

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

DATE: Wednesday, September 14, 2011

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	Public Member (Vacant)	

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**SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE**

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

MEETING DATE:	September 14, 2011
AGENDA ITEM:	2.A
AGENDA TITLE:	Approve Minutes from August 10, 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
August 10, 2011**

Attendees: TAC Members

City of Seaside – Scott Ottmar
California American Water – Eric Sabolsice
City of Monterey – No representative
Laguna Seca Property Owners – Bob Costa
MPWMD – Joe Oliver
Public Member – No representative
MCWRA – Rob Johnson
City of Del Rey Oaks – No representative
City of Sand City – Richard Simonitch
Coastal Subarea Landowners – No Representative

Watermaster

Technical Program Manager - Robert Jaques
Dewey Evans - Executive Officer
Laura Dadiw - Administration

Consultants

HydroMetrics – Derrick Williams (by telephone)

Others:

MPWMD – Jon Lear
MCWD – Carl Niizawa

The meeting was called to order at 1:39 p.m. (start of meeting delayed while waiting for the arrival of a quorum of TAC members).

1. Public Comments

There were no public comments.

2. Administrative Matters:

A. Approve Minutes from June 8, 2011 Meeting

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

3. MPWMD Progress Reports:

A. Implementing Changes to the Inputting and Management of Data in the Watermaster Database

B. Evaluating Coastal Wells for Cross-Aquifer Contamination Potential

Mr. Oliver reported that Agenda items 3.A and 3.B were very closely coordinated schedule-wise, so these two Agenda topics were discussed together.

Mr. Oliver briefly summarized the work that is being done on making the Database revisions. Mr. Lear reported that he will be meeting with Monterey Bay Analytical Services (the laboratory) to discuss water

quality data issues on August 17. Mr. Oliver said he saw no problem getting the work completed, except that the cross-aquifer contamination work will provide well information that needs to go into the Database. The Database work is proceeding on schedule, but inputting this new data will be done as it is acquired.

Mr. Oliver handed out a September 2010 Technical Memo prepared by a company named Right on Q Hydrology titled "Seaside Groundwater Basin Cross-Contamination Wells Investigation." Mr. Oliver reported that information in that report is being used in the cross-aquifer contamination work by MPWMD. Mr. Oliver said he will coordinate with Rob Johnson to obtain MCWRA's data on wells within the Seaside Groundwater Basin.

Mr. Lear reviewed the Task list from page 17 of the Agenda packet and said that currently he is going through paper records to begin the work. Under Task 2 he has identified all logs for seals that may not have been properly placed. Under Task 6 he has identified wells screened in the Santa Margarita aquifer and is looking for abandoned wells. Mr. Lear reported that the work is turning out to be more complicated and time-consuming than originally anticipated, and is therefore taking longer than originally scheduled.

Mr. Jaques asked Mr. Lear when it would be possible to have a presentation made after the work has been completed. Mr. Lear said a progress report could be made in October, but it was still too early to forecast a completion date for the work. Mr. Oliver and Mr. Lear will work with Mr. Jaques to develop a "plug number" cost for inclusion in the FY 2012 Budget for possible further cross-aquifer contamination work.

Mr. Sabolsice asked Mr. Oliver what follow-up action would likely be recommended if cross-aquifer contamination potential appears to exist. Mr. Oliver responded that MPWMD will develop recommendations on this to include in their report. They will take into account well age and materials of construction in developing a prioritization list for follow-up work. Mr. Sabolsice and Mr. Oliver recommended communicating certain of this information to Monterey County Department of Environmental Health.

Mr. Simonitch asked Mr. Oliver how cross-aquifer contamination was related to complying with the requirements of the Decision. Mr. Oliver responded that cross-contamination between aquifers could influence the movement of seawater intrusion into the Seaside Groundwater Basin. As an example he explained that the Aromas and Paso Robles aquifers are well separated from the Santa Margarita aquifer near the coast, but that cross-contamination from a faulty well could allow seawater intrusion from these shallow aquifers to get into the deeper Santa Margarita aquifer.

4. Status Report on Offer by Pasadera to Discuss Possible Use of Storm Water Runoff from Pasadera as a Water Source for Helping to Recharge the Seaside Basin

Mr. Jaques summarized the agenda packet materials for this item. No further action will be taken on this issue unless the Pasadera representative contacts the Watermaster.

5. Approve Draft Storage Agreement with California American Water

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

Mr. Simonitch noted that one ASR well would enable about 1,000 AFY of water to be stored in the Basin, and that with additional ASR wells being installed in the future (a total of 6 projected to be constructed) he asked why the proposed Storage Agreement limited the storage amount to only 2,426 AFY.

Mr. Jaques responded that this figure was set forth in the SWRCB's Division of Water Rights approval document. Mr. Oliver went on to say that once more ASR wells are completed, an amendment of the SWRCB approval document could be sought to increase this amount. Mr. Lear said that 2,426 AFY is based on the amount that the SWRCB currently allows to be diverted from the Carmel River.

Mr. Oliver noted that paragraph 4 of the proposed Storage Agreement, which describes the recovery locations, does not list all of CAW's wells in the Basin. Mr. Sabolsice responded that this is correct, and that only the listed wells would be used for recovery.

Mr. Williams asked if there had been any resolution of the issue with regard to recovery wells as covered in the language in the SWRCB's approval document. Mr. Oliver responded that the intent is to write a letter of clarification to the State on this matter, since CAW has been reporting usage of the listed recovery wells all along and this has been satisfactory and acceptable to the State.

Mr. Simonitch asked if additional storage from new ASR wells could be added to the Storage Agreement. Mr. Oliver and Mr. Jaques responded that this could be covered via an amendment to the Storage Agreement, once SWRCB approval to store greater quantities is received.

A motion was made by Mr. Simonitch, seconded by Mr. Johnson, to approve the Storage Agreement as presented. The motion passed unanimously.

6. Discussion of Topics Pertaining to Potential Supplemental Water Supply Projects

Mr. Jaques briefly summarized each of the five projects discussed under this agenda item, and a discussion on each of these projects ensued.

With regard to Projects 1 (Regional Desalination Plant at the Kaiser Refractories Site) and 2 (Pueblo Water Rights) there was brief discussion and there was consensus that these projects did not warrant further investigation.

With regard to Project 3 (Storm Water) Mr. Sabolsice reported that only a very preliminary review of cost and feasibility of constructing a storm water storage basin at CAW's David Avenue reservoir site had been performed by CAW. Based on the information contained in the agenda packet, and some further discussion, there was consensus that at this time this project did not warrant further investigation.

With regard to Project 4 (Coastal Injection Barrier) Mr. Sabolsice asked how much water would be needed in order for wells located along the beach to create a barrier. Mr. Williams responded that probably several thousand acre feet per year would be needed. Mr. Williams went on to say that in his opinion only the imminent threat of seawater intrusion would warrant giving this project further consideration, but not before that point in time. He went on to explain that under this type of project, some of the injected water would be lost to the ocean.

Mr. Sabolsice asked if the Basin water levels could be lowered if a coastal barrier was created and Mr. Williams responded yes.

Mr. Oliver commented that the previous modeling was based on injection into the Santa Margarita aquifer. Mr. Lear asked Mr. Williams if he had any recommendations with regard to which aquifer the injection water should be taken from, and which aquifer it should be injected to, under the coastal injection barrier approach. Mr. Williams responded that the Paso Robles aquifer is more susceptible to seawater intrusion than the Santa Margarita aquifer. However, he went on to say that if too much water was pulled from any aquifer it would lower water levels further in that aquifer, so it would be necessary to insure that the coastal barrier kept water levels in all aquifers above protective water levels to avoid

seawater intrusion. In other words an injected water mound would need to be achieved in all aquifers so seawater could not intrude into any of the aquifers.

Mr. Williams went on to say that it would only take a few weeks to model this concept, so there was no pressing need to do this work at this time. The work could be performed when and if seawater intrusion was detected.

Mr. Sabolsice asked Mr. Jaques what the Watermaster could do to implement a coastal barrier project at this time, if it wanted to do so. Mr. Jaques responded that the Watermaster does not have the funds available to construct the necessary infrastructure that would include wells and pipelines, etc. for a coastal barrier project. Mr. Sabolsice commented that in the future some of the entities might want to consider providing funding for such a project, but that this did not appear likely at this time.

With regard to Project 5 (Regional Urban Water Augmentation Project) Mr. Niizawa reported that MCWD is currently finalizing pipeline easements for this project, and that was the extent of his update on the status of work on this project. Mr. Niizawa and Mr. Simonitch noted that recycled water distribution piping is being installed in some of the former Fort Ord areas as they are redeveloped, but the main conveyance pipeline from the Salinas Valley Reclamation Plant as well as the recycled water pump stations to deliver recycled water to the reuse sites have not been constructed.

Mr. Costa asked if there was any intent to deliver recycled water to the Highway 68 area. Mr. Niizawa said that some discussions had been held by MRWPCA about this concept, but he was unaware of any firm plans being pursued.

Mr. Costa asked if the RUWAP is a joint MCWD/MRWPCA project and Mr. Niizawa responded that it was. He explained that the MRWPCA would produce the recycled water, and MCWD would deliver the water.

A motion was made by Mr. Johnson, seconded by Mr. Costa, to receive the report contained in today's agenda packet for information, but not to pursue any of the five projects further at this time. The motion passed unanimously.

Mr. Oliver commented that the information contained in today's agenda packet might be useful in the future when the Basin Management Action Plan is updated.

7. Progress Report on Wellhead Resurveying

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

Mr. Simonitch commented that the sandy soil strata in Basin meant that subsidence was not likely to occur as a result of groundwater levels falling. Mr. Oliver concurred with this observation.

There was TAC consensus that if the final report on the wellhead resurveying work confirms that no subsidence is occurring, there would be no need to perform further resurveying work, unless there was some indication that subsidence was occurring.

8. Proposed Items to be Included in FY 2011-2012 M&MP Work Plan and Budget

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

There were no recommendations by the TAC for changes or additions to the proposed work plan for the Management and Monitoring Program.

9. Schedule

Mr. Jaques briefly summarized the main updates that had been made to the Schedule.

With regard to ID numbers 56 through 60, 64 through 68, and 72 through 78, Mr. Sabolsice recommended deferring any further discussion of these activities until there is some specific event associated with the Coastal Water Project that would warrant reopening discussion on these topics, or if a TAC member requested that further discussion be held. Mr. Jaques will update the Schedule to show these as unscheduled activities.

10. Other Business

Mr. Simonitch said that the Sand City desalination plant is running very well and he complimented CAW for operating the plant in an excellent manner. He reported that nearly 300 acre feet of desalinated water have already been produced during 2011.

Mr. Jaques summarized an e-mail received from Richard Willis, Public Member of the TAC, reporting his decision to resign from the TAC.

Mr. Jaques said he intended to recommend to Mr. Evans that the Board consider temporarily eliminating the Public Number position on the TAC, while an effort is made to find a replacement for Mr. Willis. At such time as the Board finds a suitable replacement, the position could then be reinstated. This approach would help avoid having a problem with achieving quorum in order for the TAC to meet and conduct business. Mr. Jaques said he would also recommend to Mr. Evans that advertising for persons interested in filling the position be resumed on the Watermaster's web site.

11. Set next meeting date:

The next regular meeting will be held on Wednesday, September 14, 2011 at 1:30 p.m. at the MRWPCA Board Room

The meeting adjourned at 3:19 p.m.

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

MEETING DATE:	September 14, 2011
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:	Mr. Oliver will provide a brief oral update on the progress of work on the Database at today's meeting.
ATTACHMENTS:	None
RECOMMENDED ACTION:	None required – information only

**SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE**

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

MEETING DATE:	September 14, 2011
AGENDA ITEM:	4
AGENDA TITLE:	Report on Wellhead Resurveying
PREPARED BY:	Robert Jaques, Technical Program Manager
SUMMARY:	
<p>In 2008 the Watermaster performed a wellhead elevation and location survey on each of the wells being monitored by the Watermaster. In 2011 a resurvey of these wells was performed to determine whether or not ground subsidence was occurring at any of these sites.</p> <p>Attached is the 2011 Resurvey Report prepared by Central Coast Surveyors. As noted in the Report, some of the wells surveyed in 2008 no longer exist, and some new wells have been installed since the 2008 work was done. There were a total of 47 wells that were surveyed in both 2008 and 2011. These 47 wells are located throughout the area overlying the Seaside Basin, and should therefore provide a representative indication of any generalized subsidence that might be occurring in the Basin.</p> <p><u>Exhibit D</u> of the Report contains a summary spreadsheet comparing the elevation data from the 2008 survey to the recently-completed 2011 resurvey of these 47 wells.</p> <p><u>Exhibit E</u> of the Report contains photos and location information to document the exact reference points used in the surveying work at each well site. This will be valuable in the event future resurveying is deemed desirable. To reduce the size of the agenda packet, only a representative example of one of the photo sheets is included in the attachment to this Agenda Transmittal.</p> <p>The principal conclusions from the Report are that the data was very repeatable from 2008 to 2011, and that no appreciable subsidence appears to be occurring. Based on the findings in the Report, no further subsidence evaluation needs to be undertaken at this time.</p> <p>Based on this work, no future resurveying work will be performed unless there is some indication that subsidence is, or has been, occurring, or the Watermaster determines that there is some other reason to perform such work.</p>	
ATTACHMENTS:	Central Coast Surveyors Resurvey Report
RECOMMENDED ACTION:	Accept the Resurvey Report and recommend to the Board that no further surveying work needs to be done unless there is evidence of subsidence occurring, or some other reason to perform such work.

POSITION DATA
FOR WELLS IN THE SEASIDE BASIN
JULY 2011

PREPARED FOR
SEASIDE BASIN WATERMASTER

BY
CENTRAL COAST SURVEYORS
5 Harris Court Ste. N-11
Monterey, CA 93940

INTRODUCTION

This survey was undertaken to:

- Establish horizontal positions and elevations for the 108 wells listed in Exhibit A, attached.
- Compare elevation data to that obtained in 2008 in order to detect any potential subsidence.
- Document the locations of each well by coordinate positions, photos, maps and directions.

METHOD

Primary data were obtained with a Leica System 530 survey-grade GPS RTK receiver. Real-time correction signal was obtained from Leica Smartnet GPS correction network using a node based in Ryan Ranch, transmitted via internet for adjustment through Leica Geosystems in Norcross, GA and routed to the roving receiver via cell phone data modem connection. A previously established set of coordinate transformation parameters were utilized for optimal consistency with the 2008 data set.

LIMITATIONS

Although the horizontal accuracies approach +/- 0.03 feet, the vertical accuracy for RTK GPS yields only about a third of this accuracy, or about +/-0.10 feet. Epoch shifting occurs when a data collection session, which might be internally consistent at the time of the session, is compared to a similar session separated not by position, but by time. A slight time-function systematic error is introduced as the ephemeris data transmitted from the satellite constellation is continuously updated. The magnitude at which repeatability suffers becomes a function of the interval of time between sessions. This can amount to several centimeters per year.

RESULTS

The 2011 survey revealed that many of the well reference points had been modified since the 2008 survey was performed. There were various forms of modification, including lowering PVC sleeves to match new grade (by several feet), addition of caps, adapters and nipples to the reference point risers, and shifting of reference points to new access points. As far as can be determined, none of these modifications are documented. In order to evaluate the data for subsidence detection, forty seven of the wells, whose reference points were clearly consistent between the two surveys with no obvious modifications, were selected for analysis. These wells are listed in Exhibit D, along with a tabulation of their respective surveyed elevation data. The wells are scattered widely throughout the project area. The data shows that the measured elevation differentials are well within vertical accuracy limits for the equipment used, and thus no subsidence was detected.

EXHIBITS

Following is a list of attached exhibits:

Exhibit A COMPOSITE DATA FOR BOTH 2008 AND 2011 SURVEYS

Exhibit B LIST OF WELLS SURVEYED IN 2008 NOT SURVEYED IN 2011

Exhibit C LIST OF WELLS SURVEYED IN 2011 NOT SURVEYED IN 2008

Exhibit D LIST OF WELLS USED IN SUBSIDENCE APPRAISAL

Exhibit E WELL DATA SHEETS, LISTED ALPHABETICALLY, INCLUDING POSITION DATA, PHOTO, MAP AND DIRECTIONS TO ACCESS.

Exhibit A

COMPOSITE DATA FOR BOTH 2008 AND 2011 SURVEYS

2008 Survey Data				2011 Survey Data				
Well	Horizontal Location Northing (ft.) (NAD 83-CAL Z4)	Horizontal Location Easting (ft.) (NAD 83-CAL Z4)	Top of Well Elevation (ft.) (NAVD 88)	Top of Slab Elevation (ft.) (NAVD 88)	Horizontal Location Northing (ft.) (NAD 83-CAL Z4)	Horizontal Location Easting (ft.) (NAD 83-CAL Z4)	Top of Well Elevation (ft.) (NAVD 88)	Top of Slab Elevation (ft.) (NAVD 88)
ASR - 1	2120835.48	5734970.21	340.20	339.24	2120835.407	5734970.213	340.22	339.27
ASR - 2	2120978.33	5735215.79	357.63		2120978.244	5735214.678	358.79	
ASR MW-1	2120884.14	5735046.99	341.25		2120884.147	5735047.017	341.06	
Bay Ridge	2098752.56	5752779.02	548.89	546.69	2098752.661	5752778.92	548.97	548.24
Bishop No. 1 West	2103208.65	5746821.30	401.78	399.87	2103208.666	5746821.219	400.91	399.84
Bishop No. 2 East	2103617.47	5748327.31	421.31	420.51				
Blue Larkspur - East End	2102666.95	5740134.86	256.26		2102666.974	5740134.634	255.94	
CAW - Granite Construction	2107023.58	5734460.40	229.40	229.49	2107023.608	5734460.368	229.28	
CDM-MW-3	2120754.06	5725212.82	36.78		2120753.952	5725212.896	36.75	
CDM-MW-4	2118160.48	5723096.39	21.66		2118160.371	5723096.388	21.69	
Coe Ave	2123095.63	5731252.15	113.12	112.04	2123095.606	5731252.158	113.04	112.79
Cypress Pacific	2120708.90	5726071.05	53.20	52.70	2120708.831	5726071.036	53.19	
Darwin	2119429.40	5730454.94	137.02	136.84	2119429.495	5730455.444	137.02	136.75
Del Monte Test	2120295.81	5727252.86	35.59	35.46	2120295.782	5727252.887	35.71	35.43
East Valley	2103412.87	5748484.39	427.52	426.67				
FO_01 Deep	2115476.71	5733522.94	365.54		2115476.675	5733522.969	365.57	
FO_01 Shallow	2115476.95	5733522.83	365.58		2115477.085	5733522.928	365.62	
FO_03 Deep	2109597.74	5753627.68	777.71		2109597.747	5753627.637	777.65	
FO_04 East Shallow	2111825.54	5731361.68	171.20		2111825.554	5731361.7	171.19	
FO_04 West Deep	2111827.99	5731352.33	170.41		2111827.969	5731352.334	170.41	
FO_05 Deep	2103198.05	5755836.16	482.26		2103198.052	5755836.19	482.25	
FO_05 Shallow	2103198.11	5755836.42	481.94		2103198.156	5755836.261	481.92	
FO_06 Deep	2102686.42	5753167.29	473.60		2102686.555	5753167.171	473.39	
FO_06 Shallow	2102686.65	5753167.69	473.10		2102686.934	5753167.574	472.85	
FO_07 Deep	2122687.86	5738813.33	476.41		2122687.793	5738813.342	473.19	473.63
FO_07 Shallow	2122688.27	5738813.14	476.41		2122688.244	5738813.281	473.16	473.63
FO_08 Deep	2126741.12	5739733.42	381.07		2126741.03	5739733.41	381.01	
FO_08 Shallow	2126740.80	5739733.27	381.01		2126740.742	5739733.31	381.09	
FO_09 Deep	2127577.84	5732198.38	121.82	122.00	2127577.956	5732198.395	121.87	122.16
FO_09 Shallow	2127577.59	5732198.85	121.86	122.00	2127577.735	5732198.864	121.91	122.16
FO_10 Deep	2130542.76	5738065.90	204.00	204.12	2130542.611	5738065.951	203.92	204.09
FO_10 Shallow	2130542.84	5738065.63	203.82	204.12	2130542.677	5738065.678	203.70	204.09
FO_11 Deep	2130659.55	5744859.12	335.93		2130659.487	5744859.132	335.86	336.09
FO_11 Shallow	2130659.79	5744859.20	335.90		2130659.729	5744859.207	335.86	336.09
Hilby MGT	2114872.62	5730699.57	251.01	250.83	2114872.596	5730699.702	251.08	250.78
Justin Ct	2106516.31	5735062.85	243.25		2106516.115	5735062.881	243.28	
Kmart	2117361.24	5724054.81	33.62		2117361.062	5724054.769	33.65	
Laguna Seca Shooting Range	2105251.46	5750769.49	517.36		2105251.443	5750769.449	517.38	
LS - Old No. 12	2103287.78	5744129.13	370.99	369.27	2103287.769	5744129.132	370.82	369.30
LS CNTY Park #1	2103068.36	5749435.11	395.69		2103068.35	5749435.143	395.77	395.26
LS CNTY Park #2	2103001.31	5749416.46	393.87		2103000.561	5749416.043	393.61	393.49
LS Driving Range SCS - Deep	2104523.09	5742662.03	491.31		2104523.089	5742662.026	491.32	
LS No. 1 Subdivision	2102477.87	5740955.97	280.10	279.68	2102477.766	5740955.92	280.18	279.51
Luxton	2119476.88	5729512.78	92.09	91.23	2119477.114	5729512.863	92.12	91.26
Luzern Well #2	2120549.77	5731142.85	159.96		2120549.755	5731143.255	160.19	158.67
Military	2121670.30	5731670.78	138.77	138.65	2121670.198	5731670.441	138.83	138.58
MMP Old Rusty	2120661.59	5734503.52	318.39					
MSC - Deep	2121884.57	5726380.96	83.26		2121884.495	5726380.83	83.23	
MSC - Shallow	2121885.62	5726373.80	83.07		2121885.566	5726373.94	83.04	
Mutual	2098716.39	5752720.56	547.08	546.30				
MW-B-22-180	2131192.92	5736797.38	171.07	170.37	2131192.847	5736797.403	171.17	
MW-BW-08A	2113916.77	5731787.62	208.15	206.24	2113916.736	5731787.556	208.19	
MW-BW-09-180	2113879.98	5731774.68	209.19	206.69	2113880.027	5731774.972	209.21	
Ord Grove No. 2	2120214.57	5733486.40	295.36	295.16	2120214.4	5733488.017	295.35	295.15
Ord Grove Test	2120227.02	5733554.52	296.97		2120227.131	5733554.383	296.78	
Ord Terrace School Deep	2120611.00	5732707.09	231.60	231.71	2120610.993	5732707.068	231.57	231.73
Ord Terrace School Shallow	2120610.73	5732707.30	231.62	231.71	2120610.719	5732707.275	231.57	231.73
Paralta	2121498.53	5734882.41	327.46	336.13				
Paralta Test	2121515.88	5734876.29	333.69		2121504.372	5734887.855	336.09	334.00
Pasadera Main Gate	2101738.17	5745741.55	348.39		2101738.048	5745741.796	348.37	
Pasadera Paddock	2101766.71	5746062.55	355.66	355.24	2101767.459	5746061.302	355.60	
PCA - West Deep	2124081.00	5728025.88	68.15		2124080.931	5728025.921	68.15	
PCA - West Shallow	2124072.37	5727997.08	67.19		2124072.363	5727997.117	67.19	
PCA East - Deep	2123145.71	5729011.81	71.51		2123145.775	5729011.945	71.36	
PCA East - Shallow	2123145.87	5729011.71	71.48		2123145.986	5729011.838	71.36	
Playa No. 3	2120509.26	5728351.78	55.99	55.40				
Playa No. 4	2120435.18	5728412.30	55.50	54.38	2120435.579	5728412.837	55.62	54.27
Plumas #4	2113005.58	5729732.59	164.45		2113005.704	5729732.644	164.34	162.81
Plumas '90 Test	2112991.81	5729709.54	160.80		2112992.264	5729709.606	160.80	
PRTIW	2120999.09	5734662.01	331.39	329.42	2120999.031	5734661.922	331.41	

2008 Survey Data				2011 Survey Data				
Well	Horizontal Location Northing (ft.) (NAD 83-CAL Z4)	Horizontal Location Easting (ft.) (NAD 83-CAL Z4)	Top of Well Elevation (ft.) (NAVD 88)	Top of Slab Elevation (ft.) (NAVD 88)	Horizontal Location Northing (ft.) (NAD 83-CAL Z4)	Horizontal Location Easting (ft.) (NAD 83-CAL Z4)	Top of Well Elevation (ft.) (NAVD 88)	Top of Slab Elevation (ft.) (NAVD 88)
Public Works Corp. Yard	2119064.20	5725134.83	50.22		2119064.079	5725134.891	50.00	49.87
Reservoir	2122247.35	5736108.96	420.41	418.75	2122247.249	5736108.947	420.40	
Robinette - Design Ctr.	2118111.61	5725180.74	24.28	24.27	2118111.564	5725180.73	24.35	24.26
Robley North	2098859.72	5754308.76	569.41		2098859.888	5754308.753	569.29	
Robley South	2098855.67	5754305.57	569.51		2098855.715	5754305.766	569.46	
Ryan Ranch No. 7	2105311.11	5736505.14	296.97	296.72	2105311.143	5736505.102	296.88	296.55
Ryan Ranch No. 8	2104957.15	5736932.35	309.83	309.42	2104957.12	5736932.435	309.95	309.36
Ryan Ranch No. 11 (9?)	2104906.36	5737003.46	310.56	310.11	2104906.669	5737003.021	310.43	310.11
Seaside City No. 3	2118600.88	5733646.26	310.16	309.75	2118602.101	5733645.912	310.97	
Seaside City No. 4	2118569.40	5733626.95	315.09	311.85	2118569.339	5733626.959	315.08	311.83
Seca Place	2101974.18	5752872.00	430.55		2101974.292	5752871.851	430.56	
SPCA 2008	2102312.85	5750881.42	403.90	402.74	2102312.998	5750881.08	403.87	402.71
SPCA Old	2102318.12	5750971.43	404.20	402.36	2102317.045	5750971.54	403.08	402.21
Standex	2098399.13	5752974.03	571.82					
Target	2121644.15	5727308.78	47.39		2121644.033	5727308.972	47.17	
York Road West	2105314.04	5740102.76	493.25	493.64	2105314.062	5740102.742	493.16	
York School	2105190.72	5738657.21	387.27		2105190.637	5738657.247	387.23	
ASR3 Upper Slab					2122214.066	5735158.068	338.49	
ASR3 Lower Slab					2122216.741	5735165.477	337.16	
SMS 2-inch					2122236.435	5735166.151	336.32	
SMS 4-inch					2122230.658	5735143.847	335.59	
CDMMW1					2132681.299	5733505.331	96.12	
CDMMW2					2124608.352	5728638.358	66.48	
CDMMW3					2120753.952	5725212.896	36.75	
CDMMW4					2118160.371	5723096.388	21.69	
SBWMMW1					2132705.174	5733560.343	95.75	
SBWMMW2					2130551.152	5731758.789	73.73	
SBWMMW3					2129146.446	5730901.933	59.82	
SBWMMW4					2124665.632	5728550.641	62.40	
SBWMMW5 Deep					2120741.142	5748972.794	398.20	
SBWMMW5 Shallow					2120740.954	5748972.921	398.09	
SBWMMW5 Top of Riser					2120741.458	5748972.978	398.30	
MWB 23-180					2131286.514	5734396.591	116.49	
Laguna Seca Hole 12 New					2103264.45	5744142.345	368.93	
Bishop 3					2103609.822	5748372.464	423.55	
SNG					2123755.326	5728391.282	75.60	75.11

Notes:

1. Horizontal locations and top of well elevations for all items were located to the top of pipe or the reference point used for that well.
2. Ground level elevations for all items were determined at an elevation equivalent to that of the existing grade
3. Top of slab elevations for all applicable sites were determined on a concrete slab adjacent to the well.

Exhibit B

LIST OF WELLS SURVEYED IN 2008 BUT NOT SURVEYED IN 2011

Well	Horizontal Location Northing (ft.) (NAD 83-CAL Z4)	Horizontal Location Easting (ft.) (NAD 83-CAL Z4)	Top of Well Elevation (ft.) (NAVD 88)	Top of Slab Elevation (ft.) (NAVD 88)
Bishop No. 2 East	2103617.47	5748327.31	421.31	420.51
East Valley	2103412.87	5748484.39	427.52	426.67
MMP Old Rusty	2120661.59	5734503.52	318.39	
Mutual	2098716.39	5752720.56	547.08	546.30
Playa No. 3	2120509.26	5728351.78	55.99	55.40
Standex	2098399.13	5752974.03	571.82	

Notes:

1. Because these wells were either destroyed or abandoned subsequent to the 2008 survey, they were not available for resurveying in 2011.
2. Horizontal locations and top of well elevations for all items were located to the top of pipe or the reference point used for that well.
3. Ground level elevations for all items were determined at an elevation equivalent to that of the existing grade adjacent to the well.
4. Top of slab elevations for all applicable sites were determined on a concrete slab adjacent to the

Exhibit C

LIST OF WELLS SURVEYED IN 2011 NOT SURVEYED IN 2008

Well	Horizontal Location Northing (ft.) (NAD 83-CAL Z4)	Horizontal Location Easting (ft.) (NAD 83-CAL Z4)	Top of Well Elevation (ft.) (NAVD 88)	Top of Slab Elevation (ft.) (NAVD 88)
ASR3 Upper Slab	2122214.066	5735158.068	338.49	
ASR3 Lower Slab	2122216.741	5735165.477	337.16	
SMS 2-inch	2122236.435	5735166.151	336.32	
SMS 4-inch	2122230.658	5735143.847	335.59	
CDMMW1	2132681.299	5733505.331	96.12	
CDMMW2	2124608.352	5728638.358	66.48	
CDMMW3	2120753.952	5725212.896	36.75	
CDMMW4	2118160.371	5723096.388	21.69	
SBWMMW1	2132705.174	5733560.343	95.75	
SBWMMW2	2130551.152	5731758.789	73.73	
SBWMMW3	2129146.446	5730901.933	59.82	
SBWMMW4	2124665.632	5728550.641	62.40	
SBWMMW5 Deep	2120741.142	5748972.794	398.20	
SBWMMW5 Shallow	2120740.954	5748972.921	398.09	
SBWMMW5 Top of Riser	2120741.458	5748972.978	398.30	
MWB 23-180	2131286.514	5734396.591	116.49	
Laguna Seca Hole 12 New	2103264.45	5744142.345	368.93	
Bishop 3	2103609.822	5748372.464	423.55	
SNG	2123755.326	5728391.282	75.60	75.11

Notes:

1. These wells are new since the 2008 survey was performed and were therefore not included in the 2008 survey work.
2. Horizontal locations and top of well elevations for all items were located to the top of pipe or the reference point used for that well.

Exhibit D

**ELEVATION DATA COMPARISON
OF
WELLS USED IN SUBSIDENCE APPRAISAL**

Well	Year Surveyed		Change in Elevation in Feet
	2008 Top of Well Elevation in feet (NAVD 88)	2011 Top of Well Elevation in feet (NAVD 88)	
ASR - 1	340.20	340.2152	0.02
CDM-MW-3	36.78	36.7504	-0.03
CDM-MW-4	21.66	21.6899	0.03
Cypress Pacific	53.20	53.1911	-0.01
Darwin	137.02	137.0243	0.00
FO_01 Deep	365.54	365.5703	0.03
FO_01 Shallow	365.58	365.6198	0.04
FO_03 Deep	777.71	777.6517	-0.05
FO_04 East Shallow	171.20	171.1923	0.00
FO_04 West Deep	170.41	170.4099	0.00
FO_05 Deep	482.26	482.2503	-0.01
FO_05 Shallow	481.94	481.9204	-0.01
FO_08 Deep	381.07	381.0093	-0.06
FO_09 Deep	121.82	121.8672	0.05
FO_09 Shallow	121.86	121.9113	0.05
FO_10 Deep	204.00	203.9151	-0.08
FO_11 Deep	335.93	335.8632	-0.06
FO_11 Shallow	335.90	335.8607	-0.04
Hilby MGT	251.01	251.0825	0.07
Justin Ct	243.25	243.2755	0.02
Kmart	33.62	33.6511	0.03
Laguna Seca Shooting Range	517.36	517.3766	0.02
LS CNTY Park #1	395.69	395.7686	0.08
LS Driving Range SCS - Deep	491.31	491.3182	0.01
LS No. 1 Subdivision	280.10	280.1812	0.08
Luxton	92.09	92.1222	0.04
Military	138.77	138.8325	0.07
MSC - Deep	83.26	83.2286	-0.03
MSC - Shallow	83.07	83.0401	-0.03
MW-BW-08A	208.15	208.1873	0.04
MW-BW-09-180	209.19	209.2107	0.02
Ord Grove No. 2	295.36	295.3539	-0.01
Ord Terrace School Deep	231.60	231.5701	-0.03
Ord Terrace School Shallow	231.62	231.5722	-0.05
Pasadera Main Gate	348.39	348.3675	-0.02
Pasadera Paddock	355.66	355.6045	-0.05
PCA - West Deep	68.15	68.1488	0.00
PCA - West Shallow	67.19	67.1918	0.01
Plumas '90 Test	160.80	160.8034	0.00
PRTIW	331.39	331.4052	0.02
Reservoir	420.41	420.3986	-0.01
Robinette - Design Ctr.	24.28	24.3545	0.08
Robley South	569.51	569.4641	-0.04
Seaside City No. 4	315.09	315.0829	-0.01
Seca Place	430.55	430.5598	0.01
SPCA 2008	403.90	403.8744	-0.03
York School	387.27	387.23	-0.04

Number of Wells =47

Sum of Elevation Differences (in Feet) = 0.08

Mean Value of Elevation Differences (in Feet) = 0.0017

Exhibit E

**WELL DATA SHEETS, LISTED ALPHABETICALLY, INCLUDING
POSITION DATA, PHOTO, MAP AND DIRECTIONS TO ACCESS**

(Only One Example Shown)

List of Well Data Sheets

Well Name	Well Name
ASR - 1	MMP Old Rusty
ASR - 2	MSC - Deep
ASR3 Lower Slab	MSC - Shallow
ASR3 Upper Slab	Mutual
ASR MW-1	MW-B-22-180
Bay Ridge	MWB 23-180
Bishop No. 1 West	MW-BW-08A
Bishop No. 3	Ord Grove No. 2
Blue Larkspur - East End	Ord Grove Test
CAW - Granite Construction	Ord Terrace School Deep
CDMMW1	Ord Terrace School Shallow
CDMMW2	Paralta
CDMMW3	Paralta Test
CDMMW4	Pasadera Main Gate
Coe Ave	Pasadera Paddock
Cypress Pacific	PCA - West Deep
Darwin	PCA - West Shallow
Del Monte Test	PCA East - Deep
FO_01 Deep	Playa No. 3
FO_01 Shallow	Playa No. 4
FO_03 Deep	Plumas #4
FO_04 East Shallow	Plumas '90 Test
FO_04 West Deep	PRTIW
FO_05 Deep	Public Works Corp. Yard
FO_05 Shallow	Reservoir
FO_06 Deep	Robinette - Design Ctr.
FO_06 Shallow	Robley North
FO_07 Deep	Robley South
FO_07 Shallow	Ryan Ranch No. 7
FO_08 Deep	Ryan Ranch No. 8
FO_08 Shallow	Ryan Ranch No. 11 (9?)
FO_09 Deep	SBWMMW1
FO_09 Shallow	SBWMMW2
FO_10 Deep	SBWMMW3
FO_10 Shallow	SBWMMW4
FO_11 Deep	SBWMMW5 Deep
FO_11 Shallow	SBWMMW5 Shallow
Hilby MGT	Seaside City No. 3
Justin Ct	Seaside City No. 4
Kmart	Seca Place
Laguna Seca County Park #1	SMS 2-inch
Laguna Seca County Park #2	SMS 4-inch
Laguna Seca Driving Range SCS - Deep	SNG
Laguna Seca Hole 12 New	SPCA 2008
Leguna Seca No.1 Subdivision	SPCA Old
Laguna Seca Shooting Range	Standex
Luxton	Target
Luzern Well #2	York Road West
Military	York School

Well: Pasadera Paddock



Horizontal Location	Horizontal Location	Top of Well Vertical Elevation
2101767.46	5746061.30	355.60

Directions from Monterey:

1. Head east on CA-68 E/Monterey Salinas Hwy toward Salinas 6.1 mi
2. Turn left onto Pasadera Dr
Restricted usage road 213 ft
3. Turn right
Restricted usage road
Destination will be on the right 315 ft



**SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE**

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

MEETING DATE:	September 14, 2011
AGENDA ITEM:	5
AGENDA TITLE:	Proposed FY 2012 M&MP Work Plan, and Proposed 2012 and 2013 M&MP Operations and Capital Budgets
PREPARED BY:	Robert Jaques, Technical Program Manager
<p>SUMMARY: The Schedule calls for the TAC to approve the proposed Management and Monitoring Program (M&MP) Work Plan and Budgets at its September 2011 meeting. Attached are the proposed M&MP 2012 Work Plan, and the proposed M&MP Operations and Capital Budgets for 2012 and 2013.</p> <p>The principal changes from the 2011 Work Plan that are proposed for 2012 are:</p> <ul style="list-style-type: none"> • Carrying over to 2012 the work to perform further Groundwater Modeling, to refine Protective Water Levels, and to update the Basin Management Action Plan (BMAP). All of that work has been delayed during 2011 because of issues that delayed expected progress on the Coastal Water Project, specifically the Regional Water Supply Project Component. These items are included under Tasks I.3.a and I.3.c. • Adding barium and iodide analyses to the water quality samples that are collected from seven of the monitoring wells that are located near the coastline. This data may provide useful additional information to help detect possible seawater intrusion. This is included under Task I.2.b.3. • Putting in a “placeholder” amount of \$5,000 in the 2012 M&MP Operations Budget for possible further work to be done on cross-aquifer contamination potential investigations under Task I.3.d. Such work might include such things as video logging of some wells and preparing a list of abandoned wells. <p>As shown in the attachments, the proposed 2012 M&MP Operations Budget is approximately \$22,000 lower than the 2011 Budget.</p> <p>I am not recommending that any further wellhead resurvey work, or installation of new monitoring wells, be performed in either 2012 or 2013. It is proposed that no monies be budgeted in the M&MP Capital Budgets for either 2012 or 2013.</p> <p>Following TAC approval of the Work Plan and Budgets, they will be forwarded to the Board for their approval at the Board’s October 2011 meeting.</p>	
ATTACHMENTS:	<ul style="list-style-type: none"> • Proposed 2012 M&MP Work Plan • Proposed 2012 and 2013 M&MP Operations Budgets • Proposed M&MP Capital Budgets for 2012 and 2013
RECOMMENDED ACTION:	Approve, or make changes to, the attached Work Plan and Budgets

Seaside Groundwater Basin Management and Monitoring Program FY 2012 Work Plan

The tasks outlined below are those that are anticipated to be performed during 2012. Some Tasks listed below are specific to 2012, while others Tasks recur throughout the program, such as data collection and database entry, and Program Administration Tasks.

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

M.1 Program Administration

**M. 1. a.
Project Budget and Controls
(\$0)**

Consultants will provide monthly or bimonthly invoices to the Watermaster for work performed under their contracts with the Watermaster. Consultants will perform maintenance of their internal budgets and schedules, and management of their subconsultants. The Watermaster will perform management of its Consultants.

**M. 1. b.
Assist with Board and TAC
Agendas (\$0)**

Watermaster staff will prepare Board and TAC meeting agenda materials. No assistance from Consultants is expected to be necessary to accomplish this Task.

**M. 1. c. & M. 1. d
Preparation for and
Attendance at Meetings
(\$5,150)**

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

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

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

**M. 1. e.
Peer Review of Documents
and Reports
(\$3,100)**

When requested by the Watermaster staff, Consultants may be asked to assist the TAC and the Watermaster staff with peer reviews of documents and reports prepared by various other Watermaster Consultants and/or entities.

**M. 1. f.
QA/QC (\$0)**

A Consultant (MPWMD) will provide general QA/QC support over the Seaside Basin Monitoring and Management Program.

I. 2 Comprehensive Basin Production, Water Level and Water Quality Monitoring Program

I. 2. a. Database Management

I. 2. a. 1

Conduct Ongoing Data Entry and Database Maintenance/

Enhancement

(\$12,300)

The database will be maintained by a Consultant (MPWMD) performing this work for the Watermaster. MPWMD will enter new data into the consolidated database, including water production volumes, water quality and water level data, and such other data as may be appropriate. Another Consultant will periodically post database information to the Watermaster's website, so it will be accessible to the public and other interested parties. The database programming was enhanced in 2010 and in 2011 at the direction of the Watermaster to improve the usefulness and "user friendliness" of the database. No further enhancements are anticipated during 2012.

I. 2. a. 2

Verify Accuracy of Production Well Meters

(\$0)

To ensure that water production data is accurate, the well meters of the major producers were verified for accuracy during 2009. No additional work of this type is anticipated during 2012.

I. 2. b. Data Collection Program

I. 2. b. 1.

Site Representation and Selection. (\$0)

The monitoring well network review that was started in 2008 has been completed, and sites have been identified where future monitoring well(s) could be installed, if it is deemed necessary to do so in order to fill in data gaps. No further work of this type is anticipated in 2012.

I. 2. b. 2.

Collect Monthly Manual Water Levels. (\$3,450)

Each of the monitoring wells will be visited on a monthly basis. Water levels will be determined by either taking manual water levels using an electric sounder, or by dataloggers.

I. 2. b. 3.

Collect Quarterly Water Quality Samples.

(\$55,520)

Water quality data will be collected quarterly from certain of the monitoring wells. In 2012 water quality analyses will be expanded to include barium and iodide ions, to determine the potential benefit of performing these additional analyses. These two parameters have been useful in analyzing seawater intrusion potential in other vulnerable coastal groundwater basins, and are briefly mentioned in the Watermaster's annual Seawater Intrusion Analysis Reports. These parameters will be added to the annual water quality sampling list for the four Watermaster Sentinel wells (SBWM-1, SBWM-2, SBWM-3, and SBWM-4), and also for the 3 most coastal MPWMD monitoring wells (MSC, PCA, and FO-09). A determination as to whether or not to continue monitoring these additional parameters in subsequent years will be made at the end of Water Year 2012.

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

This Task includes \$3,500 to continue retrofitting the wells that are sampled on an annual basis to use the new low-flow purge approach for collecting samples. The wells that are sampled quarterly have previously been retrofitted, but only a portion of the wells that are sampled annually have been retrofitted. The dedicated devices sit in the water column and may periodically need to be replaced or repaired. The \$3,500 amount includes costs to perform ongoing maintenance and/or replacement of the sample pumping equipment,

<p>I. 2. b. 4. Update Program Schedule and Standard Operating Procedures. (\$0)</p>	<p>The TAC, with assistance from Consultants, has conducted periodic reviews of the data collection program. Only a few small improvements have been recommended in recent years, and these recommendations have been implemented. No additional work of this type is anticipated in 2012.</p>
<p>I. 2. b. 5. Monitor Well Construction (\$0)</p>	<p>An additional monitoring well was installed in 2009. No further work of this type is anticipated in 2012.</p>
<p>I. 2. b.6 Reports (\$6,900)</p>	<p>The groundwater level and quality monitoring will be conducted on a monthly, quarterly, and annual basis, as described in the Consultant's Scope of Work. Reports summarizing data collected and analyzed will be submitted to the Watermaster on a schedule to be established during the year. Reports will include:</p> <ul style="list-style-type: none"> • Water Quality and Water Level Quarterly Reports. Q1 and Q2 data will be consolidated into one report which will be provided shortly after the end of Q2. Q3 and Q4 data will be included in the Annual Report. • An Annual Water Quality and Water Level Report
<p><i>1.3 Basin Management</i></p>	
<p>I. 3. a. Enhanced Seaside Basin Groundwater Model (Costs listed in subtasks below)</p>	<p>As a result of the data obtained during Phase 1, including constructing new coastal sentinel monitoring wells and developing a consolidated database of groundwater production, water levels, and water quality, it is was concluded that at that time it was not necessary to develop a new Model. Preliminary conclusions from work performed in preparing the Basin Management Action Plan in 2008, along with comments and questions from Technical Advisory Committee and Board members, indicated that it was desirable to update the existing Model during 2009, so that it could be used as more data becomes available.</p>
<p>I.3.a.1 Update the Existing Model (\$0)</p>	<p>The existing Model, described in the report titled "Groundwater Flow and Transport Model" dated October 1, 2007, was updated in 2009 in order to develop protective water levels, and to evaluate replenishment scenarios and develop answers to Basin management questions (Tasks I.3.a.2 and I.3.a.3). This work was done by a Consultant hired by the Watermaster. No further work of this type is anticipated in 2012.</p>
<p>I. 3. a. 2 Develop Protective Water Levels (\$25,000)</p>	<p>A series of cross-sectional models was created in order to develop protective water levels for selected production wells, as well as for the Basin as a whole. This work was done in 2009 by a Consultant hired by the Watermaster (HydroMetrics), and is discussed in HydroMetrics' "Seaside Groundwater Basin Protective Water Elevations Technical Memorandum." In 2010 and 2011 further work was scheduled and budgeted to be done to refine these protective water levels to find the most cost-effective approach to provide the desired degree of protection. However, not all of the information needed to perform the refinements was available in those years, so this Task has been rescheduled to occur in 2012.</p>
<p>I. 3. a. 3 Evaluate Replenishment Scenarios and Develop Answers to Basin Management Questions (\$25,000)</p>	<p>The updated Model was used to evaluate different scenarios to determine such things as the most effective methods of using supplemental water sources to replenish the Basin and/or to assess the impacts of pumping redistribution. This work was done in 2009 by a Consultant hired by the Watermaster (HydroMetrics), and is described in HydroMetrics' "Seaside Groundwater Basin Groundwater Model Report." In 2010 HydroMetrics used the updated Model to develop answers to some questions associated with Basin management. In 2012 the Watermaster may perform additional work to answer additional questions.</p>

**I. 3. b.
Complete Preparation of Basin
Management Action Plan (\$0)**

The Watermaster's Consultant completed preparation of the Basin Management Action Plan (BMAP) in February 2009. The BMAP serves as the Watermaster's long-term seawater intrusion prevention plan. The Sections that are included in the BMAP are:

- Executive Summary
- Section 1 – Background and Purpose
- Section 2 – State of the Seaside Groundwater Basin
- Section 3 – Supplemental Water Supplies
- Section 4 –Groundwater Management Actions
- Section 5 – Recommended Management Strategies
- Section 6 – References

The only work which may be performed on the BMAP in 2012 is discussed under Task I. 3. c.

**I. 3. c.
Refine and/or Update the Basin
Management Action Plan
(\$25,000)**

During 2012 it may be beneficial to update the BMAP based on new data, and/or knowledge that is gained from the work described under Tasks I. 3. a. 2 and/or I. 3. a. 3. Such work might involve issues pertaining to Basin storage capacity, water storage rights, or pumping redistribution strategies. This work was originally scheduled and budgeted for 2010 and again in 2011, but not all of the information needed to update the BMAP was available, so the updating has been rescheduled to occur in 2012, if sufficient information becomes available to warrant performing this work. This task is included primarily for budgeting purposes in the event such work is deemed necessary.

**I. 3. d.
Evaluate Coastal Wells for Cross-
Aquifer Contamination Potential
(\$5,000)**

If seawater intrusion were to reach any of the coastal wells in any aquifer, and if a well was constructed without proper seals to prevent cross-aquifer communication, or if deterioration of the well had compromised these seals, it would be possible for the intrusion to flow from one aquifer to another. In 2010 a preliminary review of the well construction records for each of the coastal wells was made. As a result of that review it was deemed desirable to further evaluate certain higher-risk wells in 2011 to determine whether or not they were properly constructed so as to prevent such cross-aquifer contamination from occurring. As part of this further evaluation, records will also be reviewed to determine whether there is any indication of well seal deterioration that would lead to the potential for cross-aquifer contamination. A report summarizing the findings of this further evaluation will be prepared, with recommendations for any further followup work that should be done. This work was delayed in starting in 2011 due to the Consultant's (MPWMD's) workload, and could not be completed in time to include in this M&MP any recommendations regarding further work to be performed in 2012. The evaluation is scheduled to be completed in December, 2011. Consequently, a "placeholder" amount of \$5,000 has been included in the 2012 M&MP Budget to provide funding for such work, if it is approved by the Watermaster Board following receipt of the report summarizing the findings of the evaluation conducted in 2011.

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

**I. 4. a.
Oversight of Seawater Intrusion
Detection and Tracking (\$5,750)**

A Consultant will provide general oversight over the Seawater Intrusion detection program.

**I. 4. b.
Analyze and Map Water Quality
from Coastal Monitoring Wells
(costs included above under Task
I. 4. a)**

Annual chloride concentration maps will be produced incorporating the data from the coastal wells. Data from the Phase 1 coastal sentinel wells will be used to develop time series graphs.

<p>I. 4. c. Annual Report- Seawater Intrusion Analysis (\$25,750)</p>	<p>At the end of each water year, a Consultant will reanalyze all water quality data. Semi-annual chloride concentration maps will be produced for each aquifer in the basin. Time series graphs, trilinear graphs, and stiff diagram comparisons will be updated with new data. The annual EM logs will be analyzed to identify changes in seawater wedge locations. All analyses will be incorporated into an annual report that follows the format of the initial, historical data report. Potential seawater intrusion will be highlighted in the report, and if necessary, recommendations will be included. The annual report will be submitted for review by the TAC and the Board. Modifications to the report will be incorporated based on input from these bodies, as well as Watermaster staff.</p>
<p>I. 4. d Complete Preparation of Seawater Intrusion Response Plan (\$0)</p>	<p>The Watermaster's Consultant (HydroMetrics) completed preparation of the long-term Seawater Intrusion Response Plans (SIRP) in February 2009. The Sections that are included in the SIRP are:</p> <ul style="list-style-type: none"> • Section 1 – Background and Purpose • Section 2 – Consistency with Other Documents • Section 3 – Seawater Intrusion Indicators and Triggers • Section 4 –Seawater Intrusion Contingency Actions • Section 5 - References <p>No further work on the SIRP is anticipated in 2012.</p>
<p>I. 4. e. Refine and/or Update the Seawater Intrusion Response Plan (\$0)</p>	<p>At the beginning of 2009 it was thought that it might be beneficial or necessary to perform work to refine the SIRP and/or to update it based on new data or knowledge that was gained subsequent to the preparation of the SIRP. However, this did not prove to be necessary, and no further work of this type is anticipated in 2012.</p>
<p>I. 4. f. If Seawater Intrusion is Determined to be Occurring, Implement Contingency Response Plan (\$0)</p>	<p>The SIRP will be implemented if seawater intrusion, as defined in the Plan, is determined by the Watermaster to be occurring.</p>

Management and Monitoring Plan Operations Budget For Tasks to be Undertaken in 2012							Comparative Costs from 2011 Budget	
Task	Subtask	Sub-Subtask	Cost Description	CONSULTANTS & CONTRACTORS ⁽³⁾				Total
				MPWMD	Private Consultants	Contractors		
Labor								
			Technical Project Manager	\$0	\$100,000	\$0	\$100,000	\$100,000
M.1 Program Administration								
	M.1.a		Project Budget and Controls	\$0	\$0	\$0	\$0	\$0
	M.1.b		Assist with Board and TAC Agendas	\$0	\$0	\$0	\$0	\$0
	M.1.c & M.1.d		Preparation for and Attendance at Meetings ⁽⁸⁾	\$0	\$5,150	\$0	\$5,150	\$5,150
	M.1.e		Peer Review of Documents and Reports ⁽⁸⁾	\$0	\$3,100	\$0	\$3,100	\$3,100
	M.1.f		QA/QC	\$0	\$0	\$0	\$0	\$0
I.1 Initial Phase 1 Monitoring Well Construction (Task Completed in Phase 1)								
I.2 Production, Water Level and Quality Monitoring								
	I.2. a.		Database Management					
		I.2. a. 1.	Conduct Ongoing Data Entry/ Database Maintenance/Enhancement	\$9,900	\$2,400	\$0	\$12,300	\$13,000
		I.2. a. 2.	Verify Accuracy of Production Well Meters	\$0	\$0	\$0	\$0	\$0
	I.2. b.		Data Collection Program					
		I.2. b. 1.	Site Representation and Selection ⁽⁷⁾	\$0	\$0	\$0	\$0	\$0
		I.2. b. 2.	Collect Monthly Water Levels ⁽⁶⁾	\$3,450	\$0	\$0	\$3,450	\$3,450
		I.2. b. 3.	Collect Quarterly Water Quality Samples ⁽¹⁾⁽⁵⁾⁽⁶⁾	\$38,300	\$0	\$17,220	\$55,520	\$68,600
		I.2. b. 4.	Update Program Schedule and Standard Operating Procedures.	\$0	\$0	\$0	\$0	\$0
		I.2. b. 5.	Monitor Well Construction ⁽⁷⁾	\$0	\$0	\$0	\$0	\$0
		I.2. b. 6.	Reports	\$5,850	\$1,050	\$0	\$6,900	\$6,900
I.3 Basin Management								
	I.3. a.		Enhanced Seaside Basin Groundwater Model	(Costs Shown in Subtasks Below)				
		I.3. a. 1.	Update the Existing Model	\$0	\$0	\$0	\$0	\$0
		I.3. a. 2.	Develop Protective Water Levels ⁽¹¹⁾	\$0	\$25,000	\$0	\$25,000	\$25,000
		I.3. a. 3.	Evaluate Replenishment Scenarios and Develop Answers to Basin Management Questions	\$0	\$25,000	\$0	\$25,000	\$25,000
	I.3. b.		Complete Preparation of Basin Management Action Plan	\$0	\$0	\$0	\$0	\$0
	I.3. c.		Refine and/or Update the Basin Management Action Plan ⁽¹¹⁾	\$0	\$25,000	\$0	\$25,000	\$25,000
	I.3. d.		Evaluate Coastal Wells for Cross-Aquifer Contamination Potential	\$5,000	\$0	\$0	\$5,000	\$10,000
I.4 Seawater Intrusion Contingency Plan								
	I.4. a.		Oversight of Seawater Intrusion Detection and Tracking	\$3,700	\$2,050	\$0	\$5,750	\$5,750
	I.4. b.		Analyze and Map Water Quality from Coastal Monitoring Wells	(Costs Included Under I.4.a)				
	I.4. c.		Annual Report- Seawater Intrusion Analysis	\$0	\$25,750	\$0	\$25,750	\$25,750
	I.4. d.		Complete Preparation of Seawater Intrusion Response Plan ⁽²⁾	\$0	\$0	\$0	\$0	\$0
	I.4. e.		Refine and/or Update the Seawater Intrusion Response Plan ⁽²⁾⁽⁹⁾	\$0	\$0	\$0	\$0	\$0
	I.4. f.		If Seawater Intrusion is Determined to be Occurring, Implement Contingency Response Plan ⁽²⁾	(No Costs are Included for This Task, as This Task Will Likely Not be Necessary During 2012. If it Does Become Necessary, Use of Contingency Funds or a Budget Modification Will Likely be Necessary)				
TOTALS CONSULTANTS & CONTRACTORS				\$66,200	\$214,500	\$17,220		
SUBTOTAL not including Technical Program Manager =							\$197,920	\$216,700
Contingency (not including Technical Program Manager) @ 20% ⁽⁴⁾ =							\$39,584	\$43,340
Technical Program Manager =							\$100,000	\$100,000
TOTAL=							\$337,504	\$360,040

Footnotes:

- (1) An outside contractor would be used to perform the induction logging, and potentially to also collect some water quality samples in conjunction with doing the induction logging. MPWMD is expected to perform portions of the work of this Subtask, and would likely be the party that subcontracts with the Contractor to perform the induction logging and sample collection work on certain of the wells.
- (2) The response plan would only be implemented in the event sea water intrusion is determined to be occurring.
- (3) Within the context of this document the term "Consultant" refers either to a Private Consultant providing professional engineering or other types of technical services, or to the Monterey Peninsula Water Management District (MPWMD). The term "Contractor" refers to a firm providing construction or field services such as well drilling, induction logging, or meter calibration.
- (4) Due to the uncertainties of the exact scopes of some of the Tasks listed above at the time of preparation of this Budget, e.g. Tasks I.3.a, I.3.c, and I.3.d, it is recommended that a 20% Contingency be included in the Budget.
- (5) Includes \$3,500 in potential well site retrofitting costs that may be necessary in order to make some of these wells available for use as monitoring wells, as well as to maintain equipment previously installed for this purpose. Also includes \$1,500 to analyze for barium and iodide ions in certain of these wells.
- (6) Does not include costs for MPWMD to collect water level data or water quality samples from wells other than those that are part of the basic monitoring well network, i.e. for private well owners who have requested that the Watermaster obtain this data for them. Costs to obtain that data are to be reimbursed to the Watermaster by those well owners, so there should be no net cost to the Watermaster for that portion of the
- (7) No additional monitoring well is expected to be constructed in 2012.
- (8) For HydroMetrics to provide hydrogeologic consulting assistance to the Watermaster, beyond that associated with performing other Tasks, when requested to do so by the Technical Program Manager.
- (9) If work under this Task is found to be necessary, it will be funded through the Contingency line item in this Budget.
- (10) Does not include funds for Database enhancement, as it is assumed that all desired enhancements had been made in 2010.
- (11) If necessary to reflect knowledge gained from modeling work or other data sources. Provides funds for work originally budgeted for 2010, t which has been rescheduled to 2012.

Management and Monitoring Plan Operations Budget
For Tasks to be Undertaken in 2013⁽¹²⁾

Task	Subtask	Sub-Subtask	Cost Description	CONSULTANTS & CONTRACTORS ⁽³⁾			Total
				MPWMD	Private Consultants	Contractors	
Labor							
			Technical Project Manager	\$0	\$100,000	\$0	\$100,000
M.1 Program Administration							
	M.1.a		Project Budget and Controls	\$0	\$0	\$0	\$0
	M.1.b		Assist with Board and TAC Agendas	\$0	\$0	\$0	\$0
	M.1.c & M.1.d		Preparation for and Attendance of at Meetings ⁽⁸⁾	\$0	\$5,305	\$0	\$5,305
	M.1.e		Peer Review of Documents and Reports ⁽⁸⁾	\$0	\$3,193	\$0	\$3,193
	M.1.f		QA/QC	\$0	\$0	\$0	\$0
I.1 Initial Phase 1 Monitoring Well Construction (Task Completed in Phase 1)							
I.2 Production, Water Level and Quality Monitoring							
	I. 2. a.		Database Management				
		I. 2. a. 1.	Conduct Ongoing Data Entry/ Database Maintenance/Enhancement	\$10,197	\$2,472	\$0	\$12,669
		I. 2. a. 2.	Verify Accuracy of Production Well Meters	\$0	\$0	\$0	\$0
	I. 2. b.		Data Collection Program				
		I. 2. b. 1.	Site Representation and Selection ⁽⁷⁾	\$0	\$0	\$0	\$0
		I. 2. b. 2.	Collect Monthly Water Levels ⁽⁶⁾	\$3,554	\$0	\$0	\$3,554
		I. 2. b. 3.	Collect Quarterly Water Quality Samples ⁽¹⁾⁽⁵⁾⁽⁶⁾	\$39,449	\$0	\$17,737	\$57,186
		I. 2. b. 4.	Update Program Schedule and Standard Operating Procedures.	\$0	\$0	\$0	\$0
		I. 2. b. 5.	Monitor Well Construction ⁽⁷⁾	\$0	\$0	\$0	\$0
		I. 2. b. 6.	Reports	\$6,026	\$1,082	\$0	\$7,107
I.3 Basin Management							
	I. 3. a.		Enhanced Seaside Basin Groundwater Model	(Costs Shown in Subtasks Below)			
		I. 3. a. 1	Update the Existing Model	\$0	\$0	\$0	\$0
		I. 3. a. 2	Develop Protective Water Levels ⁽¹³⁾	\$0	\$25,750	\$0	\$25,750
		I. 3. a. 3	Evaluate Replenishment Scenarios and Develop Answers to Basin Management Questions ⁽¹³⁾	\$0	\$25,750	\$0	\$25,750
	I. 3. b.		Complete Preparation of Basin Management Action Plan	\$0	\$0	\$0	\$0
	I. 3. c.		Refine and/or Update the Basin Management Action Plan ⁽¹¹⁾⁽¹³⁾	\$0	\$25,750	\$0	\$25,750
	I. 3. d.		Evaluate Coastal Wells for Cross-Aquifer Contamination Potential ⁽¹⁴⁾	\$5,150	\$0	\$0	\$5,150
I.4 Seawater Intrusion Contingency Plan							
	I. 4. a.		Oversight of Seawater Intrusion Detection and Tracking	\$3,811	\$2,112	\$0	\$5,923
	I. 4. b.		Analyze and Map Water Quality from Coastal Monitoring Wells	(Costs Included Under I.4.a)			
	I. 4. c.		Annual Report- Seawater Intrusion Analysis	\$0	\$26,523	\$0	\$26,523
	I. 4. d.		Complete Preparation of Seawater Intrusion Response Plan ⁽²⁾	\$0	\$0	\$0	\$0
	I. 4. e.		Refine and/or Update the Seawater Intrusion Response Plan ⁽²⁾⁽⁹⁾	\$0	\$0	\$0	\$0
	I. 4. f.		If Seawater Intrusion is Determined to be Occurring, Implement Contingency Response Plan ⁽²⁾	(No Costs are Included for This Task, as This Task Will Likely Not be Necessary During 2011. If it Does Become Necessary, Use of Contingency Funds or a Budget Modification Will Likely be Necessary)			
TOTALS CONSULTANTS & CONTRACTORS				\$68,186	\$217,935	\$17,737	
SUBTOTAL not including Technical Program Manager =							\$203,858
Contingency (not including Technical Program Manager) @ 20% ⁽⁴⁾ =							\$40,772
Technical Program Manager							\$100,000
TOTAL=							\$344,630

Footnotes:

- (1) An outside contractor would be used to perform the induction logging, and potentially to also collect some water quality samples in conjunction with doing the induction logging. MPWMD is expected to perform portions of the work of this Subtask, and would likely be the party that subcontracts with the Contractor to perform the induction logging and sample collection work on certain of the wells.
- (2) The response plan would only be implemented in the event sea water intrusion is determined to be occurring.
- (3) Within the context of this document the term "Consultant" refers either to a Private Consultant providing professional engineering or other types of technical services, or to the Monterey Peninsula Water Management District (MPWMD). The term "Contractor" refers to a firm providing construction or field services such as well drilling, induction logging, or meter calibration.
- (4) Due to the uncertainties of the exact scopes of some of the Tasks listed above at the time of preparation of this Budget, e.g. Tasks I.3.a, I.3.c, and I.3.d, it is recommended that a 20% Contingency be included in the Budget.
- (5) A portion of this cost is for well retrofits and for maintaining sampling equipment that was installed in prior years.
- (6) Does not include costs for MPWMD to collect water level data or water quality samples from wells other than those that are part of the basic monitoring well network, i.e. for private well owners who have requested that the Watermaster obtain this data for them. Costs to obtain that data are to be reimbursed to the Watermaster by those well owners, so there should be no net cost to the Watermaster for that portion of the work under these Tasks.
- (7) No additional monitoring well is expected to be constructed in 2013.
- (8) For HydroMetrics to provide hydrogeologic consulting assistance to the Watermaster, beyond that associated with performing other specified Tasks, when requested to do so by the Technical Program Manager.
- (9) If work under this Task is found to be necessary, it will be funded through the Contingency line item in this Budget.
- (10) Does not include funds for Database enhancement, as it is assumed that all desired enhancements had been made in prior years.
- (11) If necessary to reflect knowledge gained from modeling work or other data sources.
- (12) Includes a 3% inflation factor on most 2012 Budget costs, except the Technical Program Manager cost which has no inflation factor applied to it.
- (13) Costs included for these Tasks would only be incurred if the Board determined to defer this work from 2012 to 2013, or determined to perform additional work beyond that performed in 2012.
- (14) This is a "placeholder" cost in the event the Board determines in 2012 that further work on this Task should be performed in 2013.

**Management and Monitoring Plan Capital Budget
For Tasks to be Undertaken in 2012**

No Capital projects are anticipated to be undertaken in 2012, so this budget is \$0.

**Management and Monitoring Plan Capital Budget
For Tasks to be Undertaken in 2013**

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

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

MEETING DATE:	September 14, 2011
AGENDA ITEM:	6
AGENDA TITLE:	Set Next Meeting Date
PREPARED BY:	Robert Jaques, Technical Program Manager
SUMMARY:	
<p>The next regular meeting date for the TAC is October 12, 2011. However, it will not be possible for some of the items that should be reviewed and/or approved by that TAC at its October meeting will be available by that date.</p> <p>The Seawater Intrusion Analysis Report (SIAR), for example, could not be completed last year until the end of October, as data from producers was still being received and analyzed until then. The same situation is likely to occur again this year, and is one of the reasons the Judge granted us a later date for submitting the Annual Reports.</p> <p>Also, it would be good for the TAC to have the opportunity to review and provide comments/edits on the Draft 2011 Annual Report, so that the TAC's input can be incorporated into that Report before it goes to the Board for their approval.</p> <p>For these reasons I think it makes sense to cancel the October TAC meeting altogether, and to have the next TAC meeting in November, in order to allow time for the items mentioned above to be ready for presentation to the TAC. I am also proposing reversing the meeting order of the TAC and the Board meetings in November, so that the TAC would meet first, and the Board would meet <u>after</u> the TAC met. This would enable the TAC to provide its recommendations on various Annual Report items for the Board's approval in November. This would seem to enable us to get everything approved by the TAC and the Board in time to complete the Annual Report on time. It might also allow us to skip having a December meeting, unless some other action items come up in the meantime.</p> <p>If the TAC concurs with this proposal, the next TAC meeting would be on Wednesday November 9, 2011, and I would recommend to Mr. Evans that the November Board meeting be held at some date after the TAC's November meeting.</p>	
ATTACHMENTS:	None
RECOMMENDED ACTION:	Approve recommendation to cancel the October TAC meeting and have the next TAC meeting on November 9, 2011.

**SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE**

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

MEETING DATE:	September 14, 2011
AGENDA ITEM:	7
AGENDA TITLE:	Schedule
PREPARED BY:	Robert Jaques, Technical Program Manager
SUMMARY:	<p>As a regular part of each monthly TAC meeting, I will provide the TAC with an updated 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.</p> <p>Attached is the Consultants Work Schedule for FY 2011.</p> <p>Highlights of changes since last Schedule update:</p> <ol style="list-style-type: none">1. Further discussion on the topics associated with refining preventive water levels, updating the BMAP, and moving ahead with more Groundwater Modeling (ID numbers 56 through 60, 64 through 68, and 72 through 78) has been deferred until such time as there is some specific event associated with the Coastal Water Project that would warrant reopening discussion on these topics, or if a TAC member requests that further discussion be held.2. Cancelling the October 2011 TAC meeting and having the next TAC meeting on November 9, 2011.3. Evaluation of the potential for cross-aquifer contamination of the coastal wells has been rescheduled for completion by the end of 2011. A progress report on this work has been scheduled for the November 2011 TAC meeting.
ATTACHMENTS:	Schedule of Work Activities for FY 2011
RECOMMENDED ACTION:	Provide Input to Technical Program Manager Regarding Any Corrections or Additions to these Schedules

Seaside Basin Watermaster Monitoring and Management Program 2011 Work Schedule

ID	Task Name	2011												2012											
		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
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 Report for 3rd Quarter (Same as Task 42)																								
9	Watermaster Prepares Quarterly Water Production, Water Level, and Water Quality Report for 4th Quarter (Same as Task 43)																								
10	Replenishment Assessment Unit Costs for Water Year 2012																								
11	B&F Committee Develops Replenishment Assessment Unit Cost for 2012 Water Year																								
12	If Requested, TAC Provides Assistance to B&F Committee in Development of 2012 Water Year Replenishment Assessment Unit Cost																								
13	Board Adopts and Declares 2012 Water Year Replenishment Assessment Unit Cost																								
14	Replenishment Assessments for Water Year 2011																								
15	Watermaster Prepares Replenishment Assessments for Water Year 2011																								
16	Watermaster Board Approves Replenishment Assessments for Water Year 2011 (At November Meeting)																								
17	Watermaster Levies Replenishment Assessment for 2011																								

Seaside Basin Watermaster Monitoring and Management Program 2011 Work Schedule

ID	Task Name	2011												2012											
		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
18	Monitoring & Management Program (M&MP) Budgets for 2012																								
19	Prepare Draft 2012 and 2013 M&MP O&M and Capital Budgets													Completed											
20	TAC approves Draft 2012 and 2013 M&MP O&M and Capital Budgets													9/14											
21	Board approves 2012 and 2013 M&MP O&M and Capital Budgets													10/5											
22	2011 Annual Report (Note: Schedule Reflects Court Approval of Later Submittal Date for Annual Report)																								
23	Prepare Preliminary Draft 2011 Annual Report																								
24	TAC Provides Input on Draft 2011 Annual Report																								
25	Prepare Revised Draft 2011 Annual Report (Incorporating TAC Input)																								
26	Board Provides Input on Revised Draft 2011 Annual Report (At November Board Meeting)																								
27	Prepare Final 2011 Annual Report (Incorporating Board Input)																								
28	Watermaster Submits Final 2011 Annual Report to Judge																								
29	MANAGEMENT																								
30	M.1 PROGRAM ADMINISTRATION (All Work Performed by Watermaster Staff)																								
31	Prepare Initial Consultant Contracts for 2012																								
32	TAC Approval of Initial Consultant Contracts for 2012																								
33	Board Approval of Initial Consultant Contracts for 2012 (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 2011 Work Schedule

ID	Task Name	2011												2012										
		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
55	TAC Continues Discussion Regarding Refining Protective Water Levels									Completed														
56	TAC Continues Discussion Regarding Refining Protective Water Levels																							
57	Board Approves Contract with HydroMetrics to Refine Protective Water Levels (Board Deferred Performing this Work to an Unspecified Future Date)																							
58	HydroMetrics Refines Protective Water Levels																							
59	HydroMetrics Makes Summary Report to TAC on Refinement of Protective Water Levels																							
60	HydroMetrics Makes Summary Report to Board on Protective Water Levels																							
61	I.3.a.3 Evaluate Replenishment Scenarios and Develop Answers to Basin Management Questions																							
62	TAC Continues Discussion of Issues and Timing Pertaining to Scenario 2 - Regional Water Supply Project Scenario				Completed																			
63	TAC Continues Discussion of Issues and Timing Pertaining to Scenario 2 - Regional Water Supply Project Scenario										Completed													
64	TAC Continues Discussion of Issues and Timing Pertaining to Scenario 2 - Regional Water Supply Project Scenario																							
65	Board Approves HydroMetrics Contract to Model Scenario 2																							
66	HydroMetrics Evaluates Scenario 2 - Regional Water Supply Project																							
67	HydroMetrics Makes Summary Report to TAC Regarding Evaluation of Scenario 2																							
68	HydroMetrics Makes Summary Report to Board Regarding Evaluation of Scenario 2																							
69	I.3.c Refine and/or Update the BMAP																							
70	TAC Continues Discussion Regarding Updating the BMAP				Completed																			
71	TAC Continues Discussion Regarding Updating the BMAP										Completed													
72	TAC Continues Discussion Regarding Updating the BMAP																							

Seaside Basin Watermaster Monitoring and Management Program 2011 Work Schedule

ID	Task Name	2011												2012												
		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	
73	Prepare Contract with HydroMetrics for Updating the BMAP																									TIMING TBD AT AN UNSPECIFIED FUTURE DATE
74	TAC Approves Contract with HydroMetrics for Updating the BMAP																									TIMING TBD AT AN UNSPECIFIED FUTURE DATE
75	Board Approves Contract with HydroMetrics for Updating the BMAP																									TIMING TBD AT AN UNSPECIFIED FUTURE DATE
76	HydroMetrics Updates the BMAP																									TIMING TBD AT AN UNSPECIFIED FUTURE DATE
77	HydroMetrics Makes Presentation on Draft Updated BMAP to TAC																									TIMING TBD AT AN UNSPECIFIED FUTURE DATE
78	HydroMetrics Makes Presentation of Final Updated BMAP to Board and Board Adopts Final Updated BMAP																									TIMING TBD AT AN UNSPECIFIED FUTURE DATE
79	I.3.d Evaluate Coastal Wells for Cross-Aquifer Contamination Potential																									
80	TAC Approves Scope of Work for MPWMD to Perform Further Evaluations of these Wells		Completed																							
81	Board Approves Well Evaluation Work to be Done in 2011		Completed																							
82	MPWMD Performs Further Evaluations of these Wells																									
83	MPWMD Makes Initial Progress Report on Well Evaluations to TAC																									Completed
84	MPWMD Makes Second Progress Report on Well Evaluations to TAC																									11/9
85	MPWMD Makes Final Presentation of Well Evaluations to TAC & TAC Determines if Further Work Should be Done in 2012																									TIMING TBD FOLLOWING COMPLETION OF EVALUATIONS
86	If Further Work is Recommended for 2012 Board Approves Contract with MPWMD to Perform this Work																									TIMING TBD FOLLOWING COMPLETION OF EVALUATIONS
87	I.4.a HydroMetrics & MPWMD Provide Oversight of Seawater Intrusion Detection and Tracking																									
88	I.4.b HydroMetrics Analyzes and Maps Water Quality from Coastal Monitoring Wells																									
89	I.4.c Annual Seawater Intrusion Analysis Report (SIAR)																									
90	HydroMetrics Provides Draft SIAR to Watermaster																									11/3

Seaside Basin Watermaster Monitoring and Management Program 2011 Work Schedule

ID	Task Name	2011												2012											
		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
91	TAC Approves Annual Seawater Intrusion Analysis Report (SIAR)																								
92	Board Approves Annual Seawater Intrusion Analysis Report (SIAR)																								
93	I.4.d Complete Preparation of Seawater Intrusion Response Plan (SIRP)																								
94	I.4.e Refine and/or Update the SIRP																								

◆ 11/9

NOVEMBER BOARD MEETING DATE TBD

WORK COMPLETED - NO FURTHER WORK PLANNED IN 2011

NOT NECESSARY

**SEASIDE BASIN WATER MASTER
TECHNICAL ADVISORY COMMITTEE**

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

MEETING DATE:	September 14, 2011
AGENDA ITEM:	8
AGENDA TITLE:	Other Business
PREPARED BY:	Robert Jaques, Technical Program Manager
SUMMARY:	<p>The "Other Business" agenda item is intended to provide an opportunity for TAC members or others present at the meeting to discuss items not on the agenda that may be of interest to the TAC.</p>
ATTACHMENTS:	None
RECOMMENDED ACTION:	None required – information only