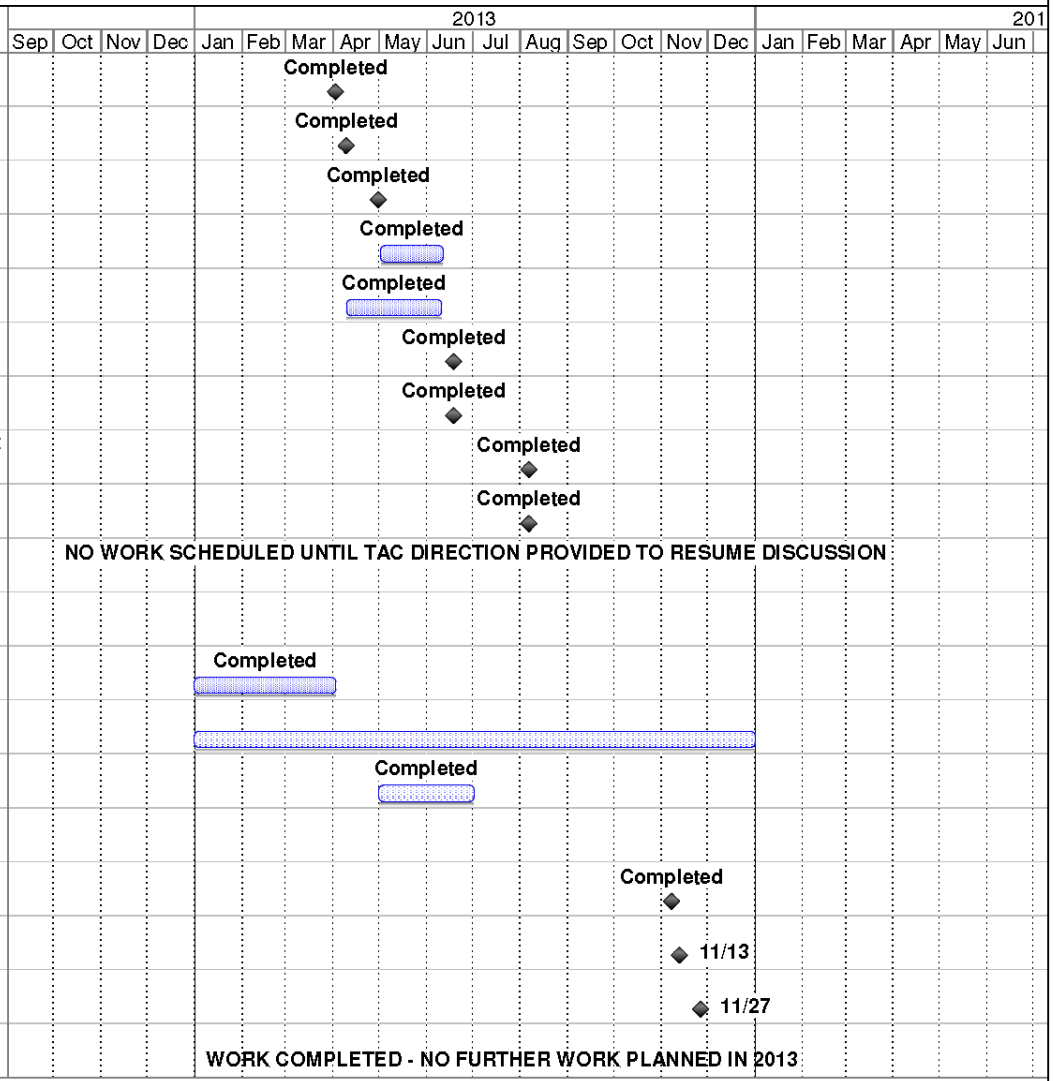


Seaside Basin Watermaster
Monitoring and Management Program
2013 Work Schedule



ID	Task Name
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 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

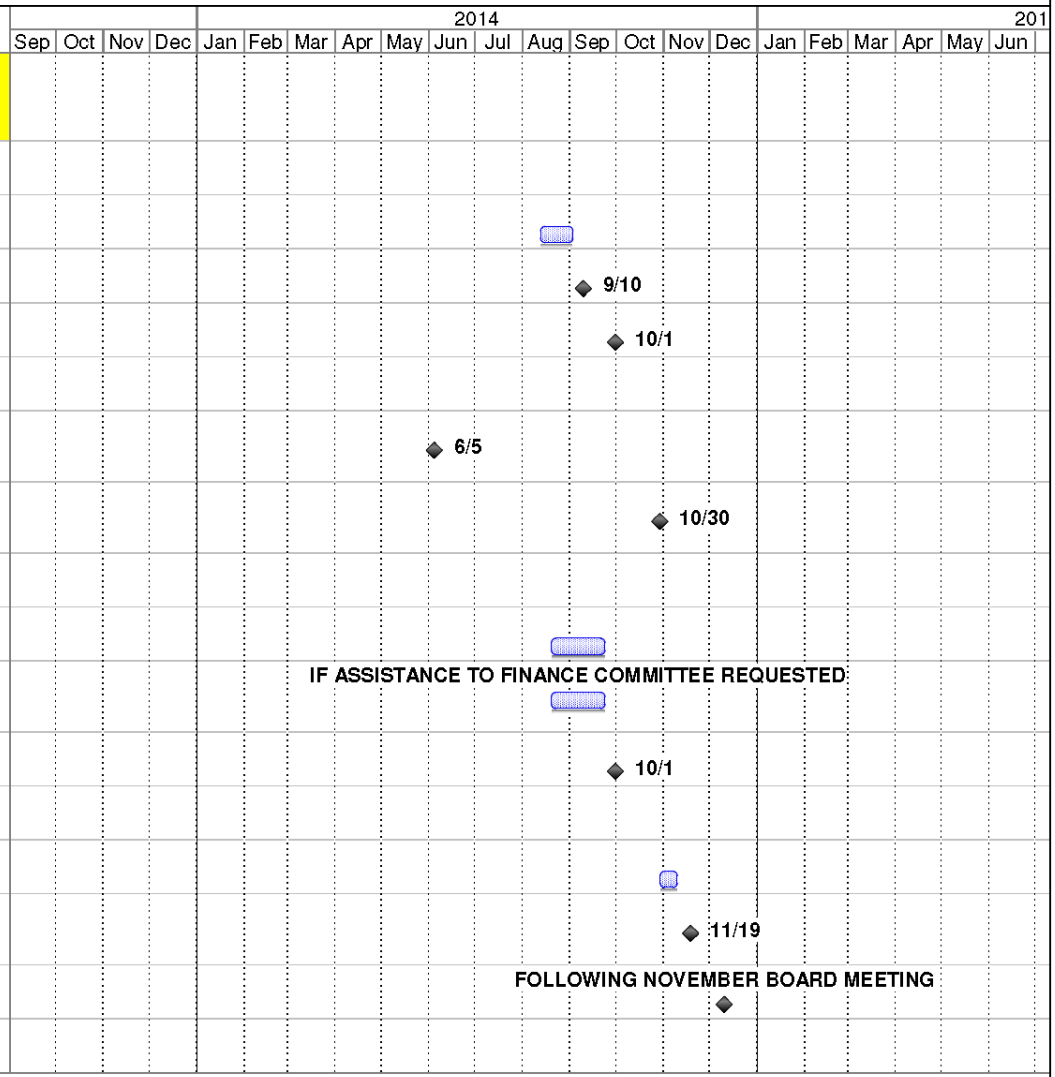


Seaside Basin Watermaster
Monitoring and Management Program
2013 Work Schedule

ID	Task Name	2013																201					
		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
74	**I.4.e Refine and/or Update the SIRP**						**NOT NECESSARY**																

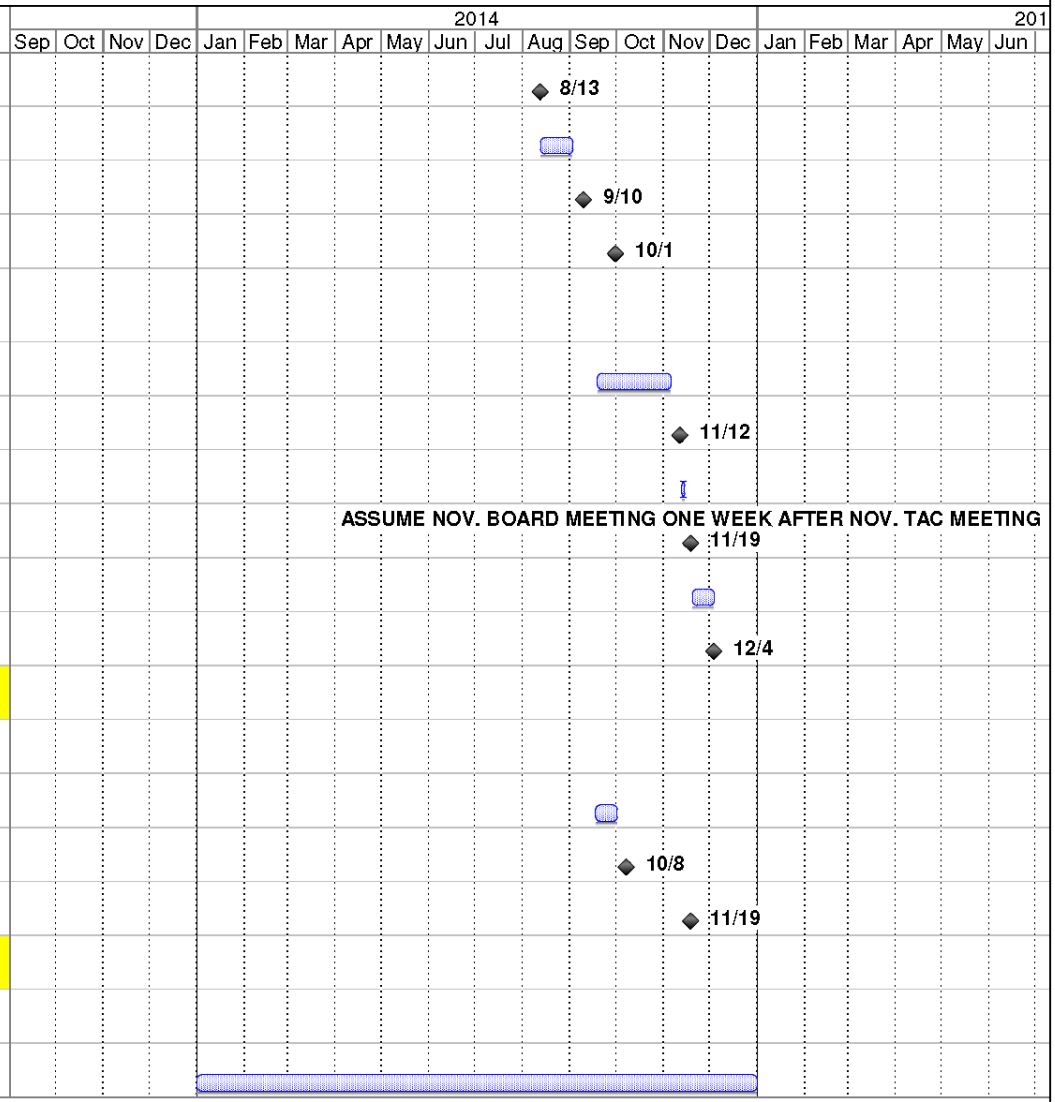
Seaside Basin Watermaster
Monitoring and Management Program
2014 Work Schedule

ID	Task Name
1	***CRITICAL PROJECT MILESTONES ASSOCIATED WITH TAC, BOARD, AND/OR CONSULTANT WORK***
2	**2015 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 Annual Water Production, Water Level, and Water Quality Report for 2013 (Same as Task 42)
9	**Replenishment Assessment Unit Costs for Water Year 2014**
10	B&F Committee Develops Replenishment Assessment Unit Cost for 2014 Water Year
11	If Requested, TAC Provides Assistance to B&F Committee in Development of 2014 Water Year Replenishment Assessment Unit Cost
12	Board Adopts and Declares 2014 Water Year Replenishment Assessment Unit Cost
13	**Replenishment Assessments for Water Year 2014**
14	Watermaster Prepares Replenishment Assessments for Water Year 2014
15	Watermaster Board Approves Replenishment Assessments for Water Year 2014 (At November Meeting)
16	Watermaster Levies Replenishment Assessment for 2014
17	**Monitoring & Management Program (M&MP) Budgets for 2015 and 2016**



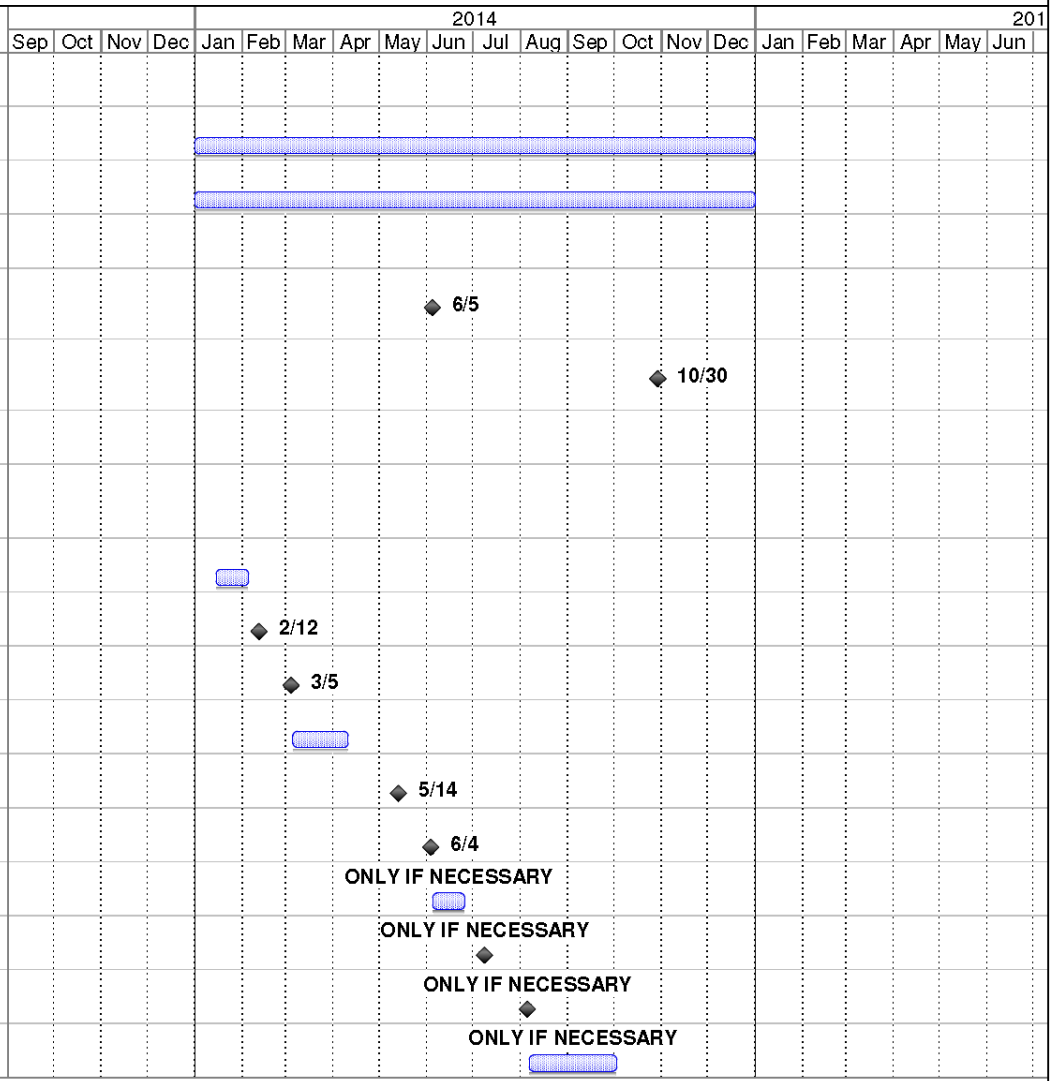
Seaside Basin Watermaster
Monitoring and Management Program
2014 Work Schedule

ID	Task Name
18	Preliminary Discussion of Potential Scope of Work for 2015 M&MP
19	Prepare Draft 2014 and 2015 M&MP O&M and Capital Budgets
20	TAC approves Draft 2015 and 2016 M&MP O&M and Capital Budgets
21	Board approves 2015 and 2016 M&MP O&M and Capital Budgets
22	**2013 Annual Report (Note: Schedule Reflects Court Approval of Later Submittal Date for Annual Report)**
23	Prepare Preliminary Draft 2014 Annual Report
24	TAC Provides Input on Draft 2014 Annual Report
25	Prepare Revised Draft 2014 Annual Report (Incorporating TAC Input)
26	Board Provides Input on Revised Draft 2014 Annual Report (At November Board Meeting)
27	Prepare Final 2014 Annual Report (Incorporating Board Input)
28	Watermaster Submits Final 2014 Annual Report to Judge
29	***MANAGEMENT***
30	**M.1 PROGRAM ADMINISTRATION (All Work Performed by Watermaster Staff)**
31	Prepare Initial Consultant Contracts for 2015
32	TAC Approval of Initial Consultant Contracts for 2015
33	Board Approval of Initial Consultant Contracts for 2015 (At November Board Meeting)
34	***IMPLEMENTATION***
35	**I.2.a DATABASE MANAGEMENT**
36	**I.2.a.1 Conduct Ongoing Data Entry/Database Maintenance**



Seaside Basin Watermaster
Monitoring and Management Program
2014 Work Schedule

ID	Task Name
37	**I.2.b DATA COLLECTION PROGRAM**
38	**I.2.b.2 Collect Monthly Water Levels (MPWMD)**
39	**I.2.b.3 Collect Quarterly Water Quality Samples (MPWMD)**
40	**I.2.b.6 Reports (from MPWMD)**
41	Watermaster Prepares Combined Quarterly Water Production, Water Level, and Water Quality Reports for 1st & 2nd Quarters
42	Watermaster Prepares Annual Water Production, Water Level, and Water Quality Report for 2014
43	**I.3.a ENHANCED SEASIDE BASIN GROUNDWATER MODEL**
44	**I.3.a.1 Update (and Potentially Recalibrate) Existing Groundwater Model**
45	Prepare RFS for HydroMetrics to Update Model and Check Accuracy
46	TAC Approves RFS to HydroMetrics
47	Board Approves RFS to HydroMetrics
48	HydroMetrics Updates Model and Checks Accuracy
49	HydroMetrics Presents Draft Model Update Report to TAC
50	HydroMetrics Presents Model Update Report to Board
51	Prepare RFS for HydroMetrics to Recalibrate Model
52	TAC Approves RFS to HydroMetrics
53	Board Approves RFS to HydroMetrics
54	HydroMetrics Recalibrates Model



Seaside Basin Watermaster
Monitoring and Management Program
2014 Work Schedule

ID	Task Name	2014																						201
		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 Draft Model Recalibration Report to TAC													ONLY IF NECESSARY										
56	HydroMetrics Presents Model Recalibration Report to Board														ONLY IF NECESSARY									
57	**I.3.c Refine and/or Update the BMAP**		NO WORK SCHEDULED UNTIL TAC DIRECTION PROVIDED TO RESUME DISCUSSION																					
58	**I.4.c Annual Seawater Intrusion Analysis Report (SIAR)**																							
59	HydroMetrics Provides Draft SIAR to Watermaster															11/6								
60	TAC Approves Annual Seawater Intrusion Analysis Report (SIAR)															11/12								
61	Board Approves Annual Seawater Intrusion Analysis Report (SIAR)															11/19								
62	**I.4.d Complete Preparation of Seawater Intrusion Response Plan (SIRP)**					WORK COMPLETED - NO FURTHER WORK PLANNED IN 2014																		
63	**I.4.e Refine and/or Update the SIRP**						NOT NECESSARY																	

SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE

** * * AGENDA TRANSMITTAL FORM * * **

MEETING DATE:	November 13, 2013
AGENDA ITEM:	9
AGENDA TITLE:	Other Business
PREPARED BY:	Robert Jaques, Technical Program Manager

SUMMARY:
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.

ATTACHMENTS:	None
RECOMMENDED ACTION:	None required – information only

SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE

** * * AGENDA TRANSMITTAL FORM * * **

MEETING DATE:	November 13, 2013
AGENDA ITEM:	10
AGENDA TITLE:	Set Next Meeting Date
PREPARED BY:	Robert Jaques, Technical Program Manager

SUMMARY:

There is currently no TAC business that needs to be conducted in December, so there should be no need for a December TAC meeting.

I recommend that the next TAC meeting be held on the regular 2nd Wednesday in January, January 8, 2014.

ATTACHMENTS:	None
RECOMMENDED ACTION:	Approve skipping having a TAC meeting in December and holding the next TAC meeting on January 8, 2014