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, January 11, 2012
MEETING TIME: 1:30 p.m.
Monterey Regional Water Pollution Control Agency Offices
5 Harris Court, Building D (Ryan Ranch)
Monterey, CA 93940

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

OFFICERS
Chairperson: Diana Ingersoll, City of Seaside
1st Vice-Chairperson: Eric Sabolsice, California American Water Company
2nd Vice-Chairperson: Rob Johnson, MCWRA

MEMBERS

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

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7. Set Next Meeting Date:	
The next regular meeting will be held on Wednesday February 8, 2012 at 1:30 p.m. at the MRWPCA Board Room	

SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE

** * * AGENDA TRANSMITTAL FORM * * **

MEETING DATE:	January 11, 2012
AGENDA ITEM:	2.A
AGENDA TITLE:	Approve Minutes from November 9, 2011
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
November 9, 2011

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
Public Member – No representative
MCWRA – Rob Johnson (via telephone)
City of Del Rey Oaks – No representative
City of Sand City – Richard Simonitch
Coastal Subarea Landowners – No Representative

Watermaster
Technical Program Manager - Robert Jaques

Consultants
HydroMetrics – Georgina King

Others:
MPWMD – Dave Stoltz and Jon Lear
MRWPCA – Bob Holden and Brad Haggeman
Todd Engineers – Phyllis Stanin

The meeting was called to order at 1:34 p.m.

1. **Public Comments**

There were no public comments. Joe Oliver introduced Dave Stoltz, the new General Manager of the MPWMD.

2. **Administrative Matters:**

A. **Approve Minutes from September 14, 2011 Meeting**
Mr. Oliver requested that the words "…for WY 2011…" be inserted into the 1st sentence of the last paragraph in item 3 of the Minutes. On a motion by Mr. Oliver, seconded by Mr. Costa, the Minutes were unanimously approved with this correction.

B. **Report on Board Action Regarding the Public Member Position**
Mr. Jaques summarized the agenda packet material on this item. There were no questions or discussion on this item.

C. **Schedule of Board and TAC Meetings for 2012**
Mr. Jaques summarized the agenda packet material on this item. There were no questions or discussion on this item.

3. **Discuss and Take Potentially Take Action to Approve the 2011 Seawater Intrusion Analysis Report (SIAR)**

Mr. Jaques introduced Ms. King of HydroMetrics who made a summary presentation on this agenda topic, with the aid of PowerPoint slides (a copy of the slides is attached at the end of these Minutes).

In her presentation Ms. King included the following points:

- In performing the analysis, a number of lines of evidence are used to look for indications of seawater intrusion, including water types, Stiff diagrams, Piper diagrams, chloride trends, induction longing, and groundwater elevations.

- The Sand City Public Works and the York School wells had noticeably different Stiff diagram plots than the other wells, but these are not indicative of seawater intrusion. The SIAR recommends resampling the Sand City Public Works well to confirm the data obtained from the Water Year 2011 sample.

- The Sand City Public Works and Camp Huffman wells showed appreciable increases in chloride levels, but this is believed to be a localized phenomenon and is not indicative of seawater intrusion.

- All Wells had less than 330 mg/l of chloride.

- The PCA-W well showed an increasing trend in chloride level.

- Groundwater levels fell about five feet in the vicinity of the CAW production wells in the Northern Coastal Subarea.

- Water levels were below Protective Water Levels in most of the deep aquifer wells and in some of the shallow aquifer wells.

Mr. Oliver and Mr. Lear explained that ASR recharging in 2010 and 2011 likely influenced groundwater levels. Ms. King noted that the triennial pumping reduction also influences groundwater levels. Mr. Sabolsice commented that it likely will take some years for a clear understanding of the ASR impacts to be made. Ms. King said the Groundwater Model could be used to evaluate the impacts of ASR operations.

Mr. Oliver reported to Mr. Sabolsice that the MPWMD had not yet received the individual CAW well production data, and asked Mr. Sabolsice if he could assist in obtaining it, so it could be used in the SIAR. Mr. Oliver will email Mr. Sabolsice a specific request for the needed data.

Ms. King said she would like to add the ASR injection data, by well, to the SIAR. Mr. Oliver said he expected to be able to provide that information to her shortly.

Mr. Simonitch asked Ms. King if samples from the Aromas Sands aquifer had been sampled. Ms. King responded no, that this aquifer is not part of the Adjudication Decision.

Mr. Riedl asked if the SNG well, or any of the other wells near SBWM-MW-4, could be a potential cross-aquifer contamination source. Mr. Oliver responded that he did not believe so, because the SNG well is not screened in the Santa Margarita aquifer. Rather, it is screened in the Paso Robles aquifer.

Mr. Riedl asked what the Sand City Public Works well is used for. Mr. Simonitch responded that it is used only for landscape irrigation, and not for potable use. Ms. King commented that in the 1970s CAW had production wells in this area, and they also had higher chloride levels.

Mr. Riedl briefly discussed sampling protocol issues with Mr. Oliver and Mr. Lear.

Mr. Green asked if any water levels in the Purissima aquifer were above Protective Water Levels. Ms. King responded no. Mr. Green asked why no seawater intrusion was detected. Ms. King said that the location of the seawater intrusion front is not known, so we do not know when it will reach any of those wells.

Mr. Riedl recommended that a list of potential cross-aquifer contamination wells be included in the SIAR.

Mr. Oliver asked Ms. King to please re-post the SIAR to the HydroMetrics ftp site when the missing data has been filled in. The missing data is to be provided to Ms. King by early next week.

Mr. Jaques asked that comments on the SIAR be provided to Ms. King not later than the end of this week, so she can finalize the Report.

Mr. Oliver suggested editing the text to clarify that production data is for production wells listed in the Adjudication Decision. He suggested also listing the ramped-down Operating Safe Yield levels in accordance with the Decision. These lower the Operating Safe Yield of the Basin to 5,040 acre-feet per year.

4. Discuss and Provide Input on Preliminary Draft Watermaster 2011 Annual Report

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

Ms. Dadiw will be asked to ensure that the ASR injection quantities listed in Sections B and E of the Annual Report are consistent. Mr. Oliver said that the ASR injection and extraction quantities in Sections B and E may differ due to the timing of the water year dates used in preparing those sections. He will discuss this with Ms. Dadiw.

Mr. Riedl commented that the in-lieu quantities for Seaside's golf courses had not been included in the Replenishment Assessment discussion. Mr. Jaques asked Mr. Riedl to contact Ms. Dadiw directly on this, and offered to assist if there was any difficulty in getting this issue resolved.

Mr. Riedl said he would like to discontinue having to get water level data for the city of Seaside's Golf Course Reservoir Well. He reported that the depth sounders are being lost in the process, and there are other wells in that area that should provide sufficient water level data so this well could discontinue having level measurements made. Mr. Oliver said he would like to discuss alternative approaches with Mr. Riedl, and those two parties will discuss that separately. Mr. Jaques noted that any change to the water level monitoring requirement would need to be described in the Annual Report.

5. Progress Report on Implementing Changes to the Inputting and Management of Data in the Watermaster Database

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

Mr. Riedl asked if the response time for data requests from the Watermaster's web site Database tab would be made within ten days. Mr. Jaques said he was not aware of any specific time requirement on this matter, and that requests would be processed as quickly as feasible.

There were no other issues raised with regard to this agenda topic.

6. Progress Report on Investigating Wells for Cross-Aquifer Contamination Potential

Mr. Lear summarized the work to date on the cross-aquifer contamination investigation. He reported that he has field-located nearly all of the abandoned wells as well as the dual-aquifer cross-screened

wells still in use. He reported that the abandoned wells were inspected and proper abandonment procedures were confirmed to have been carried out. The still-in-use wells are being evaluated for cross-aquifer contamination potential. Thus far no problems have been identified. Mr. Lear said he would complete the work in early 2012 and at that time a Report will be prepared and provided to the TAC for review.

There was some discussion with regard to farm wells and the maps and other data sources the MPWMD has used to evaluate cross-aquifer contamination potential.

Mr. Green asked if one well was found that appeared to be a possible cross-aquifer contamination source, what would be the implication of this finding. Mr. Oliver responded that it would depend on well-specific information such as location, hydraulic head, size, use, etc.

7. Initial Consultant Contracts for FY 2012

D. **MPWMD RFS No. 2012-01**
E. **MPWMD RFS No. 2012-02**
F. **HydroMetrics RFS No. 2012-01**
G. **HydroMetrics RFS No. 2012-02**

Mr. Jaques summarized the agenda packet materials for these items.

Following brief discussion a motion was made by Mr. Costa, seconded by Mr. Riedl, that all four of the consulting contracts be recommended for approval by the Board. The motion passed unanimously.

8. Set Next Meeting Date

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

Following brief discussion a motion was made by Mr. Simonitch, seconded by Mr. Green, to approve the recommendation to not hold a TAC meeting in December, and to have the next TAC meeting on January 11, 2012. The motion passed unanimously.

9. Progress Report on MRWPCA Groundwater Replenishment Project

Mr. Jaques introduced Ms. Stanin of Todd Engineers who then made a presentation on the MRWPCA Groundwater Replenishment Project, with the aid of PowerPoint slides (a copy of the slides is attached at the end of these Minutes). In her presentation Ms. Stanin discussed the issues and topics listed on page 47 of the agenda packet.

She reported that both Coastal and Inland locations had been looked at for groundwater replenishment to be performed in both the Paso Robles and Santa Margarita aquifers. She said that the recharge methods that had been considered included spreading basins, vadose zone wells into the Aromas sands to percolate into the Paso Robles aquifer (the vadose zone is defined as the area from the ground surface to the water table, i.e. the "unsaturated zone"), and deep injection wells into the Santa Margarita aquifer, similar to those used by MPWMD in its ASR project.

The spreading basins and vadose zone wells were felt to be the best methods to pursue.

A steady-state, two-layer Model was developed to evaluate the Project's impacts on the Basin. That Model found that groundwater levels would rise throughout the Basin if Inland groundwater replenishment was performed. Mounding was found to be excessive with groundwater replenishment at the Coastal locations, so the Inland location is being pursued, near Eucalyptus Road east of General Jim Moore Boulevard.

There was discussion on a variety of topics including:

- Residence time before groundwater replenishment water reaches production wells
- The CEQA process
- Target aquifers for replenishment
- Quantities of water available for recharge, and storage capacity availability
- Right-of-way and approvals
- Status of California Department of Public Health Groundwater Recharge Regulations
- Possible benefits of Coastal injection wells under certain conditions
- Dilution water requirements
- Storage and Recovery Agreements
- Source of the recharge water

Field studies will be the next phase of work to obtain more data on aquifer properties. A groundwater monitoring program is also part of the proposed Project. Forecasted startup for the Project is late 2016, but funding is a key current constraint. The estimated capital cost to construct the Project is between $50 million and $70 million.

Mr. Sabolsice invited future progress reports to be made to the TAC on the Groundwater Replenishment Project. Mr. Haggeman asked if it would be appropriate to propose making a similar type of presentation to the Watermaster Board. Mr. Sabolsice and Mr. Riedl recommended that this be pursued.

Mr. Sabolsice requested that an item be put on the January 11, 2012 TAC meeting agenda for further discussion of Groundwater Replenishment Project issues.

10. Other Business

There were no other business topics discussed.

The meeting adjourned at 4:23 p.m.

UPDATE
GROUNDWATER REPLENISHMENT PROJECT

MONTEREY REGIONAL WATER POLLUTION CONTROL AGENCY (MRWPCA)

Watermaster Technical Advisory Committee Meeting
Presentation by Phyllis Stanin, Todd Engineers
November 9, 2011

Presentation Outline

- Project description
- Work completed to date
- Future field investigations
- Input on GWR Project

TODD ENGINEERS

Project Description

- 2,700 AF over 5 months (October through March) – 151 days
  - 17.88 AF/day
  - 4,047 gpm
  - 9 cfs
  - 5.8 MGD

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Seaside Basin

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Seaside Basin Wells

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Potential GWR Locations

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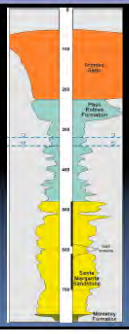
Target Aquifers



Unconfined Paso Robles

Confined Santa Margarita

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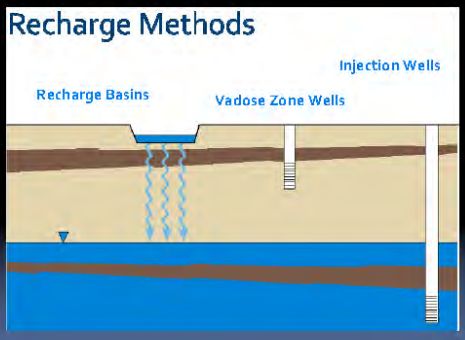
Recharge Methods



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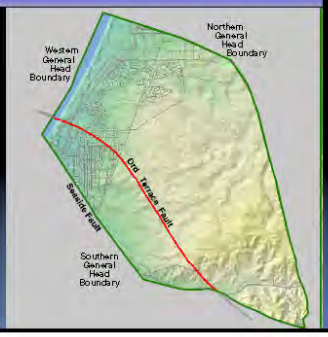
Steady-State Model



Two-layer model to analyze mounding from GWR wells

Layer 1 – Paso Robles
Layer 2 – Santa Margarita

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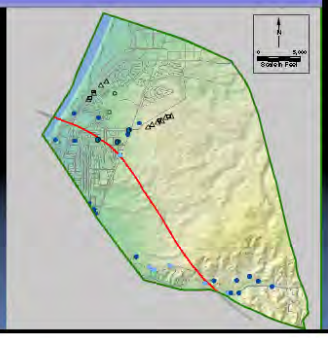
Mounding Analysis at Inland and Coastal Locations



Examined various recharge volumes and rates for both aquifers at both locations up to a total of 7,000 AFY

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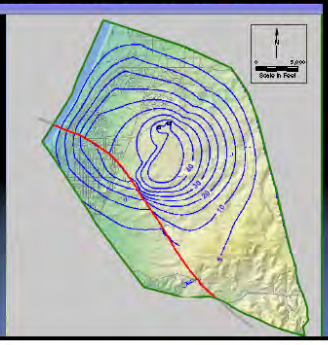
Inland Location Could Accommodate More Recharge



Santa Margarita Mounding

Inland:
3,226 AFY

Coastal:
0 AFY

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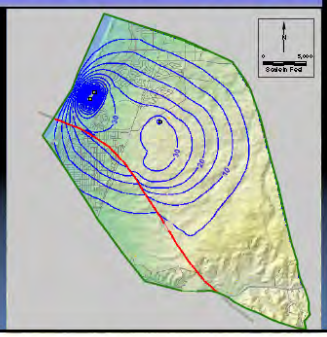
Mounding Excessive at Coastal Location for Several Scenarios



Santa Margarita Mounding

Inland: 1,613 AFY

Coastal: 2,581 AFY

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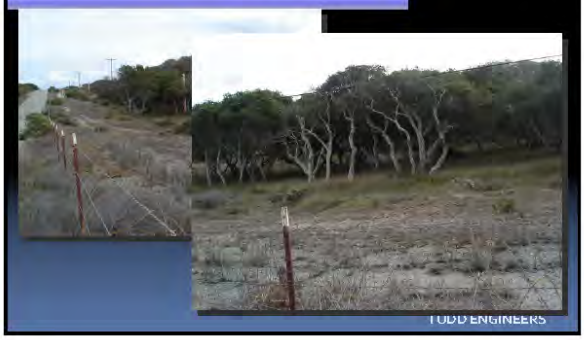
GWR Inland Location

TODD ENGINEERS

GWR Inland Location



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Monitoring Well FO-7

Thick, sandy vadose zone
Deep productive aquifers

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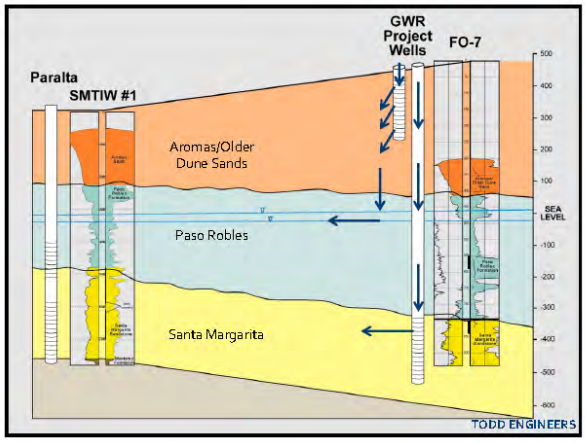

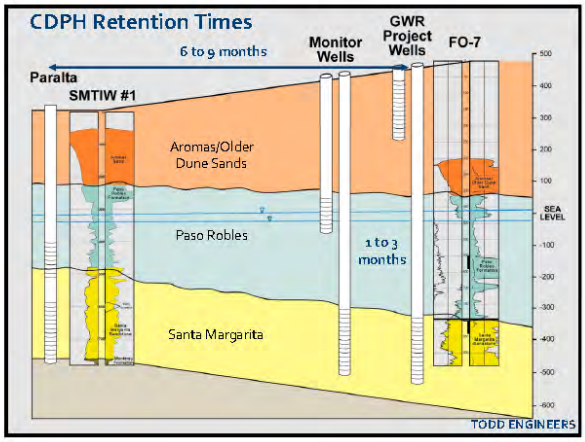

Watermaster Modeling and Conclusions

- Modeled inland location 2009
  - 6 vadose zone wells to Paso Robles
  - 2 injection wells to Santa Margarita
  - 2,600 AFY
- GWR provided more water to storage compared to most other scenarios
- GWR provided a continuous net outflow to the ocean
- Injection was most successful at raising water levels to protective levels
- Uncertainty on recovery of Paso Robles recharge from existing wells

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Groundwater Monitoring Program

- Nitrogen compounds
- Inorganic constituents
- Radionuclides
- Organic compounds, priority pollutants (metals and perchlorate)
- Disinfection by-products
- Lead and copper
- Constituents with DPH Notification Levels
- other

TODD ENGINEERS

Draft Overall GWR Workplan

Task	Resource	Start	Finish
9. Develop Groundwater Workplan	Todd	8/2/11	12/5/11
10. Design Well and Sampling Plan	Todd	1/2/12	2/24/12
11. Procure and Drill Test Monitoring Well	Todd	2/27/12	6/29/12
12. Water Sampling, Modeling, IAP & Approval of Injection and Sampling Plans	Todd/IAP	7/2/12	11/2/12
13. Design & Operate Pilot Injection Wells	Todd	1/1/13	8/18/14
14. Permits & Environmental Reviews	Young/Other	1/1/14	3/31/15
15. Pilot Injection Evaluation, Review & Acceptance	Todd/IAP/CDPH/ RWQCB	8/19/14	11/10/14
16. Detailed Design & Value Engineering	Todd/Other	8/19/14	2/16/15
17. Construction of Injection Facilities	Todd/MRWPCA	4/1/15	10/9/16
18. Start-up of Injection Facilities	Todd/MRWPCA	10/9/16	2/28/17

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Input on GWR Target Aquifers

- Paso Robles
  - Longer retention times in vadose zone and aquifer
  - Less expensive
  - More storage capacity
  - Recoverable by downgradient wells?
- Santa Margarita
  - Direct injection into primary drinking water aquifer
  - Compatible with ASR operation?

TODD ENGINEERS

2011 Seawater Intrusion Analysis Report

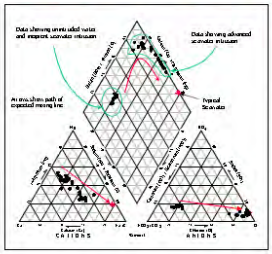
Presentation to the Seaside Groundwater Basin Watermaster TAC

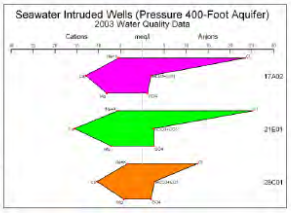
November 9, 2011

Analysis

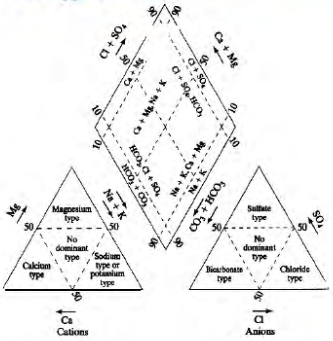
- Cation/Anions – Piper and Stiff Diagrams
- Chloride Trends and Spatial Distribution
- Electric Induction Logs
- Groundwater Elevations
- Protective Levels
- Groundwater Production

Piper and Stiff Diagrams

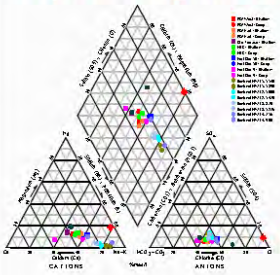


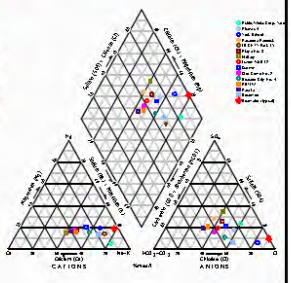


Piper Diagrams

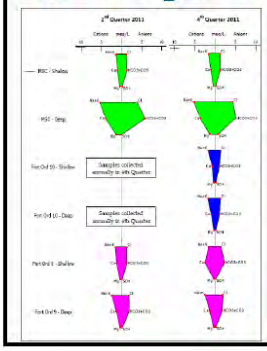


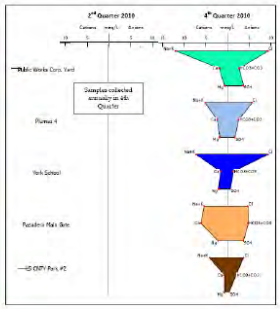
Piper Diagrams





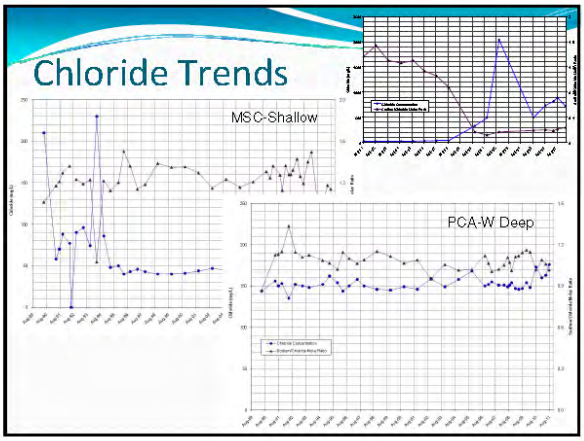
Stiff Diagrams



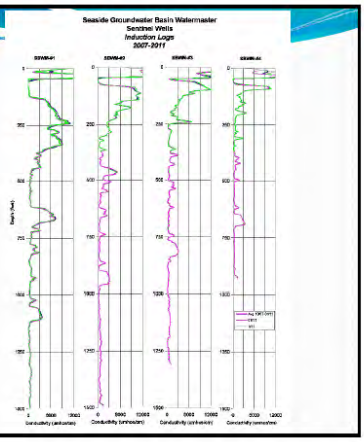


Chloride Trends

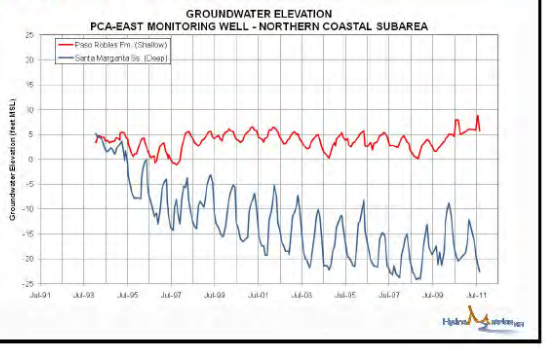
Chloride Trends



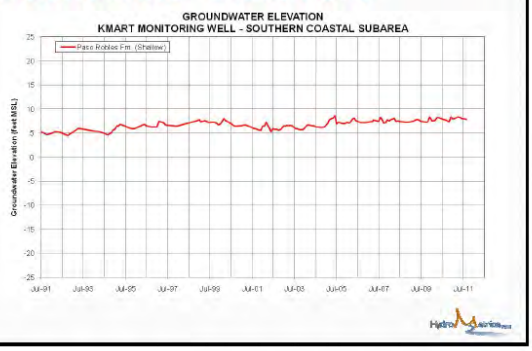
Electric Induction Logs



Groundwater Elevations



Groundwater Elevations

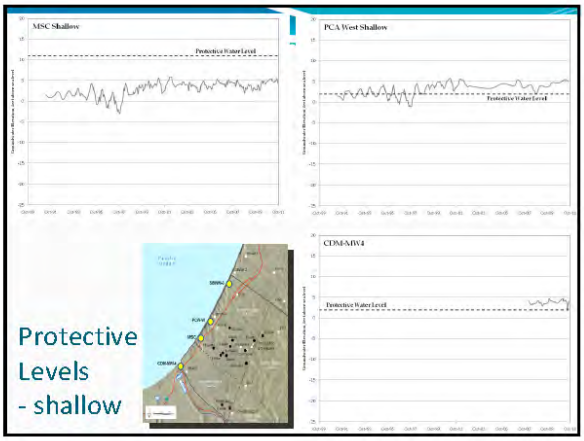


Groundwater Elevations

Shallow

4th Quarter

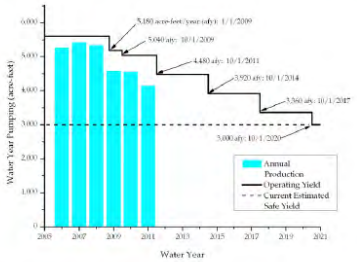
Groundwater Elevations
Deep
4th Quarter



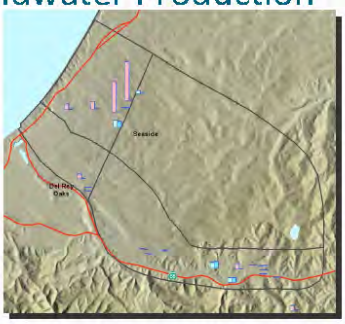
Protective Levels - shallow

Protective Levels - deep

Groundwater Production

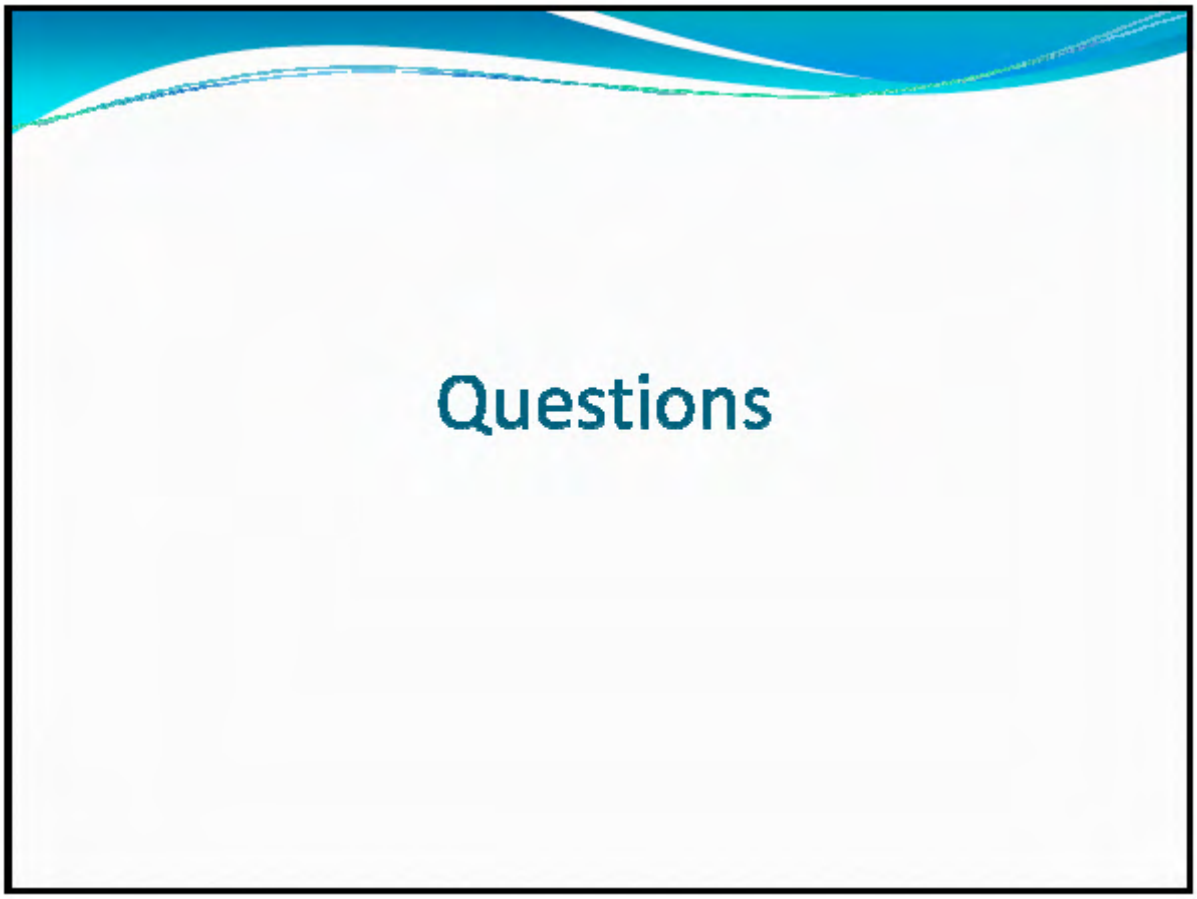


Groundwater Production



Recommendations

1. Continue with semi-annual water quality sampling in Well SBWM-4
2. Resample Sand City Public Works well
3. Continue to analyze and report on water quality annually
4. Once CWP better defined, refine preliminary shallow protective groundwater elevations


Questions

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

MEETING DATE:	January 11, 2012
AGENDA ITEM:	3
AGENDA TITLE:	Progress Report on Implementing Changes to the Inputting and Management of Data in the Watermaster Database
PREPARED BY:	Robert Jaques, Technical Program Manager

SUMMARY:

As reported at the November 9, 2011 TAC meeting the new Database was expected to be placed on the Watermaster's website in mid-January, following completion of all of the data inputting and reformatting. However, MPWMD staff has had to spend more time than originally expected completing other assignments, so it is now projected that the new Database will be placed on the website either in late January or early February 2012. An update on this will be provided at the February TAC meeting.

ATTACHMENTS:	None
RECOMMENDED ACTION:	None required – information only

SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE

** * * AGENDA TRANSMITTAL FORM * * **

MEETING DATE:	January 11, 2012
AGENDA ITEM:	4
AGENDA TITLE:	Discussion of Issues Pertaining to MRWPCA's Groundwater Replenishment Project
PREPARED BY:	Robert Jaques, Technical Program Manager

SUMMARY:

At the November 9, 2011 TAC meeting a presentation was made by MRWPCA and their consultant on their proposed Ground Water Replenishment Project (GWRP). As a result of that very informative presentation the TAC determined to further discuss the GWRP at its January 2012 meeting.

Mr. Riedl posed many of the questions about the project at the November TAC meeting and provided me with the questions he would like to discuss at today's meeting. These are listed in the attached "Discussion Paper," along with responses to each of them based on input from MRWPCA, MPWMD, and my own knowledge of the GWRP from my prior work for MRWPCA.

In addition to these issues, TAC members are invited to raise any other questions and to offer any thoughts on what role(s) the Watermaster might play with regards to helping the GWRP move forward.

ATTACHMENTS:	Discussion Paper on the Ground Water Replenishment Project
RECOMMENDED ACTION:	None required – information only

Question: Does the CSIP project, or anyone else, have any rights to the recycled water being proposed to be delivered to the Seaside Basin? If so, what are their rights and are they superior?
Response: MRWPCA has rights, set forth in Amendment No. 3 of its Memorandum of Understanding with MCWRA, to 3,900 AFY (including 766 AFY during the summer) plus water not used by MCWRA.

By the Regional Urban Water Augmentation Project (RUWAP) Memorandum of Understanding with MCWD, MRWPCA dedicates its 766 AFY of summer water to the RUWAP project including the Peninsula.

The Three-Party Memorandum of Understanding between MCWRA, MCWD, and MRWPCA identifies that there is about 6,000 AFY of water available for reuse. Both the RUWAP and Three-Party MOUs highlight and prioritize the groundwater replenishment project. MRWPCA thus has rights to more than enough advance treated wastewater to provide 2,700 AFY for the GWRP.

Question: Can water from the Salinas River project be diverted through the proposed system and delivered to the Seaside Basin?
Response: No, not without obtaining water rights from the County, performing an environmental review, obtaining necessary permits and approvals, and designing/constructing completely new facilities.

The California Department of Public Health's (CDPH's) groundwater injection standards are much more stringent than drinking water standards. Therefore, it would be more economical to treat the river water so that it would become drinking water directly and pump it through potable water pipelines to the south where it could be used.

Excess drinking water from the Salinas river, when and if available, could be injected into MPWMD's/CAW's ASR wells within the Seaside Groundwater Basin.

Question: Is there potential for a water wheeling agreement where the proposed dilution water for this project is instead delivered to the CSIP project, and wastewater (or alternatively Salinas Basin water?) is delivered to the Seaside Basin in the summer months?
Response: No. CDPH's previous draft groundwater replenishment regulations required dilution water, but the most current draft of these regulations encourage but do not require dilution water.

MRWPCA will try to get injection approved without dilution water. If unsuccessful, MRWPCA will try to get credit for most or all of any required dilution water by seeking credit for the natural seaward flow of water within the Seaside Groundwater Basin. Additional dilution water, if required, will have to be applied in the vicinity of the replenishment water.

MRWPCA is looking at Blanco Drain and Salinas Industrial Pond waters both as sources of dilution water and sources of additional replenishment water.

Question: Has a feasibility study of alternatives been performed. For example, what is the cost of delivering the proposed dilution water, without the treated wastewater, to the Seaside Basin?
Response: As part of the Coastal Water Project EIR, MRWPCA provided information about other sources of water and other locations for injection. However, it does not appear that any costs were developed for those sources.

The other sources of water are mostly available during the growing season. They would therefore require a separate pumping and piping system from the Salinas Valley to Seaside (not the RUWAP system), since the RUWAP system would be delivering recycled water for landscape and golf course irrigation during the summer months.

These options would add capital costs to the GWRP, but would provide more water to the Seaside Groundwater Basin and may reduce the cost per acre-foot for that water.

Question: What quantity of dilution water could be delivered to the Seaside Basin?
Response: The dilution waters investigated by MRWPCA, if needed or desired, are only available during the growing season. As noted in the response to the question immediately above, this means that a separate pumping and piping system would be required (not the RUWAP system).

The volume available could be up to about 3,000 acre-feet per year (AFY) of additional water or 5,700 AFY total (dilution water plus advance treated wastewater).

Question: If the proposed injection wells have insufficient capacity, is it feasible to accumulate the treated water for future injection? Could the Seaside golf course reservoir be used for this purpose?
Response: The limiting factors for the GWRP are the size of the RUWAP facilities and the size of the Advanced Water Treatment facilities. The GWRP injection wells will be designed to provide all of the injection capacity that will be needed, so there will be no reason to store the advance treated wastewater.

Injection wells are very expensive but they are less expensive than the treatment and conveyance facilities. MRWPCA plans on building excess injection capacity.

Any storage of water, especially in an open reservoir such as the Seaside Golf Course reservoir, introduces the potential for contamination which could render the water unusable for injection.

Question: Could the proposed treatment system be installed near the proposed injection wells in Seaside? If so, and if necessary, could this treatment system be used to treat potentially brackish water in the future from the Seaside aquifer?
Response: Yes. Treatment facilities for the GWRP could be located near the injection wells, and could be fed with recycled water pumped through RUWAP or fed with raw wastewater from MRWPCA's Seaside Pump Station. In either case, four dedicated pipelines would be required:

1. One pipeline would provide the input water from the RUWAP or the Seaside Pump Station.
2. The second pipeline would provide the product water from the treatment facilities to the injection wells.
3. A third pipeline would be a brine pipeline (Reverse Osmosis concentrate) from the advanced water treatment facilities back to the Regional Treatment Plant Brine Receiving Structure.
4. The fourth pipeline would carry the microfiltration backwash to the sanitary sewer system.

The raw sewage option (from the Seaside Pump Station) would result in less replenishment due to the lack of sufficient sewage flowrates and its uneven distribution during the day. The recycled water option might be able to provide 2,700 AFY, but it would take more than the five months to provide this volume.

Neither option would allow for dilution water or for additional injection water. Also, the advanced water treatment facilities would be more expensive to construct and operate if they were located in Seaside because it would not be possible to comingle infrastructure with the Regional Treatment Plant, and full

buildings (not with just roofs) would be necessary to reduce noise so it does not impact nearby residential and/or commercial land uses.

A brine pipeline would be less expensive than a dedicated replenishment pipeline, but it would not be available to convey dilution water or summer replenishment water. However, if a brine pipeline was built, the advanced water treatment facilities could potentially treat brackish water from the Seaside aquifer during the summer months for groundwater injection, but not directly for drinking water.

Constructing the advanced water treatment facilities in Seaside would be a new project on an undisrupted (prime development) site, and would require a full EIR and a new power source. This facility would require frequent chemical deliveries and other activities that might be viewed as nuisances to the nearby residential and/or commercial land uses.

Question: Is there anything that would limit the Watermaster's ability to accept the water? If so, are there additional steps that the TAC should undertake now to remove the impediments?
Response: MRWPCA is not aware of any impediments at this time that would limit the Watermaster's ability to accept the water.

In order for the GWRP to be approved and implemented, it would have to obtain permits and approvals from CDPW, Monterey County Environmental Health, and the Regional Water Quality Control Board (RWQCB), among others. The Watermaster's "*Agreement for Storage and Recovery of Non-Native Water From the Seaside Groundwater Basin,*" which was approved by the Watermaster's Board in June 2010, contains the following language regarding the quality of water that is proposed for storage and recovery in the Basin:

> *"The PRODUCER hereby certifies that prior to the Non-Native water being introduced into the Basin for Storage in accordance with this Agreement, all such water will meet all of the requirements imposed on the PRODUCER by permits and/or approvals issued to the PRODUCER by the California Regional Water Quality Control Board and any other water quality standards imposed by any other government entity, including without limitation the California Department of Public Health and the Monterey County Department of Environmental Health."*

These permits and approvals would be necessary in order for the GWRP to be implemented, so the water quality would meet the Watermaster's storage and recovery quality requirements and should be fully acceptable to the Watermaster for injection into the Basin.

Question: If, as suggested by the MPWMD, the MPWMD purchases the water, would it benefit the Seaside Basin? Or will the water be used to offset the Carmel diversions?
Response: MRWPCA commented that MPWMD has proposed to MRWPCA that if they purchased the water it would be much easier for them to inject the water into the basin than it would be for MRWPCA. MRWPCA has not discussed with MPWMD how they would administer the water after injection.

MPWMD commented that this issue should be thought of in five contexts:

1. Until the unlawful diversions from the Carmel River have been replaced, then it is likely that this resource would be delivered to Cal Am for retail delivery and applied to offset those diversions;

2. Once the unlawful diversions have been replaced, then the water could be delivered to Cal Am, but the Watermaster might direct that some portion of it be retained to replenish the deficit in the Basin. The economics of "who pays?" would have to be worked out.

3. MPWMD could proceed with the project for an extended period of time without offsetting Carmel River diversions or delivering the water to Cal Am by instead using 100% of the output for the benefit of the Basin. However, the cost of the water would have to be covered by Replenishment Assessments from Watermaster producers. Or conceivably, a producer could choose to pay for this water and use in lieu recharge by not pumping its Basin allotment. This concept needs more analysis to see if it could actually be implemented. In addition, if no Replenishment Assessments can be collected because of the offsetting credits for costs incurred on the Regional Water Supply Project, then this option may be unworkable.

4. A scenario could be envisioned where any producer in the Basin could buy the water, over and above its adjudicated allotment, and the Watermaster might direct that some portion of it be retained to replenish the deficit in the Basin. The economics of this would have to be worked out, and the Watermaster would have to be involved, in order to ensure the adjudicated withdrawal limits are being met first and the new water is additive.

5. Finally, there exists the possibility that MPWMD could sell the water for a period of time to a non-Cal Am user for a non- Cal Am purpose, but this would likely require wheeling by Cal Am and would be complex in nature. However, a good example of this might be where the Regional Water Supply Project is not yet online and in order to meet its obligations to the Pebble Beach reclamation project MPWMD would seek to wheel water for a period of time to the project area without being subject to rationing by Cal Am.

Question: What, if anything, can the Watermaster TAC do to help expedite the project?
Response: MRWPCA commented that the Watermaster has already helped the GWRP by providing $100,000 in funding to MRWPCA during the Coastal Water Project EIR. MRWPCA went on to comment that ways the Watermaster could help in the future include:

- Additional Planning Money
- Use of the Watermaster's Groundwater Model and water quality/elevation data
- Help with the bureaucratic hurdles
- Letters of support for grant and loan applications

The Watermaster is currently not receiving Replenishment Assessment monies, because it has agreements with both Cal Am and the City of Seaside to grant them credits against their assessments. For Cal Am the credits are for the monies Cal Am invests in the Coastal Water Project. For Seaside the credits are for their in-lieu replenishment of the Basin by using water from MCWD to irrigate their golf courses. Thus, at this time there is no money available from the Watermaster to help fund additional planning for the GWRP.

The Watermaster would likely be able and willing to assist in these other ways, subject to approval and direction by the Watermaster Board.

SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE

** * * AGENDA TRANSMITTAL FORM * * **

MEETING DATE:	January 11, 2012
AGENDA ITEM:	5
AGENDA TITLE:	Schedule
PREPARED BY:	Robert Jaques, Technical Program Manager

SUMMARY:

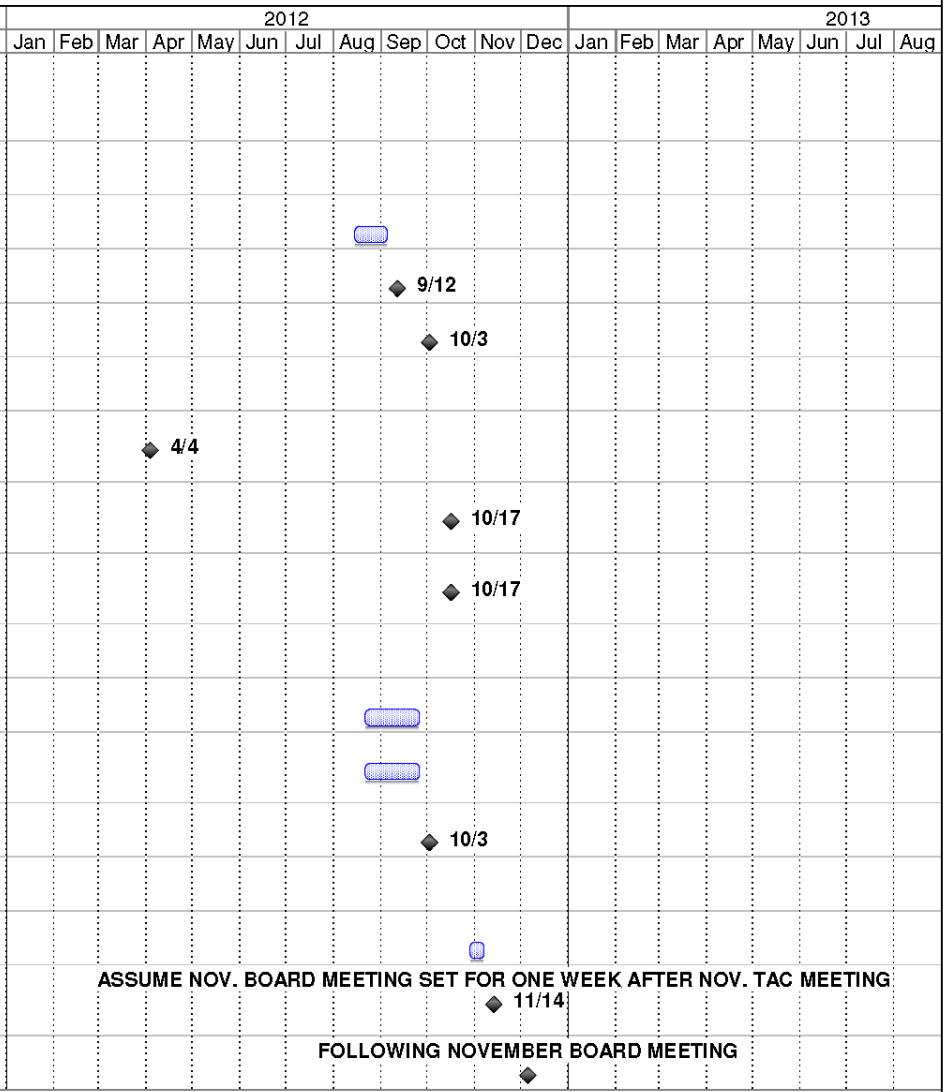
As a regular part of each monthly TAC meeting, I will provide the TAC with an updated Consultants Work Schedule of the activities being performed by the Watermaster's consultants and the public entity, MPWMD, which is performing certain portions of the work, and of the Critical Program Milestones Schedule.

Attached is the Consultants Work Schedule for FY 2012. This Schedule reflects the TAC's decisions to defer any further discussion of moving ahead with more Groundwater Modeling, refining Protective Water Levels, and updating the BMAP, until such time as there has been sufficient progress toward implementing the Regional Water Supply Project alternative of the Coastal Water Project to warrant such discussions.

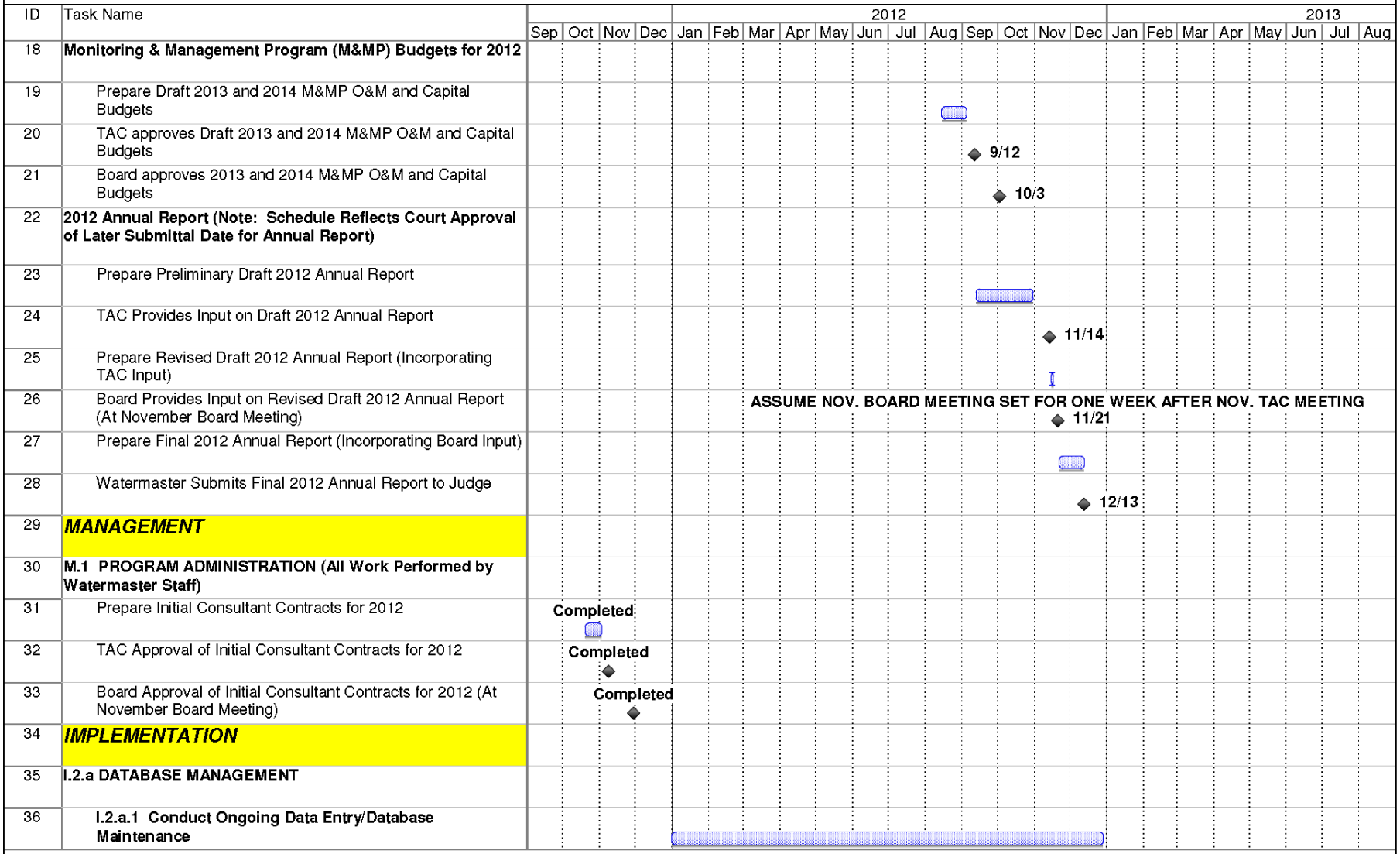
ATTACHMENTS:	Schedule of Work Activities for FY 2012
RECOMMENDED ACTION:	Provide Input to Technical Program Manager Regarding Any Corrections or Additions to this Schedule

Seaside Basin Watermaster
Monitoring and Management Program
2012 Work Schedule

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

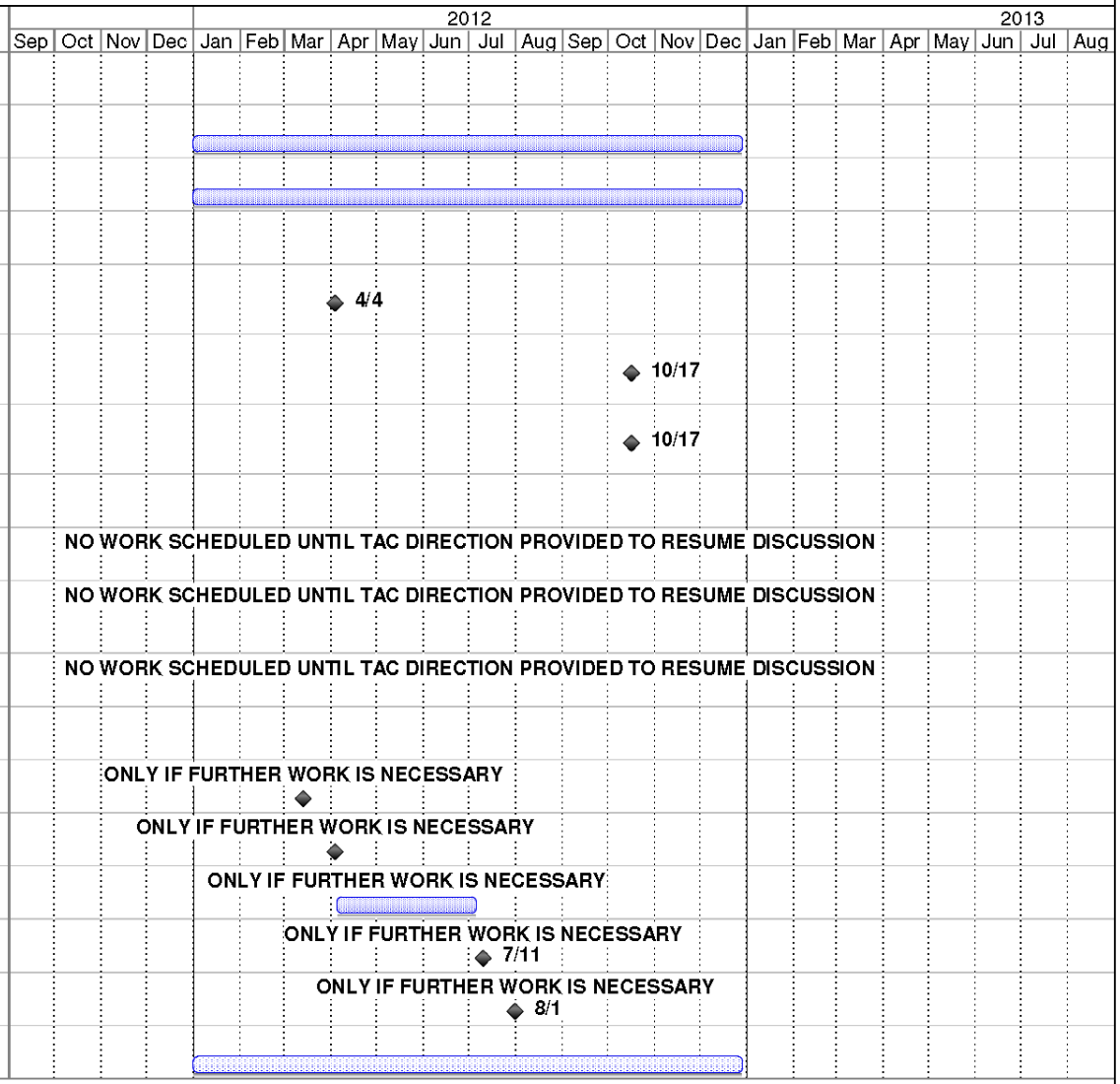


Seaside Basin Watermaster
Monitoring and Management Program
2012 Work Schedule



Seaside Basin Watermaster
Monitoring and Management Program
2012 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 Quarterly Water Production, Water Level, and Water Quality Reports for 3rd and 4th Quarters
43	Watermaster Prepares Annual Water Production, Water Level, and Water Quality Report for 2012
44	**I.3.a ENHANCED SEASIDE BASIN GROUNDWATER MODEL**
45	**I.3.a.2 Develop Protective Water Levels**
46	**I.3.a.3 Evaluate Replenishment Scenarios and Develop Answers to Basin Management Questions**
47	**I.3.c Refine and/or Update the BMAP**
48	**I.3.d Evaluate Coastal Wells for Cross-Aquifer Contamination Potential**
49	TAC Approves Scope of Work for MPWMD to Perform Further Evaluations of these Wells in 2012
50	Board Approves Well Evaluation Work to be Done in 2012
51	MPWMD Performs Further Evaluations of these Wells
52	MPWMD Makes Report on Well Evaluations to TAC
53	Presentation of Well Evaluations to Board
54	**I.4.a HydroMetrics & MPWMD Provide Oversight of Seawater Intrusion Detection and Tracking**



Seaside Basin Watermaster
Monitoring and Management Program
2012 Work Schedule

ID	Task Name	2012																2013							
		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
55	**I.4.b HydroMetrics Analyzes and Maps Water Quality from Coastal Monitoring Wells**																								
56	**I.4.c Annual Seawater Intrusion Analysis Report (SIAR)**																								
57	HydroMetrics Provides Draft SIAR to Watermaster															11/8									
58	TAC Approves Annual Seawater Intrusion Analysis Report (SIAR)															11/14									
59	Board Approves Annual Seawater Intrusion Analysis Report (SIAR)							ASSUME NOV. BOARD MEETING SET FOR ONE WEEK AFTER NOV. TAC MEETING								11/21									
60	**I.4.d Complete Preparation of Seawater Intrusion Response Plan (SIRP)**					WORK COMPLETED - NO FURTHER WORK PLANNED IN 2012																			
61	**I.4.e Refine and/or Update the SIRP**						NOT NECESSARY																		

SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE

** * * AGENDA TRANSMITTAL FORM * * **

MEETING DATE:	January 11, 2012
AGENDA ITEM:	6
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