SEASIDE GROUNDWATER BASIN WATERMASTER

NOTICE
BUDGET AND FINANCE COMMITTEE MEETING
WEDNESDAY
SEPTEMBER 16, 2015 at 11:00 AM
SEASIDE CITY HALL CONFERENCE ROOM

AGENDA

Committee Members

City of Seaside
Daphne Hodgson - Chair

California American Water
Eric Sabolsice

City of Sand City
Todd Bodem

Coastal Subarea Landowners
Paul Bruno

The next Watermaster Budget and Finance Committee meeting will be held on Wednesday, September 16, 2015 at 11:00 A.M. at the Seaside City Hall Conference Room.

The public may comment on any item within the committee's jurisdiction. Please limit comments to three minutes in length.

Action Items:

1. Discuss/Consider Recommendation to the Watermaster Board of the Proposed Fiscal Year 2016 Annual Budgets.

    A. Administrative Fund
    B. Monitoring and Management Fund—Operations
    C. Monitoring and Management Fund—Capital

2. Discuss/Consider Recommendation to the Watermaster Board to Approve the Proposed Replenishment Assessment Unit Cost for Water Year October 1, 2015 through September 30, 2016.

Seaside Groundwater Basin Watermaster
Administrative Fund
Proposed Budget
Administrative Year 2016

	2015 Adopted Amended	2015 Estimated Total	2016 Proposed Budget
Assessment Income			
Carryover*	$ 12,000	$ 11,000	$ 11,000
Administrative Assessment	95,000	95,000	58,000
Totals	107,000	106,000	69,000
Expenditures			
Contractual Services - Administrativ	60,000	60,000	65,000
Legal Services**	25,000	25,000	-
Total Expenses and Encombrances	85,000	85,000	65,000
Total Available	22,000	21,000	4,000
Less Reserve	22,000	21,000	25,000
Net Available	$ -	$ -	$-

** Note: The reserve balance of $11,000 was determined upon completion by Watermaster staff of a detailed reconciliation from 2006 through March 2015 of the Administrative Fund financial records held at the Watermaster office against the Administrative Fund financial records held by the City of Seaside - the Watermaster fiscal agent.*

*** December 3, 2014 board action to amend 2015 Administrative Fund Budget to include $25,000 for legal services*

SEASIDE GROUNDWATER BASIN
WATERMASTER

TO: Budget and Finance Committee

FROM: Robert S. Jaques, Technical Program Manager

MODIFIED AND APPROVED BY: Dewey D Evans, CEO

DATE: September 16, 2015

SUBJECT: Consider Approval of Proposed FY 2016 M&MP Work Plan, and Proposed 2016 M&MP Operations and Capital Budgets

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RECOMMENDATION:
It is recommended that the Budget and Finance Committee recommend to the Board approval of the attached M&MP FY 2016 Work Plan and the M&MP O&M and Capital Budgets for FY 2016

The projected 2017 O&M and Capital Budgets are provided only for information and no action on them is requested at this time.

BACKGROUND:
At its September 9, 2015 meeting the TAC approved the Proposed FY 2016 M&MP Work Plan, and proposed 2016 M&MP Operations and Capital Budgets, and recommended that the Budget and Finance Committee recommend approval of these to the Board of Directors.

DISCUSSION:

The M&MP 2016 Work Plan which is attached reflects revisions resulting from the TAC's discussion on the Work Plan at its August 12 and September 9, 2015 meetings, as well as input from HydroMetrics and MPWMD. The major changes from the 2015 M&MP Work Plan 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.

Task M.1.g: This Task is new this year and is a result of the implementation by the State of the Sustainable Groundwater Management Act.

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.a.1: This Task consists of three subtasks as follows:

- Step1: Update the Watermaster's Seaside Basin groundwater model and check its accuracy
- Step 2: Recalibrate the model (if necessary)
- Step 3: Prepare report describing the work that was done (if recalibration is necessary)

Step 1 was completed in 2014, and the Peer Review of the model performed in 2015 indicated that the model did not need to be recalibrated. Therefore, Steps 2 and 3 are not necessary, and no budget amount for this Task is required in 2016.

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 $32,760 lower ($313,454-$280,694) than the 2015 Budget.

The TAC is not recommending that any new monitoring wells be installed in either 2016 or 2017. Consequently, it is proposed that no monies be budgeted in the M&MP Capital Budgets proposed for 2016 or projected for 2017, as shown in Attachment 3.

ATTACHMENTS:

1. Proposed 2016 M&MP Work Plan
2. M&MP Operations Budgets Proposed for 2016 and Projected for 2017
3. M&MP Capital Budgets Proposed for 2016 and Projected for 2017

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.

M.1.g Prepare Documents for SGMA Reporting ($1,900)	Section 10720.8 of the Sustainable Groundwater Management Act (SGMA) requires adjudicated basins to submit annual reports. Most of the documentation that needs to be reported is already generated by the Watermaster in conjunction with preparing its own Annual Reports. However, some information such as changes in basin storage, is not currently generated and will require consultant assistance to do so. This task will be used to obtain this consultant assistance, as needed.

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
	M.1.g		SGMA Documentation Preparation	$0	$1,900	$0	$1,900	$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**	**$164,450**	**$23,705**		
			SUBTOTAL not including Technical Program Manager =				$183,912	$211,212
			Contingency (not including Technical Program Manager) @ 20%[4]=				$36,782	$42,242
			Technical Program Manager =				$60,000	$60,000
			TOTAL=				**$280,694**	**$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
	M.1.g		SGMA Documentation Preparation	$0	$1,957	$0	$1,957
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**	**$167,584**	**$24,416**	
						SUBTOTAL not including Technical Program Manager =	$189,429
						Contingency (not including Technical Program Manager) @ 20%[4]=	$37,886
						Technical Program Manager	$60,000
						TOTAL=	**$287,315**

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 GROUNDWATER BASIN
WATERMASTER

TO: Budget and Finance Committee

FROM: Laura Dadiw, Assistant to the CEO
REVIEWED AND APPROVED BY: Dewey D Evans, CEO

DATE: September 16, 2015

SUBJECT: Unit Cost for Water Year 2015/16 Over Production Replenishment Assessment Amount

RECOMMENDATION:

Per page 33 of the Decision*, "The per acre-foot amount of the Replenishment Assessments shall be determined and declared by Watermaster in October of each Water Year in order to provide Parties with advance knowledge of the cost of Over-Production in that Water Year."* Thus, the per acre-foot amount determined by the Board in or before October of 2015 will be used to calculate Replenishment Assessments for pumping that occurs during the Water Year which begins on October 1, 2015 and ends on September 30, 2016.

For last Water Year (2013/14) the Budget and Finance Committee updated the basis from which the annual calculation of the Unit Cost of replenishment water is established (Basis attached). Due to the lack of more supportable data the recommendation is to continue using $2,702, the average of the Base Unit Cost ($/AF) listed in Table 1 for each project [$3,507+1,800+2,000+3,500)/4], as the Replenishment Assessment Unit Cost for the Water Year 2014/2015.

ATTACHMENTS:

Table 1. Replenishment Project Information for Use in Establishing the Replenishment Assessment Unit Costs for Water Year 2014

Attachment 2: Table 1. Replenishment Project Information for Use in Establishing the Replenishment Assessment Unit Costs for Water Year 2014 (October 1, 2013-September 30, 2014)

WATER YEAR 2014 (October 1, 2013-September 30, 2014)

ANTICIPATED UNIT COSTS OF REPLENISHMENT WATER FOR THE SEASIDE BASIN

POTENTIAL SOURCE OF REPLENISHMENT WATER	POTENTIAL DATE REPLENISH-MENT WATER COULD BECOME AVAILABLE	POTENTIAL VOLUME OF WATER THAT COULD BE SUPPLIED BY THE PROJECT (AFY) [1]	LEVEL OF PROJECT DEVELOP-MENT	CONTINGENCY INCLUDED IN BASE UNIT COST [2] (%)	BASE UNIT COST ($/AF)	BASE UNIT COST YEAR	ADDITIONAL CONTINGENCY ADDED TO REFLECT LEVEL OF PROJECT DEVELOPMENT [3] (%)	UNIT COST INCLUDING ADDITIONAL CONTINGENCY ($/AF)	UNIT COST INFLATED @ 3% FROM COST BASIS YEAR TO YEAR REPLENISH-MENT WATER COULD BECOME AVAILABLE ($/AF)	VOLUME-WEIGHTED AVG %
Monterey Peninsula Water Supply Project (Regional Desalination) [4]	2018	9,752	Project Report	30%	$3,507	2012	0%	$3,507	$4,188	56.53%
Seaside Basin ASR Expansion [5]	2015	1,000	Conceptual	11%	$1,800	2012	39%	$2,502	$2,734	5.80%
Regional Urban Water Augmentation Project [6]	2017	3,000	Design	5%	$2,000	2013	10%	$2,200	$2,476	17.39%
Groundwater Replenishment Project (GWRP) [7]	2017	3,500	Conceptual	50%	$3,500	2017	0%	$3,500	$3,500	20.29%

Total Quantity of Replenishment Water (AFY) the Listed Projects Could Cumulatively Potentially be Able to Produce Within the Next 10 Years [8] = 17,252

FOOTNOTES:

(1) For the Monterey Peninsula Water Supply Project this is the total amount of water from this source which could potentially come to the CAW distribution system. Only a portion of this amount might be available as initially unused capacity that could be used to help replenish the Seaside Basin. For the RUWAP this is the total amount of water from this source. Only a portion of this amount might be used for in-lieu replenishment of the Seaside Basin. For the ASR Expansion Project this is the additional amount of water that could potentially be provided by this project (see footnote 5). For the RUWAP this is the total amount of water that this project is expected to produce. Only a portion of this amount might be used as in-lieu replenishment of the Seaside Basin. For the GWRP this is the quantity of water that is being considered at this time by CAW for inclusion in its Monterey Peninsula Water Supply Project.

(2)(3) The following Contingency percentages were considered reasonable for the indicated levels of project development: Conceptual Level - 50%, Project Report Level - 30%, and Design Level - 15%. The sum of the values in the columns titled "Contingency Included in Base Unit Cost" and "Additional Contingency Added to Reflect Level of Project Development" equals the Contingency appropriate for the project's level of development.

(4) Project data based on documents provided by Cal Am and MPWMD.

(5) Project data provided by MPWMD. The 1,000 AFY of potential water that this project could supply would be in addition to the 1,300 AFY included as part of the Monterey Peninsula Water Supply Project, and would be an annual average taking into account river flow and hydrologic conditions that change from year to year.

(6) Project data provided by MCWD.

(7) Project data provided by MRWPCA. MRWPCA reported that the GWRP quantity being used in the current CEQA documentation is 3,500 AFY, but that the project could potentially supply 6,500 AFY or more. The unit cost would be lower if a quantity larger than 3,500 AFY were produced.

(8) This value is the cumulative production capacity of all of the Potential Sources of Replenishment Water that listed in this table, and is used only to determine the "Volume-Weighted Average." It is not the amount of water that is expected to be available to the Seaside Basin.