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, September 9, 2015

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 (712) 432-1212. Use the Meeting ID 355890617. 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: Roger Hulbert, California American Water Company
Vice-Chairperson: Joe Oliver, MPWMD

MEMBERS

California American Water Company | **City of Del Rey Oaks** | **City of Monterey** | **City of Sand City** | **City of Seaside**

Coastal Subarea Landowners

Laguna Seca Property Owners | **Monterey County Water Resources Agency** | **Monterey Peninsula Water Management District**

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

MEETING DATE:	September 9, 2015
AGENDA ITEM:	2.A
AGENDA TITLE:	Approve Minutes from the August 12, 2015 Meeting
PREPARED BY:	Robert Jaques, Technical Program Manager

SUMMARY:

Draft Minutes from this meeting was 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 12, 2015

Attendees: TAC Members

City of Seaside – Rick Riedl (via telephone)
California American Water – Roger Hulbert
City of Monterey – Norm Green (via telephone)
Laguna Seca Property Owners – No Representative
MPWMD – Joe Oliver
MCWRA – No Representative
City of Del Rey Oaks – No Representative
City of Sand City – Leon Gomez (via telephone)
Coastal Subarea Landowners – No Representative

Watermaster
Technical Program Manager - Robert Jaques

Consultants
HydroMetrics – Derrik Williams (via telephone)

Others
None

The meeting was convened at 1:40 p.m. after a quorum had arrived.

1. Public Comments
There were no public comments.

2. Administrative Matters:

1. Approve Minutes from the July 15, 2015 Meeting

On a motion by Mr. Hulbert, seconded by Mr. Riedl, the Minutes were unanimously approved. Mr. Oliver had not attended that meeting and abstained.

2. Notes From July 14, 2015 Salinas River Groundwater Basin Investigation Model TAC Meeting

Mr. Jaques summarized the agenda packet materials for this item. Mr. Williams reported that sea level rise was probably included in the Watermaster's Model (but he would need to check to confirm that) but climate change had not been included. It was reported that the USGS is developing climate change information that could be used in models. There was consensus that the same climate change information should be included in the Watermaster's Model as is being included in the Salinas River Groundwater Basin Model. Mr. Hulbert reported that NOAA is also working on developing climate change data. Mr. Williams recommended using the same data source(s) as the consultants preparing the Salinas River Groundwater Basin Model use, for consistency between the two models. Mr. Hulbert noted that there is a lot of subjectivity in developing climate change forecasts. There was consensus to

hold off on making climate change revisions to the Watermaster's Model until the new climate change information from these agencies becomes available.

3. Report on Board's August 25, 2015 Discussion of Work Plan to Address Findings of Laguna Seca Modeling Work

Mr. Jaques summarized the agenda packet materials for this item. There was brief discussion of some of the topics covered in this Agenda item.

4. Request for Service to HydroMetrics WRI to Perform Modeling

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

Mr. Williams reported that he would pick two points in time to prepare the maps showing the location of the flow divide. The times he picks will be the most recent one for which data is already included in the Model, and a point in time 5 years after that.

Mr. Hulbert reported that 2019 is the most recent projection of when the MPWSP will begin operation. Mr. Williams will edit the draft scope of work for this RFS to clarify the basis for selecting the two points in time mentioned above, and will provide language in those edits to respond to Mr. Hulbert's request that a statement regarding the significance of performing this modeling be included therein. With these edits being made on a motion by Mr. Hulbert, seconded by Mr. Oliver, the TAC unanimously recommended that the Board approve this RFS.

5. Initial Discussion Regarding Scope of Work for Monitoring and Management Program (M&MP) for FY 2016

Mr. Jaques invited TAC members to raise questions or comments regarding the draft M&MP, and discussion on the following items ensued (refer to the meeting agenda packet for a description of each of these items):

Task I.2.b.2: Mr. Oliver reported that dataloggers now cost approximately $700 each and that they have an approximate useful life of about 5 years. He recommended that the budget for this Task include money for possible replacement of dataloggers that are already in use, but that no new dataloggers needed to be installed. Mr. Jaques will get specific information on this from Mr. Oliver and include it in the version of the M&MP that will be presented to the TAC for its approval at the September 9 TAC meeting.

I.2.b.3: Mr. Oliver recommended that the budget for this Task include money for ongoing maintenance and repair of the sampling equipment. Mr. Oliver also reported that groundwater levels at the Laguna Seca Driving Range well have dropped so far that during the most recent sampling event the existing sample pump was no longer able to obtain a sample from this well. He went on to say that this is an important sampling location in the Basin and that a new pump will need to be obtained for use on this well. He estimated that a new pump would cost on the order of $2,000. Mr. Jaques will get specific information on these issues from Mr. Oliver and include it in the version of the M&MP that will be presented to the TAC for its approval at the September 9 TAC meeting.

I.2.b.5: Mr. Oliver reported that while there are few wells near the northern and eastern perimeters of the Basin from which monitoring data can be obtained, he did not feel that any additional monitoring wells would need to be added in FY 2016.

I.3.c: Mr. Oliver said he that at this point in time he did not see any need to update the BMAP in FY 2016. However, with so many things going on involving water issues in the Basin, it would be good to keep money in this Budget line-item so it is available if a decision is made during FY 2016 to update the BMAP.

I.4.c: Mr. Williams reported that sea level rise has already been incorporated into the SIAR development process. There was consensus to hold off on incorporating climate change impacts, as discussed under Agenda Item No.2.B. [Note: Subsequent to this meeting Mr. Williams corrected himself by reporting that sea level rise had not been incorporated into the SIAR.]

6. Schedule

Mr. Jaques reported that there were no significant revisions to the Schedule this month.

7. Other Business

Mr. Oliver reported that as part of implementing the Sustainable Groundwater Management Act (SGMA) the Department of Water Resources (DWR) is developing a list of critically overdrafted basins in the State. After telephone conversations between MPWMD and DWR staff, and Watermaster and DWR staff, DWR staff determined not to include the Seaside Basin in that list. Mr. Oliver noted that being included on the list accelerates the deadline to prepare a Groundwater Sustainability Plan, but could enhance the outlook for getting funding assistance to prepare such a Plan. However, adjudicated basins, such as the Seaside Basin, are exempt from the requirement to prepare a Groundwater Sustainability Plan. He went on to report that when DWR does its next update to Bulletin 118 it may be desirable to reconsider the status of the Seaside Basin, and whether it should be included in the list at that time. He also reported that procedures are currently under development by DWR for making changes to basin boundaries. He said he felt some revisions to the Seaside Basin boundary may be in order once those procedures have been developed and promulgated for use.

8. Set Next Meeting Date

Mr. Green reported that the next regular meeting date for the TAC, September 9, 2015, is Admissions Day and that is a holiday for the City of Monterey, so he would not be available to attend the meeting if it is held on that date. All other TAC members reported that their entities do not take that as a holiday, so they will be working as usual. There was consensus to leave the meeting date unchanged. Therefore, the next regular meeting was set for Wednesday September 9, 2015 at 1:30 p.m. at the MRWPCA Board Room.

The meeting adjourned at 2:33 p.m.

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

MEETING DATE:	September 9, 2015
AGENDA ITEM:	3
AGENDA TITLE:	Approve Work Plan for FY 2016 Management and Monitoring Program (M&MP) and FY 2016 and 2017 M&MP Operations and Capital Budgets
PREPARED BY:	Robert Jaques

The Schedule calls for the TAC to approve the proposed Management and Monitoring Program (M&MP) Work Plan and Budgets at its September 2015 meeting. Attached are the proposed M&MP 2016 Work Plan, and the proposed M&MP Operations and Capital Budgets for 2016 and 2017. The Board has asked that two-year budgets be developed to alert the Board to potential changes in scope and/or cost in near future years.

The M&MP 2016 Work Plan which is attached reflects revisions resulting from the TAC's discussion when it reviewed the Draft M&MP 2014 Work Plan at its August 12, 2015 meeting, as well as subsequent input from HydroMetrics and MPWMD.

Changes in costs from the draft version contained in the August 12 agenda packet are:

Task M.1.e: This Task has not been used in recent years. Its budget amount was reduced, but not eliminated, in case some work of this type is necessary in 2016.

Tasks I.2.a.1and I.2.b.6: Private Consultant services have not been needed for these Tasks in the past, so no Private Consultant services for these Tasks are included in the 2016 budget.

Task I.2.a.2: This task that was completed in 2015 and no further work on this Task is expected to be required in 2016.

Task I.2.b.2: Costs to replace two dataloggers @ $750 each, plus $100 for installation parts, have been included in this task.

Task I.2.b.3: The cost of $2,000 to replace the sampling pump used at the Laguna Seca Driving Range well, and $1,000 to perform additional water quality testing at one of the Watermaster's sentinel wells, have been included in this task.

Task I.3.c: The budget for this Task was increased at the suggestion of HydroMetrics to reflect increases in hourly rates for their staff members who would work on this assignment, if the Watermaster determines that this Task should be performed in 2016.

As indicated by the right-hand column titled "Comparative Costs from 2015 Budget" in the proposed 2016 M&MP Operations Budget in Attachment 2, the proposed Budget is $35,040 lower ($313,454-$278,414) than the 2015 Budget.

Following TAC approval of the Work Plan and Budgets, they will be forwarded to the Board for their approval at the Board's October 2015 meeting.

AGENDA ITEM:	3 (Continued)

ATTACHMENTS:	1. Proposed 2016 M&MP Work Plan 2. Proposed 2016 and 2017 M&MP Operations Budgets 3. Proposed 2016 and 2017 M&MP Capital Budgets
RECOMMENDED ACTION:	Approve, or make changes to, the attached Work Plan and/or Budgets and then recommend these for approval by the Board

ATTACHMENT 1

Seaside Groundwater Basin Management and Monitoring Program
Proposed FY 2016 Work Plan

The tasks outlined below are those that are anticipated to be performed during 2016. Some Tasks listed below are specific to 2016, 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 ($7,000)	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 ($2,500)	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. These costs are included in the other tasks.

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 ($11,052)	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. No enhancements to the database are anticipated during 2015.
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 and again during 2015. No additional work of this type is anticipated during 2016.
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 2016.
I. 2. b. 2 Collect Monthly Manual Water Levels. ($5,872)	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. All wells where the use of dataloggers is feasible or appropriate have been equipped with dataloggers. It is anticipated that no additional dataloggers will need to be purchased in 2016. It is anticipated that installed dataloggers will periodically fail and need replacement. Accordingly, the cost for two replacement dataloggers at $750 apiece and $100 for installation parts has been included in this Task for budgeting purposes.
I. 2. b. 3 Collect Quarterly Water Quality Samples. ($54,906)	Water quality data will be collected quarterly from certain of the monitoring wells. In 2012 water quality analyses were 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 were 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). Barium and iodide analyses will continue being performed in 2016. 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 consideration of costs and other factors. Under this Task in 2013 retrofitting to use the low-flow purge approach for getting water quality samples was completed on all of the wells that are sampled. This sampling equipment sits in the water column and may periodically need to be replaced or repaired. Accordingly, an allowance to perform maintenance on previously installed equipment has been included in this Task. Also, the Laguna Seca Driving Range sampling pump is no longer adequate due to declining groundwater levels, so $2,000 to purchase a replacement sampling pump has been included in this Task. $1,000 has been included in this Task to perform additional semi-annual water quality sampling at Sentinel Well SBMW-1 as recommended in the 2014 SIAR.

I. 2. b. 4 Update Program Schedule and Standard Operating Procedures. ($0)	All recommendations from prior reviews of the data collection program have been implemented. No additional work of this type is anticipated in 2016.
I. 2. b. 5. Monitor Well Construction ($0)	An additional monitoring well was installed in 2009. No further work of this type is anticipated in 2016.
I. 2. b.6 Reports ($4,704)	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, and will consist of: • One combined report summarizing the water production data and summarizing and analyzing the water quality and water level data from the 1st & 2nd Quarters of the Water Year. • One annual report summarizing the water production data and summarizing and analyzing the water quality and water level data from the 3rd & 4th Quarters of the Water Year, and containing tables consolidating the data from the quarterly reports and a narrative summarization of the findings, conclusions, and recommendations from the quarterly reports. This annual report may include, as attachments, each of the quarterly reports.
	I. 3 Basin Management
I. 3. a. Enhanced Seaside Basin Groundwater Model (Costs listed in subtasks below)	The Watermaster and its consultants use a Groundwater Model for basin management purposes.

I.3.a.1
Update the Existing Model ($0)

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). The scope and budget in 2014 for again updating the Model included the following:

- Step1: Update the model and check its accuracy - $10,000
- Step 2: Recalibrate the model - $15,000
- Step 3: Prepare report describing the work that was done - $5,000

Step 1 was completed in 2014 by incorporating recent pumping data, groundwater level data, and rainfall data, and then checking to see if the recently simulated groundwater levels match the recently measured groundwater levels. These are the principle findings and conclusions of this Step 1 work:

- The model still provides reliable results in the Laguna Seca Subarea.
- Although the performance of the model during the updated period is worsening, the calibration of the model remains within acceptable standards.
- The northern boundary condition needs to be updated to reflect real groundwater elevation variations for the model period of 2005-2013. The behavior of the northern boundary will impact flows and the ability to calibrate the model for the area of the model that is adjacent to the northern boundary. An alternative method for defining this boundary condition will have to be developed that does not rely upon simulations from the Salinas Valley Integrated Groundwater Surface Water Model (SVIGSM).
- The groundwater model should be updated in a maximum of five years and its calibration reevaluated at that time. However, if groundwater related projects are implemented in the Basin before that time, the update and calibration reevaluation may need to be performed sooner.

Modeling of the Laguna Seca Subarea was performed in 2014 and a peer review of that work was performed in 2015. The peer review concluded that the model is a reasonable representation of the Seaside Basin groundwater flow system. No major errors in assumptions, data or results were identified during this peer review, and the simulated water levels generally matched observed water levels for the historical calibration simulation. The peer review recommended some aspects of the model should be explored to try to determine some differences between field-measured conditions and model-predicted conditions in some parts of the Basin, but stated that the model should be used for estimating the operational safe yield of the basin and subareas, and for simulating the effects of possible management measures. It also recommended that some additional simulations should be completed for management measures likely to be implemented. Therefore, Steps 2 and 3 will not be needed and no further work of this type is anticipated in 2016.

I. 3. a. 2
Develop Protective Water Levels ($0)

A series of cross-sectional models was created in 2009 in order to develop protective water levels for selected production wells, as well as for the Basin as a whole. This work is discussed in Hydrometrics' "Seaside Groundwater Basin Protective Water Elevations Technical Memorandum." In 2013 further work was started to refine these protective water levels, but it was found that the previously developed protective water levels were reasonable. Therefore, no further work of this type is anticipated.

I. 3. a. 3 Evaluate Replenishment Scenarios and Develop Answers to Basin Management Questions ($40,000)	In 2009 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 is described in HydroMetrics' "Seaside Groundwater Basin Groundwater Model Report." In 2010, and again in 2013, HydroMetrics used the updated Model to develop answers to some questions associated with Basin management. Modeling performed in 2014 led to the conclusion that groundwater levels in parts of the Laguna Seca Subarea will continue to fall even if all pumping within that subarea is discontinued, because of the influence of pumping from areas near to, but outside of, the Basin boundary. Additional modeling work may be performed in 2016 to further examine this situation.
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 2016 is discussed under Task I. 3. c.
I. 3. c. Refine and/or Update the Basin Management Action Plan ($27,300)	During 2016 it may be beneficial to update the BMAP based on new data, and/or knowledge that is gained from the work described under Task I. 3. a. 3. Such work might involve issues pertaining to Operational and Natural Safe Yields or pumping redistribution strategies. Updating the BMAP has been scheduled and budgeted in several of the preceding years, but was not deemed to be necessary. This task is included primarily for budgeting purposes in the event such work is deemed necessary during 2016.
I. 3. d. Evaluate Coastal Wells for Cross-Aquifer Contamination Potential ($0)	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. An evaluation of this was completed in 2012 and is described in MPWMD's Memorandum titled "Summary of Seaside Groundwater Basin Cross-Aquifer Contamination Wells Investigation Process and Conclusions" dated August 8, 2012. This Memorandum did not recommend performing any further work on this matter at this time, other than to incorporate into the Watermaster's Database data from wells that were newly identified by the work performed in 2012. That data has now been incorporated into the Database, and no further work on this matter is anticipated.
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 ($0)	Consultants will provide general oversight over the Seawater Intrusion detection program.

I. 4. b. Focused Hydrogeologic Evaluation ($0)	MPWMD attempted to compile historical and current water quality data in the coastal area to provide more in-depth evaluation of conditions in the shallow Dune Sand/Aromas Sand aquifer in the vicinity of the Sand City Public Works well, where unique water quality conditions and variability have recently been observed as discussed at TAC meetings. However, it was found that no historical water quality data from Cal Am's now-abandoned wells existed, and consequently it was not possible to answer the question of why water quality in the Sand City Public Works well differs from water quality in other wells in the Basin. The Sand City desalination plant could be affecting water quality in this area, but without the prior water quality data from now-abandoned wells, this could not be determined. The results of this work were summarized in 2013 in a brief Technical Memorandum prepared by MPWMD with conclusions and recommendations, and no further work on this matter is planned.
I. 4. c. Annual Report- Seawater Intrusion Analysis ($28,678)	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.
I. 4. d Complete Preparation of Seawater Intrusion Response Plan ($0)	The Watermaster's Consultant (HydroMetrics) completed preparation of the long-tem Seawater Intrusion Response Plans (SIRP) in February 2009. The Sections that are included in the SIRP are: 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 No further work on the SIRP is anticipated in 2016.
I. 4. e. Refine and/or Update the Seawater Intrusion Response Plan ($0)	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 2016.
I. 4. f. If Seawater Intrusion is Determined to be Occurring, Implement Contingency Response Plan ($0)	The SIRP will be implemented if seawater intrusion, as defined in the Plan, is determined by the Watermaster to be occurring.

ATTACHMENT 2

Management and Monitoring Plan Operations Budget For Tasks to be Undertaken in 2016								Comparative Costs from 2015 Budget
Task	Subtask	Sub-Subtask	Cost Description	CONSULTANTS & CONTRACTORS[3]			Total	
				MPWMD	Private Consultants	Contractors		
Labor								
			Technical Project Manager	$0	$60,000	$0	$60,000	$60,000
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	$7,000	$0	$7,000	$7,000
	M.1.e		Peer Review of Documents and Reports[8]	$0	$2,500	$0	$2,500	$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	$11,052	$0	$0	$11,052	$13,452
		I. 2. a. 2.	Verify Accuracy of Production Well Meters	$0	$0	$0	$0	$10,000
	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]	$5,872	$0	$0	$5,872	$5,872
		I. 2. b. 3.	Collect Quarterly Water Quality Samples[1][5][6]	$31,201	$0	$23,705	$54,906	$51,906
		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	$4,704	$0	$0	$4,704	$6,204
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	$20,000
		I. 3. a. 2	Develop Protective Water Levels	$0	$0	$0	$0	$0
		I. 3. a. 3	Evaluate Replenishment Scenarios and Develop Answers to Basin Management Questions[10]	$0	$40,000	$0	$40,000	$40,000
	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	$27,300	$0	$27,300	$25,000
	I. 3. d		Evaluate Coastal Wells for Cross-Aquifer Contamination Potential	$0	$0	$0	$0	$0
I.4 Seawater Intrusion Contingency Plan								
	I. 4. a.		Oversight of Seawater Intrusion Detection and Tracking	$0	$0	$0	$0	$0
	I. 4. b.		Provide focused area hydrogeologic investigation for Sand City Public Works	$0	$0	$0	$0	$0
	I. 4. c.		Annual Report- Seawater Intrusion Analysis	$2,928	$25,750	$0	$28,678	$28,678
	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 2016. If it Does Become Necessary, Use of Contingency Funds or a Budget Modification Will Likely be Necessary)				$0
TOTALS CONSULTANTS & CONTRACTORS				**$55,757**	**$162,550**	**$23,705**		
SUBTOTAL not including Technical Program Manager =							$182,012	$211,212
Contingency (not including Technical Program Manager) @ 20%[4]=							$36,402	$42,242
Technical Program Manager =							$60,000	$60,000
TOTAL=							**$278,414**	**$313,454**

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 will 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.3 and I.3.c, it is recommended that a 20% Contingency be included in the Budget.

(5) Includes $1,000 to maintain equipment previously installed for this purpose. Also includes lab costs to analyze for barium and iodide ions in certain of these wells as was done in preceding years beginning in 2012.

(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 2016.

(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) If requested by the Board.

(11) If necessary to reflect knowledge gained from modeling work or other data sources.

Management and Monitoring Plan Operations Budget
For Tasks to be Undertaken in 2017[12]

Task	Subtask	Sub-Subtask	Cost Description	CONSULTANTS & CONTRACTORS[3]			Total
				MPWMD	Private Consultants	Contractors	
Labor							
			Technical Project Manager	$0	$60,000	$0	$60,000
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	$7,210	$0	$7,210
	M.1.e		Peer Review of Documents and Reports[8]	$0	$2,575	$0	$2,575
	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	$11,384	$0	$0	$11,384
		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]	$6,048	$0	$0	$6,048
		I. 2. b. 3.	Collect Quarterly Water Quality Samples[1][5][6]	$32,137	$0	$24,416	$56,553
		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	$4,845	$0	$0	$4,845
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	$0	$0	$0	$0
		I. 3. a. 3	Evaluate Replenishment Scenarios and Develop Answers to Basin Management Questions	$0	$41,200	$0	$41,200
	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	$28,119	$0	$28,119
	I. 3. d		Evaluate Coastal Wells for Cross-Aquifer Contamination Potential[14]	$0	$0	$0	$0
I.4 Seawater Intrusion Contingency Plan							
	I. 4. a.		Oversight of Seawater Intrusion Detection and Tracking	$0	$0	$0	$0
	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	$3,016	$26,523	$0	$29,538
	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 2016. If it Does Become Necessary, Use of Contingency Funds or a Budget Modification Will Likely be Necessary)			
TOTALS CONSULTANTS & CONTRACTORS				**$57,430**	**$165,627**	**$24,416**	
SUBTOTAL not including Technical Program Manager =							$187,472
Contingency (not including Technical Program Manager) @ 20%[4] =							$37,494
Technical Program Manager							$60,000
TOTAL=							**$284,967**

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 will 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.3 and I.3.c, it is recommended that a 20% Contingency be included in the Budget.

(5) A portion of this cost is 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 2017.

(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) Not used.

(11) If necessary to reflect knowledge gained from modeling work or other data sources.

(12) Includes a 3% inflation factor on most annually recurring costs in the 2016 Budget, 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 2016 to 2017, or determined to perform additional work beyond that performed in 2016.

(14) No further work on this Task is anticipated in 2017.

ATTACHMENT 3

Management and Monitoring Plan Capital Budget
For Tasks to be Undertaken in 2016

No Capital projects are anticipated to be undertaken in 2016, so this budget is $0.

Management and Monitoring Plan Capital Budget
For Tasks to be Undertaken in 2017

No Capital projects are anticipated to be undertaken in 2017, so this budget is $0.

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

MEETING DATE:	September 9, 2015
AGENDA ITEM:	4
AGENDA TITLE:	Continued Discussion of Work Plan to Address Findings of Laguna Seca Modeling Work
PREPARED BY:	Robert Jaques, Technical Program Manager

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

SUMMARY:

As reported at previous TAC meetings the Board has retained an attorney to prepare documents to file with the Court regarding several issues: (1) requesting a stay of the 2015 through 2018 Operating Yield reduction, (2) updating the Court concerning recent regional water supply developments pertinent to the Seaside Basin, and (3) updating the Court concerning the recent modeling results and findings concerning the Laguna Seca Subarea (LSSA) and the Watermaster's intended work plan to address long-term water reliability for the subbasin. From recent discussions with Dewey Evans, the Watermaster's Executive Officer, it appears that the attorney will soon be starting to prepare these documents. I anticipate that he will ask for input from the TAC in preparing the proposed work plan. At today's meeting I would like to try to complete development of a list of technical issues or topics that we feel may be useful to the attorney in that regard. From our series of discussions on those topics and issues here is the list I have compiled:

- Regarding Natural Safe Yield (NSY), it will probably not be possible to reach agreement among all parties on a specific number to use for the NSY of the Laguna Seca Sub Area (LSSA). Efforts should focus on addressing the problem of falling water levels rather than seeking a universally acceptable NSY value for the LSSA.
- Regarding monitoring wells the Watermaster should focus its efforts on protecting production wells, but should keep monitoring wells operational to provide data that can be used for future model runs.
- Regarding performing further modeling, it would not be desirable to do this at this time, other than perhaps modeling to determine the location of the flow divide along the eastern boundary of the LSSA. However, further modeling to look at long-term hydrogeologic issues may be desirable if climate change impacts are input into the model, and the Watermaster's model is coordinated with the model being developed for the Salinas River Basin.
- Regarding the eastern hydrogeologic boundary of the LSSA, it would be helpful to determine where the flow divide between the LSSA and the El Toro Subarea is located. This information could then be used to determine if any of the LSSA wells are located east of that flow divide.
- Regarding pumping redistribution, the Board does not wish to evaluate this at this time.
- Regarding seeking a change to the boundary between the LSSA and the El Toro Subarea, it would not be desirable to pursue this at this time. However, this decision should be reconsidered if future information provides overwhelming reasons to seek a change in the boundary location.
- Regarding importing water to the LSSA, no action should be pursued at this time to import water to the LSSA, other than CAW's already-planned interconnection to its Main System to provide water to the LSSA so CAW can discontinue pumping from its LSSA wells.
- Regarding a means of managing areas outside the Seaside Basin, the Watermaster should monitor the development of the Salinas Valley Groundwater Basin Sustainability Agency and the State

AGENDA ITEM:	4 (Continued)

Department of Water Resources' development of regulations pertaining to requesting boundary revisions in accordance with the Sustainable Groundwater Management Act, with the intent to collaborate with these entities as appropriate to seek solutions to the problem of falling groundwater levels in the LSSA.

TAC members are invited to add to this list any other topics or issues they feel would be helpful to the attorney.

ATTACHMENTS:	None
RECOMMENDED ACTION:	Provide input to complete development of listing of technical topics and issues

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

MEETING DATE:	September 9, 2015
AGENDA ITEM:	5
AGENDA TITLE:	Set Next Meeting Date
PREPARED BY:	Robert Jaques, Technical Program Manager

SUMMARY:
There is no TAC meeting business that needs to be conducted in October, so there will be no need for an October TAC meeting.

I recommend that the next TAC meeting be held on November 18, 2015, which is the 3rd Wednesday, not the normal 2
Annual Report information assembled and compiled. This should enable the TAC to have a complete Draft Annual Report available for review and discussion at that meeting. In the past some items still could not be completed by the 2
developed.

There will likely be no need to have a TAC meeting in December, but this will be confirmed later.

ATTACHMENTS:	None
RECOMMENDED ACTION:	Approve skipping having a TAC meeting in October and holding the next TAC meeting on November 18, 2015

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

MEETING DATE:	September 9, 2015
AGENDA ITEM:	6
AGENDA TITLE:	Schedule
PREPARED BY:	Robert Jaques, Technical Program Manager

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

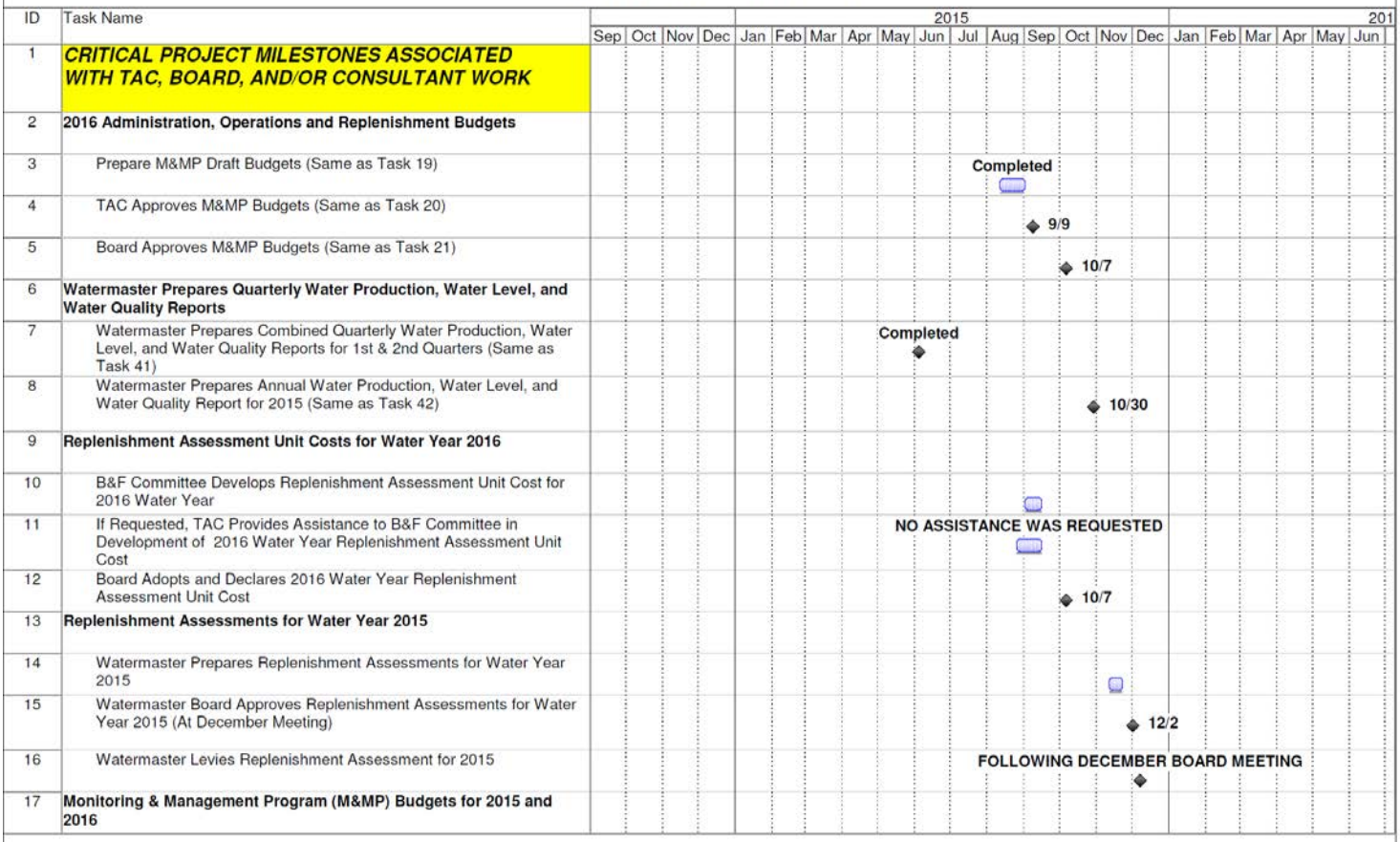
Attached is the most recent update of the Work Schedule for FY 2015.

There are a number of things to note in this update:

1. There will be no October 2015 TAC meeting. The next TAC meeting will be on the 3 Wednesday of November, not the 2
   Draft Annual Report completed for TAC review/approval at that meeting.
2. The Initial Consultant Contracts for 2016 will also be presented to the TAC for approval at the November 18 meeting.
3. It is being proposed to the Board that there be no Board meeting in November, and that the Board would meet on its normal meeting date of December 2 (1
   approve a number of things including the Annual Report and the Initial Consultant Contracts for 2016.

ATTACHMENTS:	Schedule of Work Activities for FY 2015
RECOMMENDED ACTION:	Provide Input to Technical Program Manager Regarding Any Corrections or Additions to the Schedule

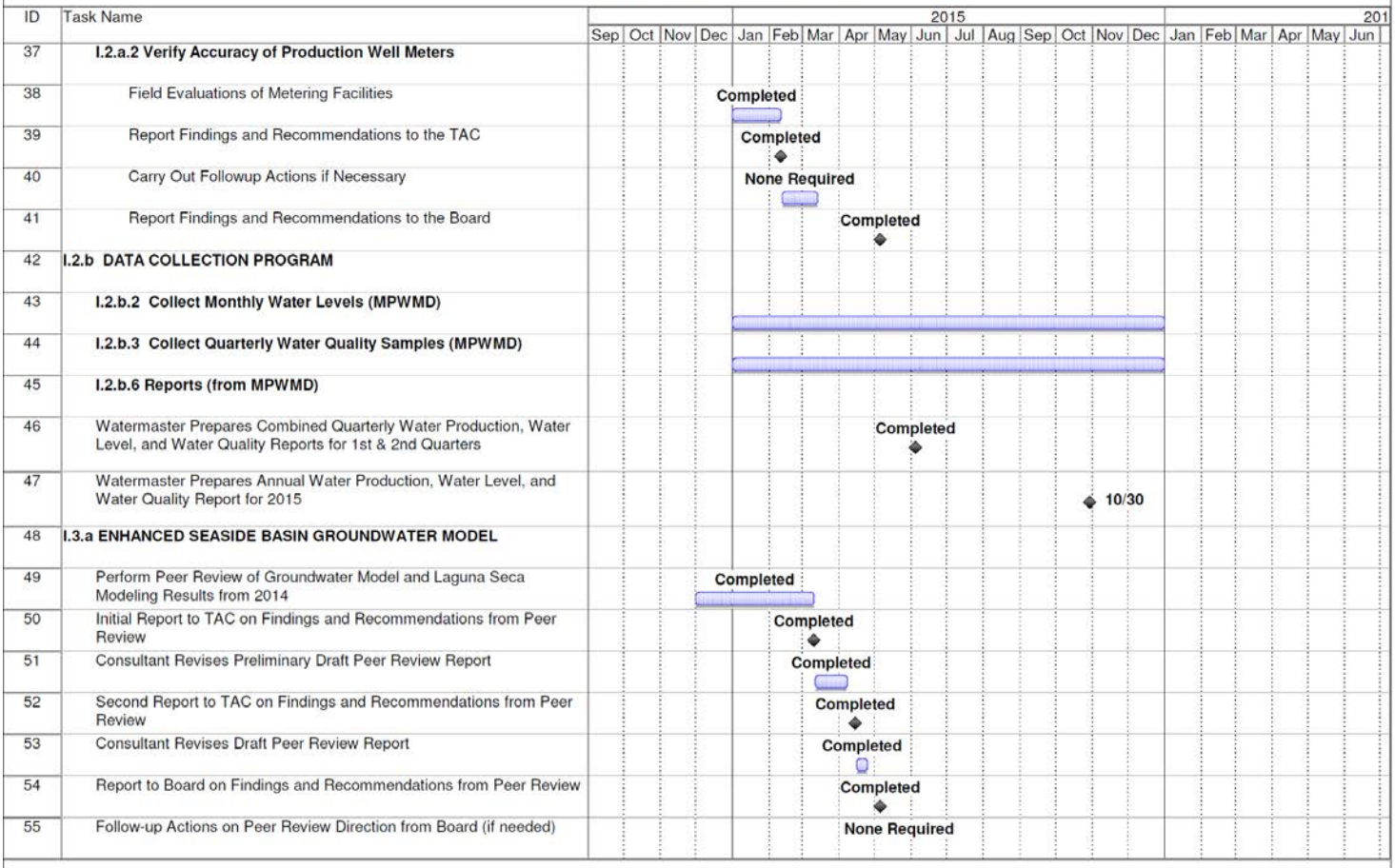
Seaside Basin Watermaster
Monitoring and Management Program
2015 Work Schedule



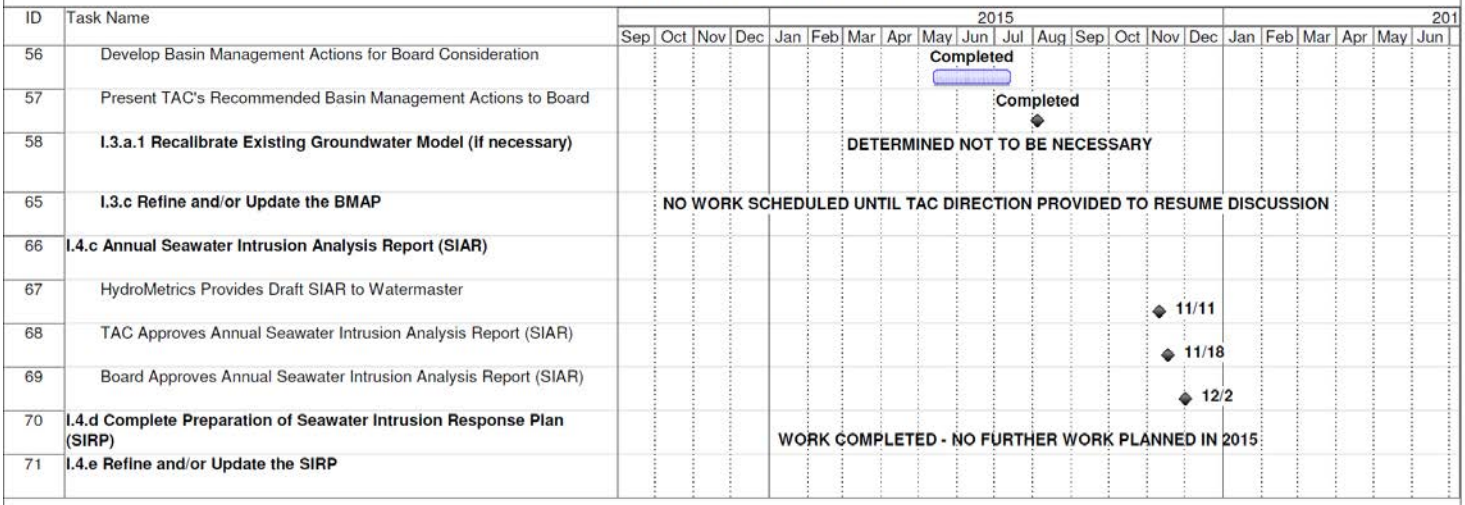
ID	Task Name
1	***CRITICAL PROJECT MILESTONES ASSOCIATED WITH TAC, BOARD, AND/OR CONSULTANT WORK***
2	**2016 Administration, Operations and Replenishment Budgets**
3	Prepare M&MP Draft Budgets (Same as Task 19)
4	TAC Approves M&MP Budgets (Same as Task 20)
5	Board Approves M&MP Budgets (Same as Task 21)
6	**Watermaster Prepares Quarterly Water Production, Water Level, and Water Quality Reports**
7	Watermaster Prepares Combined Quarterly Water Production, Water Level, and Water Quality Reports for 1st & 2nd Quarters (Same as Task 41)
8	Watermaster Prepares Annual Water Production, Water Level, and Water Quality Report for 2015 (Same as Task 42)
9	**Replenishment Assessment Unit Costs for Water Year 2016**
10	B&F Committee Develops Replenishment Assessment Unit Cost for 2016 Water Year
11	If Requested, TAC Provides Assistance to B&F Committee in Development of 2016 Water Year Replenishment Assessment Unit Cost
12	Board Adopts and Declares 2016 Water Year Replenishment Assessment Unit Cost
13	**Replenishment Assessments for Water Year 2015**
14	Watermaster Prepares Replenishment Assessments for Water Year 2015
15	Watermaster Board Approves Replenishment Assessments for Water Year 2015 (At December Meeting)
16	Watermaster Levies Replenishment Assessment for 2015
17	**Monitoring & Management Program (M&MP) Budgets for 2015 and 2016**

Seaside Basin Watermaster
Monitoring and Management Program
2015 Work Schedule

Seaside Basin Watermaster
Monitoring and Management Program
2015 Work Schedule



Seaside Basin Watermaster
Monitoring and Management Program
2015 Work Schedule



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

MEETING DATE:	September 9, 2015
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