SEASIDE GROUNDWATER BASIN WATERMASTER

NOTICE
BUDGET AND FINANCE COMMITTEE
MEETING WEDNESDAY, SEPTEMBER 18, 2019
10:00 A.M. - SEASIDE CITY HALL
CONFERENCE ROOM

AGENDA

Committee Members

City of Seaside
Kimberly Drabner - Chair

California American Water
Chris Cook/Nina Miller

City of Sand City
Mary Ann Carbone

Coastal Subarea Landowners
Paul Bruno

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 for Proposed Fiscal Year 2020 Annual Budgets.
   A. Administrative Fund
   B. Monitoring and Management Fund—Operations
   C. Monitoring and Management Fund—Capital (None)
   D. Replenishment Fund (No Action Required)

2. Discuss/Consider Recommendation to the Watermaster Board to Approve the Proposed Replenishment Assessment Unit Costs for Natural Safe Yield and Operating Yield Overproduction for Water Year October 1, 2019 through September 30, 2020.

If requested, the agenda and documents in the agenda packet shall be made available in appropriate alternative formats to persons with a disability, as required by Section 202 of the Americans with Disabilities Act of 1990 (42 U.S.C. Sec. 12132), and the federal rules and regulations adopted in implementation thereof.

ITEM NO. 1A
9/18/2019

SEASIDE GROUNDWATER BASIN WATERMASTER

TO: Budget/Finance Committee

FROM: Laura Paxton, Administrative Officer

DATE: September 18, 2019

SUBJECT: Proposed Fiscal Year (Calendar Year) 2020 Annual Administrative Fund Budget

PURPOSE:
To advise the Board of the estimated amount necessary to properly fund the Administrative oversight portion of the Seaside Groundwater Basin Watermaster for Fiscal Year 2020.

RECOMMENDATION:
Recommended Board approval of the attached proposed Administrative Fund Budget for FY 2020.

DISCUSSION:
The court decision states that next fiscal year's budgets must be approved by the Board of Directors no later than the end of October each year in order for the tentative budgets to be circulated to each Party to the adjudication "no earlier than November 1 and no later than November 15" of each fiscal year.

Staff fields whatever legal issues it can. Legal counsels to the Watermaster parties are queried for issues beyond staff scope, primarily California American Water legal counsel. No significant legal issues have arisen in 2019.

The Watermaster board has directed staff to issue a request for proposals (RFP) for Watermaster legal services. Staff is developing a mailing list of proposal candidates and anticipates distribution of the RFP in 2020.

The estimated legal expenditure in 2020 is as follows:

Annual report review by CAW counsel:	$ 0
No Case Management Conferences requested:	0
Unanticipated Issues/contingency:	25,000
Total:	$ 25,000

An estimated $37,000 in unspent 2019 funds is the expected carry over to 2020.

FISCAL IMPACT:
An Administrative Fund Assessment of $63,000 is proposed:
$50,000(AO)+$25,000(Legal)+$25,000(Reserve) = $100,000-$37,000(Carryover) = $63,000

The assessments for the parties required to contribute to the Administrative Fund are:

California American Water 83.0%	$52,290
City of Seaside 14.4%	9,072
City of Sand City 2.6%	1,638

ATTACHMENTS
1) Proposed Administrative Fund Budget for FY (Calendar Year) 2020

Seaside Groundwater Basin Watermaster
Administrative Fund
Proposed Budget
Administrative Year 2020

	2019 Adopted Budget	2019 Estimated Total	2020 Proposed Budget
Assessment Income			
Reserve/Rollover*	$ 23,000	$ 13,000	$ 37,000
Administrative Assessment	77,000	77,000	63,000
Totals	100,000	90,000	100,000
Expenditures			
Contractual Services - Administrative	50,000	48,000	50,000
Legal Services	25,000	5,000	25,000
Total Expenses	75,000	53,000	75,000
Total Available	25,000	37,000	25,000
Less Reserve	25,000	25,000	25,000
Net Available	$ -	$ 12,000	$ -

SEASIDE BASIN WATER MASTER
BUDGET AND FINANCE COMMITTEE

** * * AGENDA TRANSMITTAL FORM * * **

MEETING DATE:	September 18, 2019
AGENDA ITEM:	1. B. & C.
AGENDA TITLE:	Discuss/Consider Recommendation to the Watermaster Board for Proposed Fiscal Year 2020 Annual Budgets: Monitoring and Management Fund—Operations and Monitoring and Management Fund—Capital
PREPARED BY:	Robert Jaques

Attached are the proposed 2020 Monitoring and Management Program (M&MP), and the proposed M&MP Operations and Capital Budgets for 2020 and 2021. 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 2020 M&MP attached reflects revisions resulting from the TAC's discussion and input, input from Montgomery Associates, Martin Feeney, Todd Groundwater, and MPWMD.

The TAC approved the attached M&MP and Budgets at its meeting of September 11, 2019.

The following are comments and/or principle revisions from the 2019 M&MP Budget:

Tasks M.1.c, M.1.d, and M.1.e (On-call/as-needed Consulting Services): There have been some hourly rate increases for the Montgomery and Associates staff that will likely be the ones to provide on-call/as-needed hydrogeological consulting services under Tasks M.1.c, M.1.d, and M.1.e (Derrik Williams and Georgina King). However, I have left the budget amounts for those tasks unchanged from 2019. This is because there is often some money left over in those budget line-items at the end of the year, and because the dollar amounts provided for those Tasks are only guesstimates.

Task M.1.g (SGMA Documentation Preparation): In 2019 the amount budgeted for this Task was $2,140. The proposed scope of work for this task is unchanged from 2019, but there was budget left over after the work in 2019 was completed. Therefore, the amount proposed for 2020 is decreased by $140 to $2,000.

Task I.2.b.3 (Collect Quarterly Water Quality Samples): In 2019 the total amount budgeted for this Task was $42,083, comprised of $24,542 for MPWMD and $17,541for Martin Feeney. The proposed scope of work for this task in 2020 is changed slightly from 2019 due to (1) the need to perform some maintenance work on the Sentinel Wells by Mr. Feeney, and (2) by a reduction in the amount of work required by MPWMD to compile data. The cost for the induction logging subcontractor to Mr. Feeney is unchanged from 2019, but the amount proposed for Mr. Feeney's portion of this work in 2020 is increased by $1,710 to perform the maintenance work. MPWMD's costs for 2020 are reduced by $992. Therefore, the amount proposed for 2020 is increased by $718 to $42,801.

Task I.2.b.6 (Prepare Data Appendix for SWI Report): MPWMD's scope of work for this Task in 2020 has been reduced by having them only compile the data in MS Access format and provide that to Montgomery & Associates, rather than preparing a water quality and water level report. Therefore, the amount proposed for 2020 is reduced by $1,490 to $2,086.

Task I.2.b.7 (CASGEM Data Submittal for Watermaster's Voluntary Wells): Because of the increased time MPWMD encountered in 2019 to format and submit this data to DWR to comply with the SGMA requirements for adjudicated basins, the number of hours provided for this Task in 2020 has been significantly increased from 16 hours in 2019 to 60 hours in 2020. The hourly rate for this work is unchanged from 2019, but the additional hours resulted in an increase in cost. Therefore, the amount proposed for 2020 is increased by $6,556 to $8,940.

Task I.4.c (Annual Report- Seawater Intrusion Analysis): In 2019 the total amount budgeted for this Task was $22,742, comprised of $1,192 for MPWMD and $21,550 for Montgomery & Associates. The proposed scope of work for this task is changed from 2019 by having Montgomery & Associates prepare the water quality and water level report that was formerly prepared by MPWMD under Task I.2.a.1. The hourly rate for the MPWMD staff involved in performing their portion of this task is unchanged, so the amount proposed for 2020 for their portion of this work is unchanged from the amount in 2019. The hourly rates for some of the personnel working on this at Montgomery and Associates have increased slightly, and additional hours have been added for Montgomery & Associates to take the raw data provided to them by MPWMD and use it to prepare the water level and water quality report, so it can be included in the SIAR. Therefore, the amount proposed for 2020 is increased by $2,580 to $25,322.

As indicated by the right-hand column titled "Comparative Costs from 2019 Budget" in the proposed 2020 M&MP Operations Budget in Attachment 2, the proposed 2020 Budget, including the $822 increase in the 10% Contingency line item, is $9,046 higher ($215,967-$206,921) than the 2019 Budget.

Following TAC approval of the 2020 M&MP and Budgets, they will be forwarded to the Budget and Finance Committee and then to the Board for approval at the Board's October 2019 meeting.

Since no Capital Projects are anticipated in 2020, there is no change in the M&MP Capital Budget from 2019 to 2020, and the budget remains at zero dollars.

ATTACHMENTS:	2. C. & D.

RECOMMENDED ACTION:

	2020 M&MP Operations Budget 2021 M&MP Operations Budget 2020 and 2021 M&MP Capital Budgets 2020 M&MP
	Approve, or make changes to, the attached 2020 M&MP and/or 2020/2021 Budgets and then approve them

Monitoring and Management Program Operations Budget
For Tasks to be Undertaken in 2020

Task	Subtask	Sub-Subtask	Cost Description	CONSULTANTS & CONTRACTORS[3]			Total	Comparative Costs from 2019 Budget
				MPWMD	Private Consultants	Contractors		
			Labor					
			Technical Project Manager	$0	$50,000	$0	$50,000	$50,000
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, & M.1.e		Preparation for and Attendance at Meetings and Peer Review of Documents and Reports[8]	$0	$19,000	$0	$19,000	$19,000
	M.1.f		QA/QC	$0	$0	$0	$0	$0
	M.1.g		SGMA Documentation Preparation	$0	$2,000	$0	$2,000	$2,140
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	$14,604	$2,400	$0	$17,004	$17,004
		I. 2. a. 2.	Verify Accuracy of Production Well Meters	$0	$0	$0	$0	$0
	I. 2. b.		Data Collection Program					
		I. 2. b. 1.	Site Representation and Selection[7]	$0	$0	$0	$0	$0
		I. 2. b. 2.	Collect Monthly Water Levels[6]	$3,726	$0	$0	$3,726	$3,726
		I. 2. b. 3.	Collect Quarterly Water Quality Samples[1][5][6]	$23,550	$0	$19,251	$42,801	$42,083
		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	$2,086	$0	$0	$2,086	$3,576
		I. 2. b. 7.	CASGEM Data Submittal for Watermaster's Voluntary Wells	$8,940	$0	$0	$8,940	$2,384
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[11]	$0	$0	$0	$0	$0
		I. 3. a. 2	Develop Protective Water Levels[12]	$0	$0	$0	$0	$0
		I. 3. a. 3	Evaluate Replenishment Scenarios and Develop Answers to Basin Management Questions[10]	$0	$20,000	$0	$20,000	$20,000
	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	$0	$0	$0	$0	$0
	I. 3. d		Evaluate Coastal Wells for Cross-Aquifer Contamination Potential	$0	$0	$0	$0	$0
	I. 3. e		Seaside Basin Geochemical Model[13]	$0	$10,000	$0	$10,000	$10,000
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	$1,192	$24,130	$0	$25,322	$22,742
	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 2020. If it Does Become Necessary, Use of Contingency Funds or a Budget Modification Will Likely be Necessary)				
		TOTALS CONSULTANTS & CONTRACTORS		**$54,098**	**$127,530**	**$19,251**		
			SUBTOTAL not including Technical Program Manager =				$150,879	$142,655
			Contingency (not including Technical Program Manager) @ 10%[4]=				$15,088	$14,266
			Technical Program Manager =				$50,000	$50,000
			TOTAL=				**$215,967**	**$206,921**

Footnotes:
(1) Under this Subtask the Watermaster will directly contract with an outside contractor to perform the Sentinel Well induction logging work, and to also collect water level data in conjunction with doing the induction logging. MPWMD will perform the other portions of the work of this Subtask.
(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 larger Tasks listed above at the time of preparation of this Budget it is recommended that a Contingency of approximately 10% be included in the Budget.
(5) Includes $1,000 to maintain equipment previously installed for this purpose, and $2,000 to purchase a new sampling pump if an existing one needs to be replaced. Also includes lab costs to analyze for barium and iodide ions in certain of these wells as was done in preceding 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. Includes the purchase and installation of one new and/or replacement datalogger at a price of $700, plus $50 for installation parts, to keep in inventory as a spare if needed.
(7) No additional monitoring well is expected to be constructed in 2020.
(8) This cost is for Montgomery and Associates, Todd Groundwater, and Martin Feeney 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. This work may include participation in conference calls and reviewing documents prepared by others.
(9) If work under this Task is found to be necessary, it will be funded through the Contingency line item in this Budget.
(10) Since the Model and BMAP were updated in 2018 and 2019 respectively, this Task would only be used if there were other issues the Board wished to evaluate and which were not covered in the updated BMAP.
(11) The Model was updated and recalibrated in 2018, so no costs for this Task are anticipated in 2020.
(12) The protective water levels developed in 2009 were examined in 2013 to see if they needed to be updated. It was concluded that the 2009 protective levels were still satisfactory for Basin management purposes, and that no revisions were needed. No work under this Task is anticipated in 2020.
(13) This was a new Task that was started in 2018, and was completed for the PWM AWT water in 2019. Funds allocated for this Task in 2020 would only be used if the geochemical modeling that is expected to be performed in 2020 for the MPWSP desalination plant water indicates the need to have Montgomery and Associates use the Seaside Basin groundwater model to provide additional information needed by the geochemical model to develop miitgation measures for any adverse water quality impacts the geochemical model predicts could occur from introducing desalinated water into the Basin.

Monitoring and Management Program Operations Budget

For Tasks to be Undertaken in 2021[12]

Task	Subtask	Sub-Subtask	Cost Description	CONSULTANTS & CONTRACTORS[3]			Total
				MPWMD	Private Consultants	Contractors	
Labor							
			Technical Project Manager	$0	$50,000	$0	$50,000
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, & M.1.e		Preparation for and Attendance at Meetings and Peer Review of Documents and Reports[8]	$0	$19,570	$0	$19,570
	M.1.f		QA/QC	$0	$0	$0	$0
	M.1.g		SGMA Documentation Preparation	$0	$2,060	$0	$2,060
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	$15,042	$2,472	$0	$17,514
		I. 2. a. 2.	Verify Accuracy of Production Well Meters	$0	$0	$0	$0
	I. 2. b.		Data Collection Program				
		I. 2. b. 1.	Site Representation and Selection[7]	$0	$0	$0	$0
		I. 2. b. 2.	Collect Monthly Water Levels[6]	$3,838	$0	$0	$3,838
		I. 2. b. 3.	Collect Quarterly Water Quality Samples[1][5][6]	$24,257	$0	$19,829	$44,085
		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	$2,149	$0	$0	$2,149
		I. 2. b. 7.	CASGEM Data Submittal for Watermaster's Voluntary Wells	$9,208	$0	$0	$9,208
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	$20,000	$0	$20,000
	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]	$0	$0	$0	$0
	I. 3. d		Evaluate Coastal Wells for Cross-Aquifer Contamination Potential[13]	$0	$0	$0	$0
	I. 3. e		Seaside Basin Geochemical Model[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	$1,228	$24,854	$0	$26,082
	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 2019. If it Does Become Necessary, Use of Contingency Funds or a Budget Modification Will Likely be Necessary)			
		TOTALS CONSULTANTS & CONTRACTORS		**$55,721**	**$118,956**	**$19,829**	
						SUBTOTAL not including Technical Program Manager =	$144,505
						Contingency (not including Technical Program Manager) @ 10%[4]=	$14,451
						Technical Program Manager	$50,000
						TOTAL=	**$208,956**

Footnotes:						

(1) Under this Subtask the Watermaster will directly contract with an outside contractor to perform the Sentinel Well induction logging work, and to also collect water level data in conjunction with doing the induction logging. MPWMD will perform the other portions of the work of this Subtask.

(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, it is recommended that a 10% 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 2021.

(8) For Montgomery and Associates, Todd Groundwater, and Martin Feeney 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. Since the BMAP was updated in 2018, no work on this Task is anticipated in 2021.

(12) Includes a 3% inflation factor on most annually recurring costs in the 2020 Budget, except the Technical Program Manager cost which has no inflation factor applied to it.

(13) No further work on this Task is anticipated in 2021.

(14) It is assumed that all work of this Task will be completed in 2020.

Monitoring and Management Program Capital Budget
For Tasks to be Undertaken in 2020

No Capital projects are anticipated to be undertaken in 2020, so this budget is $0.

Monitoring and Management Program Capital Budget
For Tasks to be Undertaken in 2021

No Capital projects are anticipated to be undertaken in 2021, so this budget is $0.

Seaside Groundwater Basin
2020 Monitoring and Management Program

The tasks outlined below are those that are anticipated to be performed during 2020. Some Tasks listed below are specific to 202019, while other Tasks are recurring such as data collection, 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, & M.1.e Preparation for and Attendance at Meetings, and Peer Review of Documents and Reports ($15,000)	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 periodic 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. • 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. 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 ($2,000)	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
($14,604)

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. Other than an annual reporting of data to another Watermaster Consultant at the end of the Water Year, as mentioned below, no reporting of water level or water quality data during the Water Year is required. However, MPWMD will promptly notify the Watermaster of any missing data or data collection irregularities that were encountered during the quarterly reporting period.

At the end of the Water Year MPWMD will prepare an annual water production, water level, and water quality tabulation in Access format and will provide the tabulation to another Watermaster Consultant who will use that data in the preparation of the SIAR under Task No. I.4.c of the Monitoring and Management Program.

No enhancements to the database are anticipated during 2020.

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 2020.

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 2020.

I. 2 b. 2
Collect Monthly Manual Water Levels
($3,726)

Each of the monitoring wells will be visited on a regular basis. Water levels will be determined by either taking manual water levels using an electric sounder, or by dataloggers. The wells where the use of dataloggers is feasible or appropriate have been equipped with dataloggers. All of the other wells will be manually measured.

This Task includes the purchase of one datalogger and parts for the datalogger to keep in inventory as a spare if needed.

I. 2. b. 3
Collect Water Quality Samples.
($23,550)

Water quality data will be collected quarterly from certain of the monitoring wells, but will no longer be collected from the four coastal Sentinel Wells. Discontinuing water quality sampling in those wells is the result of the finding made in 2018 that the water quality samples being extracted from those wells are not representative of the aquifer. Those wells were designed for the purpose of electric induction logging, and will therefore continue to be induction logged twice a year in WY 2020.

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 on the 3 most coastal MPWMD monitoring wells in 2020, but will no longer be performed on the Watermaster's coastal Sentinel Wells as discussed above.

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 or Contractor 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, in the event a sampling pump is found to be no longer adequate due to declining groundwater levels, or if a sampling pump needs to be installed on a Sentinel Well, an allowance to purchase a replacement sampling pump has been included in this Task.

Improvements to the QA/QC program for the water quality sampling work were adopted in mid-2017 and will be included in this work in 2020.

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 2020.
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 2020.
I. 2. b. 6 **Reports** **($2,086)**	This task was essentially eliminated starting in 2020 by having the data collected by MPWMD under task I.2.b.1, and reported in the SIAR under task I.4.c. The only work remaining under this task is for MPWMD to prepare and provide the data appendix to the Consultant that prepares the SIAR.
I.2.b.7 **CASGEM Data Submittal** **($8,940)**	On the Watermaster's behalf MPWMD will compile and submit data on the Watermaster's "Voluntary Wells" into the State's CASGEM groundwater management database. The term "Voluntary Well" refers to a well that is not currently having its data reported into the CASGEM system, but for which the Watermaster obtains data. This will be done in the format and on the schedule required by the Department of Water Resources under the Sustainable Groundwater Management Act.
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 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. The Model was again updated in 2014. In 2018 the Model was recalibrated and updated. No further work of this type is anticipated in 2020.
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. Protective water levels will be updated, if appropriate, as part of the work of Task I. 3.c.

I. 3. a. 3 **Evaluate Replenishment Scenarios and Develop Answers to Basin Management Questions ($20,000)**	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, 2015, and 2016 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 2020 to further examine this situation. This Task provides a $20,000 allowance to perform modeling or other work to develop answers to basin management questions, if so directed by the Watermaster Board.
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
I. 3. c. **Refine and/or Update the Basin Management Action Plan ($0)**	During 2018-2019 the BMAP was updated based on new data and knowledge that has been gained since it was prepared in 2009. No further work of this type is anticipated in 2020. However, after the Groundwater Sustainability Plan (GSP) for the adjacent Monterey Subbasin of the Salinas Valley Groundwater Basin is completed, it may be appropriate to further update the BMAP to reflect the impacts of implementing that GSP. That GSP is scheduled to be completed by early 2022.

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 by the Watermaster on this matter is anticipated. In late 2017 a request was made to MPWMD to destroy one of its no-longer-used monitoring wells that is perforated in multiple aquifers (Well PCA-East Multiple). MPWMD performed this work in 2018.

No further work of this type is anticipated in 2020.

I. 3. e.
Seaside Basin Geochemical Model
($10,000)

When new sources of water are introduced into an aquifer, with each source having its own unique water quality, there can be chemical reactions that may have the potential to release minerals which have previously been attached to soil particles, such as arsenic or mercury, into solution and thus into the water itself. This has been experienced in some other locations where changes occurred in the quality of the water being injected into an aquifer. MPWMD's consultants have been using geochemical modeling to predict the effects of injecting Carmel River water into the Seaside Groundwater Basin under the ASR program.

In order to predict whether there will be groundwater quality changes that will result from the introduction of desalinated water and additional ASR water (under the Monterey Peninsula Water Supply Project) and advance-treated water (under the Pure Water Monterey Project) geochemical evaluations, and potentially modeling, will be performed in the areas of the Basin where injection of these new water sources will occur.

In 2019 a geochemical evaluation of introducing advance-treated water from the Pure Water Monterey Project was performed. That evaluation concluded that there would be no adverse geochemical impacts as a result of introducing that water into the Basin. A similar evaluation of the impact of introducing ASR water also concluded that there would be no adverse geochemical impacts. An evaluation of introducing desalinated water will be performed if the Monterey Peninsula Water Supply Project's desalination plant proceeds into the construction phase.

If any of the geochemical evaluations indicate the potential for problems to occur, then Montgomery and Associates may use the Watermaster's updated groundwater model, and information about injection locations and quantities, injection scheduling, etc. provided by MPWMD for each of these projects, to develop model scenarios to see if the problem(s) can be averted by changing delivery schedules and delivery quantities. This Task includes an allowance of $10,000 to have Montgomery and Associates perform such modeling, if necessary.

If the modeling predicts that there may be adverse impacts from introducing these new sources of water, measures to mitigate those impacts will be developed under a separate task that will be created for that purpose when and if necessary.

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 under the other Tasks in this Work Plan.
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** **($25,322)**	At the end of each water year, a Consultant will reanalyze all water quality data. Water level and water quality data will be provided to the Consultant in MS Access format. The Consultant will put this data into a report format and will include it as an attachment to the Seawater Intrusion Analysis Report. 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-term 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 2020.

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 2020.
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.

Seaside Groundwater Basin Watermaster

Replenishment Fund

Water Year 2020 (October 1 - September 30) / Fiscal Year (January 1 - December 31, 2020)

Proposed 2020 Budget

PAGE ONE

Replenishment Fund	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Assessments:	WY 05/06	WY 06/07	WY 07/08	WY 08/09	WY 09/10	WY 10/11	WY 11/12	WY 12/13	WY 13/14
Unit Cost:	$1,132 / $283	$1,132 / $283	$2,485 / 621.25	$3,040 / $760	$2,780 / $695	$2,780 / $695	$2,780 / $695	$2,780 / $695	$2,702 / $675.50
Cal-Am Water Balance Forward	**$ -**	**$ 1,641,004**	**$ 4,226,710**	**$ (2,871,690)**	**$ (2,839,939)**	**$ (3,822,219)**	**$ (6,060,164)**	**$ (8,735,671)**	**$ (6,173,771)**
Cal-Am Water Production	**3710.0 AF**	**4059.9 AF**	**3862.9 AF**	**2966.0 AF**	**3713.5 AF**	**3416.0 AF**	**3070.9 AF**	**3076.6 AF**	**3232.1 AF**
Exceeding Natural Safe Yield Considering Alternative Producers	2,106,652	2,565,471	5,199,014	3,773,464	4,112,933	3,187,854	2,280,943	2,380,842	2,790,539
Operating Yield Overproduction Replenishment	-	20,235	8,511	-	-	-	154,963	181,057	281,012
Total California American	**$ 2,106,652**	**$ 2,585,706**	**$ 5,207,525**	**$ 3,773,464**	**$ 4,112,933**	**$ 3,187,854**	**$ 2,435,907**	**$ 2,561,899**	**$ 3,071,550**
CAW Credit Against Assessment	(465,648)		(12,305,924)	$ (3,741,714)	(5,095,213)	(5,425,799)	(5,111,413)	-	-
CAW Unpaid Balance	***$ 1,641,004***	***$ 4,226,710***	***(2,871,690)***	***$ (2,839,939)***	***$ (3,822,219)***	***$ (6,060,164)***	***$ (8,735,671)***	***$ (6,173,771)***	***$ (3,102,221)***
City of Seaside Balance Forward	**$ -**	**$ 243,294**	**$ 426,165**	**$ 1,024,272**	**$ 1,619,973**	**$ 891,509**	**$ (110,014)**	**$ (773,813)**	**$ (1,575,876)**
City of Seaside Municipal Production	**332.0 AF**	**387.7 AF**	**294.3 AF**	**293.4 AF**	**282.9 AF**	**240.7 AF**	**233.7 AF**	**257.7 AF**	**223.6 AF**
Exceeding Natural Safe Yield Considering Alternative Producers	219,689	174,082	402,540	465,300	314,721	141,335	163,509	236,782	142,410
Operating Yield Overproduction Replenishment	12,622	85	4,225	16,522	20,690	-	1,689	27,007	3,222
Total Municipal	232,310	174,167	406,764	481,823	335,412	141,335	165,198	263,788	145,631
City of Seaside - Golf Courses									
Exceeding Natural Safe Yield - Alternative Producer	-	-	131,705	69,701	-	-	-	-	-
Operating Yield Overproduction Replenishment	-	-	32,926	17,427	-	-	-	-	-
Total Golf Courses	-	-	164,631	87,128	-	-	-	-	-
Total City of Seaside*	**$ 232,310**	**$ 174,167**	**$ 571,395**	**$ 568,951**	**$ 335,412**	**$ 141,335**	**$ 165,198**	**$ 263,788**	**$ 145,631**
City of Seaside Late Payment 5%	10,984	8,704	26,712	26,750	15,737				
In-lieu Credit Against Assessment	-		-	$ -	(1,079,613)	(1,142,858)	(828,996)	(1,065,852)	(1,459,080)
City of Seaside Unpaid Balance	***$ 243,294***	***$ 426,165***	***$ 1,024,272***	***$ 1,619,973***	***$ 891,509***	***$ (110,014)***	***$ (773,813)***	***$ (1,575,876)***	***$ (2,889,325)***
Total Replenishment Fund Balance	**$ 1,884,298**	**$ 4,652,874**	**$ (1,847,417)**	**$ (1,219,966)**	**$ (2,930,710)**	**$ (6,170,178)**	**$ (9,509,483)**	**$ (7,749,648)**	**$ (5,991,546)**
Replenishment Fund Balance Forward	**-**	**$ 1,884,298**	**$ 4,652,874**	**$ (1,847,417)**	**$ (1,219,966)**	**$ (2,930,710)**	**$ (6,170,178)**	**$ (9,509,483)**	**$ (7,749,648)**
Total Replenishment Assessments	2,349,946	2,768,576	5,805,632	4,369,165	4,464,082	3,329,189	2,601,104	2,825,688	3,217,182
Total Paid and/or Credited	(465,648)	-	(12,305,924)	(3,741,714)	(6,174,826)	(6,568,657)	(5,940,409)	(1,065,852)	(1,459,080)
Grand Total Fund Balance	**$ 1,884,298**	**$ 4,652,874**	**$ (1,847,417)**	**$ (1,219,966)**	**$ (2,930,710)**	**$ (6,170,178)**	**$ (9,509,483)**	**$ (7,749,648)**	**$ (5,991,546)**

Seaside Groundwater Basin Watermaster — **ITEM 1 D**

Replenishment Fund — 9/18/19

Water Year 2020 (October 1 - September 30) / Fiscal Year (January 1 - December 31, 2020)

Proposed 2020 Budget

PAGE TWO

Replenishment Fund	2015	2016	2017	2018	Estimated 2019	Totals WY 2006 Through 2019	Budget WY 2020	Projected Totals Through WY 2020
Assessments:	WY 14/15	WY 15/16	WY 16/17	WY 17/18	WY 18/19		WY 19/20	
Unit Cost:	$2,702 / $675.50	$2,702 / $675.50	$2,872 / $718	$2,872 / $718	$2,872 / $718		$2,872 / $718	
Cal-Am Water Balance Forward	**$ (3,102,221)**	**$ (676,704)**	**$ (676,704)**	**$ (491,747)**	**$ (48,797,949)**		**$ (48,677,949)**	
Cal-Am Water Production								
Exceeding Natural Safe Yield Considering Alternative Producers	2,113,414	-	184,957	1,075,995	100,000	$ 31,872,078	100,000	$ 31,972,078
Operating Yield Overproduction Replenishment	312,103	-	-	-	20,000	977,881	20,000	997,881
Total California American	**$ 2,425,516**		**$ 184,957**	**$ 1,075,995**	**$ 120,000**	**$ 32,849,958**	**$ 120,000**	**$ 32,969,958**
CAW Credit Against Assessment	-	-		(49,382,196)		(81,527,907)		(81,527,907)
CAW Unpaid Balance	***$ (676,704)***	***$ (676,704)***	***$ (491,747)***	***$ (48,797,949)***	***$ (48,677,949)***	***$ (48,677,949)***	***$ (48,557,949)***	***$ (48,557,949)***
City of Seaside Balance Forward	**$ (2,889,325)**	**$ (3,346,548)**	**$ (3,232,420)**	**$ (3,142,500)**	**$ (3,022,249)**		**$ (2,912,249)**	
City of Seaside Municipal Production	**223.6 AF**	**185.01 AF**						
Exceeding Natural Safe Yield Considering Alternative Producers	69,630	102,330	87,512	93,225	100,000	$ 2,713,063	100,000	$ 2,813,063
Operating Yield Overproduction Replenishment	38	11,959	2,409	27,026	10,000	137,492	10,000	147,492
Total Municipal	69,667	114,290	89,920	120,251	110,000	2,850,556	110,000	2,960,556
City of Seaside - Golf Courses								
Exceeding Natural Safe Yield - Alternative Producer	-	-	-	-	-	201,406	-	201,406
Operating Yield Overproduction Replenishment	-	-	-	-	-	50,353	-	50,353
Total Golf Courses	-	-	-	-	-	251,759	-	251,759
Total City of Seaside*	**$ 69,667**	**$ 114,290**	**$ 89,920**	**$ 120,251**	**$ 110,000**	**$ 3,102,315**	**$ 110,000**	**$ 3,212,315**
City of Seaside Late Payment 5%						88,887		88,887
In-lieu Credit Against Assessment	(526,890)	(162)	-	-	-	(6,103,451)	-	(6,103,451)
City of Seaside Unpaid Balance	***$ (3,346,548)***	***$ (3,232,420)***	***$ (3,142,500)***	***$ (3,022,249)***	***$ (2,912,249)***	***$ (2,912,249)***	***$ (2,802,249)***	***$ (2,802,249)***
Total Replenishment Fund Balance	**$ (4,023,252)**	**$ (3,909,125)**	**$ (3,634,247)**	**$ (51,820,198)**	**$ (51,590,198)**	**$ (51,590,198)**	**$ (51,360,198)**	**$ (51,360,198)**
Replenishment Fund Balance Forward	**$ (5,991,546)**	**$ (4,023,252)**	**$ (3,909,125)**	**$ (3,634,247)**	**$ (51,820,198)**		**$ (51,590,198)**	
Total Replenishment Assessments	2,495,183	114,290	274,877	1,196,246	230,000	36,041,161	230,000	**36,271,161**
Total Paid and/or Credited	(526,890)	(162)	-	(49,382,196)	-	(87,631,358)	-	**(87,631,358)**
Grand Total Fund Balance	**$ (4,023,252)**	**$ (3,909,125)**	**$ (3,634,247)**	**$ (51,820,198)**	**$ (51,590,198)**	**(51,590,198)**	**$ (51,360,198)**	**$ (51,360,198)**

ITEM 2
9/18/2019

SEASIDE GROUNDWATER BASIN WATERMASTER

TO: Budget/Finance Committee

FROM: Laura Paxton, Administrative Officer

DATE: September 18, 2019

SUBJECT: Unit Cost for Water Year 2019/20 Over Production Replenishment Assessment Amounts

---

RECOMMENDATION:

It is recommended that the Board approve a Proposed Replenishment Assessment Unit Cost of $2,872 for Natural Safe Yield Overproduction and $718 (25% of $2,872) for Operating Yield Over Production for Water Year 2019 (October 1, 2019 - September 30, 2020).

SUMMARY:

The Replenishment Assessment Unit Cost is used to calculate the Replenishment Assessments that are charged to any Standard Producer that exceeds its allocations (both Natural Safe Yield and Operating Yield allocations) during the Water Year.

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 on or before October of 2019 will be used to calculate Replenishment Assessments for pumping that occurs during the Water Year which begins on October 1, 2019 and ends on September 30, 2020.

BACKGROUND:

For each of the three Water Years 2014, 2015, and 2016, the Board adopted a unit cost of $2,702/AF. This unit cost was developed starting with Water Year 2014 by taking the average of the Base Unit Cost ($/AF) listed in Table 1 for each project [$3,507+$1,800+$2,000+$3,500)/4], as the Replenishment Assessment Unit Cost. The Water Year 2014 unit cost was carried over to the two subsequent Water Years because no updated cost data was available for the projects listed in Table 1, and no other viable projects could be identified. For Water Year 2016/17 the Budget and Finance Committee updated the basis from which the annual calculation of the Unit Cost of replenishment water is established, a blended cost of a reduced size desalination plant for the Monterey Peninsula Water Supply Project and groundwater replenishment provided by the Pure Water Monterey Project [($4,591+$2,025+$2,000)/3] = $2,872 (see Table 2).

DISCUSSION:

Due to the lack of more supportable data the recommendation is to continue using $2,872, the average of the Base Unit Cost ($/AF) listed in Table 2 for each project [($4,591+$2,025+$2,000)/3] as the Natural Safe Yield Over Production Replenishment Assessment Unit Cost for the Water Year 2019/2020. The Operating Yield Over Production Replenishment Assessment Unit Cost is 25% of that amount, or $718.

ATTACHMENTS:

Table 1: Water Year 2014 Unit Cost Calculation Data
Table 2: Current Unit Cost Data

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.

TABLE 2

WATER YEAR 2017 (October 1, 2016-September 30, 2017)

ANTICIPATED UNIT COSTS OF WATER COULD POTENTIALLY BE USED FOR REPLENISHMENT OF 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]	BASE UNIT COST ($/AF)	BASE UNIT COST YEAR
Regional Desalination[2]	2020	6,250	$6,147	2019
Groundwater Replenishment Project (Pure Water Monterey)[2]	2018	3,500	$1,811	2018
Monterey Peninsula Water Supply Project (Combined Regional Desalination with Groundwater Replenishment Project)	GWRP in 2018 Regional Desalination in 2020	9,750	$4,591	
Seaside Basin ASR Expansion[3]	2020	1,000	$2,025	2016
Regional Urban Water Augmentation Project[4]	2018	1,400-1,700	$2,000	2018

FOOTNOTES:

(1) For the Regional Desalination Project this is the total amount of water from this source which could potentially come to the CAW distribution system, based on the desalination plant having a 6.4 MGD capacity which is equivalent to 7,169 AFY. 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 non-potable 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 3). For the GWRP this is the quantity of water that is being planned at this time by CAW for inclusion in its Monterey Peninsula Water Supply Project.

(2) Base unit cost data based on PUC filing documents and provided by Dave Stoldt of MPWMD .

(3) Base unit cost 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.

(4) Project data provided by MCWD.