SEASIDE GROUNDWATER BASIN WATERMASTER

NOTICE

BUDGET AND FINANCE COMMITTEE MEETING
AUGUST 21, 2023
1:00 P.M.

AGENDA

Committee Members			
City of Seaside *Victor Damiani – Chair*	California American Water *Chris Cook*	City of Sand City *Mary Ann Carbone*	Coastal Subarea Landowners *Paul Bruno*

This meeting will be held in-person at the Seaside City Hall Conference Room
440 Harcourt Avenue, Seaside, CA 93955.

To access the meeting virtually, please click on the Zoom link or copy/paste it into your browser:

https://us02web.zoom.us/j/81847686825?pwd=Y1g3ZFlRRWZKOHBGbGRLYlMxWWF5Zz09
Meeting ID: 818 4768 6825
Passcode: 492511

If you would like to comment on any item on the agenda or any item not on the agenda, please submit those in writing to our office or via email at watermasterseaside@sbcglobal.net by 10 a.m. on Friday, August 18. All submitted written comments will be provided to the Committee and you may also comment during the meeting.

Public Comment:
The public may comment 3 minutes on any item within the committee's jurisdiction.

Action Items:

1. Fiscal Year 2024 Annual Budgets
   - A. Administrative Fund 3
   - B. Monitoring and Management Fund—Operations 5
   - C. Monitoring and Management Fund—Capital 19
   - D. Replenishment Fund (Informational only) 21
2. Replenishment Assessment Unit Costs for Natural Safe Yield and Operating Yield Overproduction for Water Year October 1, 2023 through September 30, 2024 23
3. Supplemental Cost-Sharing Agreement for Monitoring Well FO-9 Shallow Replacement Well Installation 27

Other Items: None

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.

SEASIDE GROUNDWATER BASIN WATERMASTER

TO: Watermaster Budget & Finance Committee

FROM: Laura Paxton, Administrative Officer (AO)

DATE: August 21, 2023

SUBJECT: Proposed Fiscal Year (Calendar Year) 2024 Annual Administrative Fund Budget

RECOMMENDATION:
Recommend Watermaster Board of Directors approve the attached proposed Administrative Fund Budget for FY 2024.

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 tentative budgets to be circulated to each adjudication Party "no earlier than November 1 and no later than November 15" each fiscal year.

The need for legal services in 2023 has been minimal with $40 spent to date. Joe Hughes, new legal counsel, contracted with Watermaster and began assisting the board in 2023. He is currently tasked with researching the Decision regarding aspects of Basin replenishment and it is anticipated this task will continue into 2024. Replenishment related services will be funded in 2024 by the estimated $20,000 remaining balance in the Replenishment Assessment Fund after 2023 expenditures. The 2024 Legal line item for non-replenishment related legal services is proposed at $25,000.

It is proposed that the Administrative Officer receive a 13.63% rate increase, from $110/hour that began in 2022 to $125/hour. Such an increase in AO rate calculates to a budgeted amount of $63,500, up from $60,000.

FISCAL IMPACT:
An estimated $23,500 in unspent 2023 funds are expected to be carried over to 2024. An Administrative Fund Assessment of $70,000 is proposed:
$63,500(AO)+$25,000(Legal)+$25,000(Reserve) = $113,500-$20,000(RA Fund)-$23,500(Carryover) = $70,000

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

California American Water 83.0%	$50,215
City of Seaside 14.4%	8,712
City of Sand City 2.6%	1,573
	$70,000

ATTACHMENTS
1) Proposed Administrative Fund Budget for FY (Calendar Year) 2024

Seaside Groundwater Basin Watermaster
Administrative Fund Budget
Proposed Budget August 21, 2023
Administrative Year 2024

	2023 Adopted Budget	2023 Estimated Total	2024 Proposed Budget
Assessment Income			
Reserve/Rollover*	$ 39,500	$ 43,000	$ 23,500
Administrative Assessment	60,500	60,500	70,000
Replenishment Related Legal Costs**		8,500	20,000
Totals	100,000	112,000	113,500
Expenditures			
Contractual Services - Administrative	60,000	60,000	63,500
Legal Services	12,000	3,500	25,000
Public Awareness Committee	3,000	2,610	-
Total Expenses	75,000	63,500	88,500
Total Available	25,000	48,500	25,000
Less Reserve	25,000	25,000	25,000
Net Available	$ -	$ 23,500	$ -

** Note: The reserve/rollover balance of $23,500 was determined upon completion by Watermaster staff of a detailed reconciliation from 2006 through July 2023 of the Administrative Fund financial records held at the Watermaster office.*

*** Replenishment related legal costs will be covered by funds transferred into the Administrative Fund from the Replenishment Assessment Fund*

ITEM 1.C.

SEASIDE GROUNDWATER BASIN WATERMASTER **8/21/23**

TO: Budget & Finance Committee

FROM: Robert Jaques, Technical Program Manager
Laura Paxton, Administrative Officer

DATE: August 21, 2023

SUBJECT: Approve the FY 2024 Monitoring and Management Program (M&MP) and the FY 2024 M&MP Operations and Capital Budgets

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SUMMARY:
Attached are the proposed FY 2024 M&MP and the proposed FY 2024 M&MP Operations and Capital Budgets for 2024 and 2025. 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. Only the 2024 budgets are before the B&F Committee for approval. The 2025 budgets are for information only.

The attached documents were approved by the TAC at its August 9, 2023 meeting, with the TAC's recommendation that they be approved by the Board.

The following are comments and/or principal revisions from the 2023 M&MP Budget:

Technical Program Manager: Technical Program Manager, Robert Jaques was hired as the Watermaster Technical Program Manager on June 6, 2007 at an hourly rate of $100/hour. As of October 1, 2018, his rate was increased to $150/hour. Mr. Jaques has over 16 years working as the Watermaster Technical Program Manager.

Administrative Officer Paxton recommends approving the request to increase the Technical Program Manager's hourly rate to $175/hour effective January 1, 2024" to instead read "Administrative Officer Paxton recommends increasing the Technical Program Manager's hourly rate to $175/hour effective January 1, 2024. Taking into account the increase in hourly rate proposed and the expected continued meeting attendance and other Basin work, actual Technical Program Manager expenditures are projected to still fall within the proposed $75,000 budgeted for 2024 and in 2025.

Tasks Involving MPWMD and Montgomery & Associates: The scopes-of-work for both MPWMD and Montgomery & Associates are essentially unchanged from 2022. However, both will have hourly-rate increases in 2024, so the costs of the Tasks in which they are involved reflect somewhat higher dollar amounts in 2024 compared to 2023.

For several of the Tasks involving MPWMD (I.2.a.1, I.2.b.2, I.2.b.3) I have re-allocated certain of their costs to more closely match the Tasks to which they pertain. This accounts for some of the changes in costs of these Tasks in 2024 compared to their costs in 2023.

Task I.2.b.3 includes induction logging of the Sentinel Wells. Access to Sentinel Well #4 may be reduced if the access road leading to it is removed and re-vegetated in conjunction with the demolition of the Ord Village Pump Station. If that is the case, the induction logging vehicle will

have to be located some distance away from this well, and the cable that connects the logging tool to the vehicle will have to be supported by a series of braces with pulleys on them. Mr. Feeney included a contingency amount of $5,000 in his cost estimate for this work in case this additional work is needed. This, along with increases in the charges from the induction logging subcontractor, led to the increase in the cost of this Task.

As a result of the changes described above, as indicated by the right-hand column titled "Comparative Costs from 2023 Budget" in Attachment 1, the proposed 2024 Budget is $31,149 lower ($324,930 -$293,781) than the 2023 Budget.

Following B&F Committee approval of the 2024 M&MP and the 2024 M&MP Budgets, they will be forwarded to the Board for approval.

FISCAL IMPACT:

For the Monitoring & Maintenance – Operations Fund:
An estimated $123,781 in unspent 2023 funds are expected to be carried over to 2024. An Operations Fund Assessment of $170,000 is proposed ($293,781 2024 Ops Budget - $123,781 carryover =$170,000).

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

California American Water 91.0%	$154,700
City of Seaside 7.0%	11,900
D.B.O. 0.9%	1,530
Granite Rock 0.9%	1,530
Cypress Pacific	340
	$170,000

For the Monitoring & Maintenance – Capital Fund:
A Capital Fund Assessment of $119,763.73 is proposed (42.5% of the $281,797 cost of the well per the Cost Share Agreement). ***This assessment applies to 2023 as the well construction is anticipated to be completed by the end of this calendar year (the Watermaster fiscal year). Assessment was pending execution of the Cost Share Agreement, and will be levied on parties after well construction is completed. Payments from parties most likely will be due in early 2024.***

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

California American Water 91.0%	$108,984.99
City of Seaside 7.0%	8,383.46
D.B.O. 0.9%	1,077.87
Granite Rock 0.9%	1077.87
Cypress Pacific	239.53
	$119,763.73

ATTACHMENTS:

1. 2024 M&MP
2. 2024 and 2025 M&MP Operations Budgets
3. 2024 and 2025 M&MP Capital Budgets

Seaside Groundwater Basin
2024 Monitoring and Management Program

The tasks outlined below are those that are anticipated to be performed during 2024. Some Tasks listed below are specific to 2024, 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 ($19,530)	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, M.1.d, and M.1.e will be: • Those associated with attendance at TAC meetings (either in person or by videoconference 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 (either in person or by videoconference connection) when requested to do so by Watermaster Staff, 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 ($2,540)	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 ($22,700)	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 in Task I.4.c 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. Under this Task, when requested MPWMD will also respond to requests from consultants and others for data from the database. 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 2024. A separate consultant will maintain the Watermaster's website.
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 2024.
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 2024.

I. 2 b. 2 **Collect Water Levels** **($21,128)**	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.** **($38,446)**	As discussed in the 2018 Annual Report, water quality data will be collected quarterly from certain of the monitoring wells, but is no longer being collected from the four coastal Sentinel Wells. Because many years of data have shown essentially no change in aquifer water quality, beginning in WY2023 the frequency of induction logging of the Sentinel Wells was reduced to once per year. As discussed in the 2012 Annual Report, water quality analyses were expanded to include barium and iodide ions. Since these analyses have created more than 10 years of data, as discussed in the 2022 Annual Report the analyses were no longer being performed starting in WY 2023. They will only be resumed if the other water quality parameters are indicative of seawater intrusion. As discussed in the 2021 Annual Report, the frequency of sampling of SBWM-5 (the Camp Huffman well) has been reduced over the years. It is being sampled once every five years beginning in WY 2022. 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. 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 fails or is found to be no longer adequate due to declining groundwater levels, an allowance of $945 to purchase a replacement sampling pump has been included in this Task.
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 2024.
I. 2. b. 5 **Monitor Well Construction** **($0)**	A well to replace Monitoring Well FO-9 Shallow, which in 2021 was found to have a leaking casing, was installed in 2023. No other monitoring wells are expected to be constructed in 2024.

I. 2. b. 6 **Reports** **($3,680)**	This task was essentially eliminated starting in 2020 by having the data collected by MPWMD under tasks I.2.b.1, I.2.b.2, and I.2.b.3 reported in the SIAR under Task I.4.c. The work remaining under this task is for MPWMD to prepare and provide the data appendix to the Consultant that prepares the SIAR. No formalized reporting on a quarterly basis is required. However, MPWMD will promptly notify the Watermaster and the Consultant that prepares the SIAR of any missing data or data collection irregularities in the water quality and water level data collected under Tasks I.2.b.2 and I.2.b.3.
I.2.b.7 **CASGEM Data Submittal** **($4,200)**	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 2024.
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' November 2009 report titled *"Seaside Groundwater Basin Modeling and Protective Groundwater Elevations,"* which is the October 21, 2009 posting on the Watermaster's website. As discussed in Attachment 10 of the 2013 Annual Report, further work was started in 2013 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 ($40,000)**	Modeling performed to date indicates that the solution to the problem of water levels in the Seaside Basin being below Protective Water Levels will be to inject replenishment water. Two projects are planned that have the potential to provide additional water for Basin replenishment. The first is the Pure Water Monterey Expansion (PWMX) Project for which construction bids were solicited in 2023 and is projected to become operational in 2025. The PWMX Project will increase the capacity of the existing 3,500 AFY PWM Project by 2,250 AFY. The second is the Monterey Peninsula Water Supply Project's (MPWSP) desalination plant which is still in the design and permitting stage with no currently projected implementation date. Growth is built into each of these projects' plant capacity, and the full capacity of these plants will likely not all be needed for some years into the future. During the time period that these projects would have excess capacity, they could potentially provide water for Basin replenishment. Montgomery & Associates agrees that injection is the quickest way to bring groundwater levels up in the Seaside Basin. Modeling performed in 2022 and 2023 found that between 1,000 and 4,600 AFY of replenishment water will need to be needed, depending on future water demands and rainfall. 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. The Groundwater Sustainability Plan for Corral de Tierra area of the Monterey Subbasin includes projects to help to alleviate this problem, but they are unlikely to completely alleviate it. This Task includes a $40,000 allowance to perform further modeling or analyses pertaining to Basin management issues 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)**	In 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 2024. However, although no funds are budgeted for this Task in 2024, since the Groundwater Sustainability Plan (GSP) for the adjacent Monterey Subbasin of the Salinas Valley Groundwater Basin was completed in early 2022, at some point it may be appropriate to further update the BMAP to reflect the impacts of implementing that GSP.
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 led to casing leakage, it would be possible for the intrusion to flow from one aquifer to another. An evaluation of this was performed in 2012 and is described in Attachment 10 of the 2012 Annual Report. In 2021 the Watermaster TAC examined the feasibility of performing conductivity profiling of certain of the near-coastal wells that were evaluated in the 2012 Memorandum, as a method of determining if any of those wells was allowing downward migration of intruded water from the shallow dunes aquifer to enter the Paso Robles aquifer. However, it was concluded that conditions in those wells would make it infeasible to perform such work. No further work of this type is anticipated in 2024.
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 used 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

I.3. e. **Seaside Basin Geochemical Model** **(Continued)**	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 the geochemical evaluation of injecting desalinated water indicates 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 and/or California American Water for this project, 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 desalinated 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. c. **Annual Report- Seawater Intrusion Analysis** **($28,020)**	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 by another Consultant (MPWMD) 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. If possible, 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 induction 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. e. **Refine and/or Update the Seawater Intrusion Response Plan** **($0)**	At the beginning of 2009, and again in 2021, 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 2024.

Monitoring and Management Program Operations Budget For Tasks to be Undertaken in 2024								Comparative Costs from 2023 Budget
Task	Subtask	Sub-Subtask	Cost Description	CONSULTANTS & CONTRACTORS[3]			Total	
				MPWMD	Private Consultants	Contractors		
Labor								
			Technical Project Manager	$0	$75,000	$0	$75,000	$75,000
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	$19,530	$0	$19,530	$28,280
	M.1.f		QA/QC	$0	$0	$0	$0	$0
	M.1.g		SGMA Documentation Preparation	$0	$2,540	$0	$2,540	$2,464
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[15]	$19,100	$3,600	$0	$22,700	$32,238
		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 Water Levels[5][6]	$21,128	$0	$0	$21,128	$20,042
		I. 2. b. 3.	Collect Water Quality Samples and Perform Sentinel Well Induction Logging[1][5]	$20,694	$0	$17,752	$38,446	$28,210
		I. 2. b. 4.	Update Program Schedule and Standard Operating Procedures.	$0	$0	$0	$0	$0
		I. 2. b. 5.	Monitor Well Construction	$0	$0	$0	$0	$0
		I. 2. b. 6.	Reports	$3,680	$0	$0	$3,680	$3,568
		I. 2. b. 7.	CASGEM Data Submittal for Watermaster's Voluntary Wells	$4,200	$0	$0	$4,200	$5,352
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	$40,000	$0	$40,000	$60,000
	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[7]	$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[17]	$0	$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[16]	$0	$28,020	$0	$28,020	$27,176
	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 2021. If it Does Become Necessary, Use of Contingency Funds or a Budget Modification Will Likely be Necessary)				
		TOTALS CONSULTANTS & CONTRACTORS		**$68,802**	**$178,690**	**$17,752**		
						SUBTOTAL not including Technical Program Manager =	$190,244	$217,330
						Contingency (not including Technical Program Manager) @ 15%[4] =	$28,537	$32,600
						Technical Program Manager =	$75,000	$75,000
						TOTAL=	**$293,781**	**$324,930**

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. The Sentinel Wells will be induction logged once per year (in September).
(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 15% be included in the Budget.
(5) The MPWMD portion of these Tasks includes:
For Task I.2.b.2: (1) $527 for vehicle mileage costs for both this Task and Task I.2.b.3 and (2) $893 to purchase a replacement datalogger (if
For Task I.2.b.3: (1) $5,670 for laboratory analytical costs, (2) $158 for air compressor rental to sample the Camp Huffman well, (3) $263 for CO2 bottles to run the sample pumps, (4) $945 to purchase a replacement low flow sampling pump (if necessary) and (5) $736 of administrative support costs for preparing billings and processing invoices from the water quality laboratory.
(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) The BMAP was updated in 2018, and no further work on this Task is anticiapted in 2024.
(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, but not be limited to, 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) This Task is included to provide funds for the Watermaster to perform modeling and other investigative work to aid in making Basin management decisions that the Board may wish to perform in 2024.
(11) The Model was updated and recalibrated in 2018, so no costs for this Task are anticipated in 2024.
(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 2024.
(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 2024 would only be used if geochemical modeling is performed in 2024 for the MPWSP desalination plant water, and if that modeling 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.
(14) Not used.
(15) Includes $300/month for an outside consultant to maintain the Watermaster's website and post documents on it and $2,300 for MPWMD to respond to requests from consultants and others for data from the database.
(16) MPWMD's costs to assist in this Task are included in its costs under Task I.2.b.6.
(17) MPWMD's and Montgomery & Associates' costs to provide oversight in this Task are included under their other Tasks.

Monitoring and Management Program Operations Budget

For Tasks to be Undertaken in 2025[12]

Task	Subtask	Sub-Subtask	Cost Description	CONSULTANTS & CONTRACTORS[3]			Total
				MPWMD	Private Consultants	Contractors	
Labor							
			Technical Project Manager	$0	$75,000	$0	$75,000
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	$20,116	$0	$20,116
	M.1.f		QA/QC	$0	$0	$0	$0
	M.1.g		SGMA Documentation Preparation	$0	$2,616	$0	$2,616
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	$19,673	$3,708	$0	$23,381
		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]	$21,762	$0	$0	$21,762
		I. 2. b. 3.	Collect Quarterly Water Quality Samples[1][5][6]	$21,315	$0	$18,285	$39,599
		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	$3,790	$0	$0	$3,790
		I. 2. b. 7.	CASGEM Data Submittal for Watermaster's Voluntary Wells	$4,326	$0	$0	$4,326
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[10]	$0	$30,000	$0	$30,000
		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[15]	$0	$30,000	$0	$30,000
	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	$10,000	$0	$10,000
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	$0	$28,861	$0	$28,861
	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		**$70,866**	**$125,301**	**$18,285**	
						SUBTOTAL not including Technical Program Manager =	$214,451
						Contingency (not including Technical Program Manager) @ 15%[4]=	$32,168
						Technical Program Manager	$75,000
						TOTAL=	**$321,619**

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 15% 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 2025.						
(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) The model was last updated in 2018. Information subsequently gained through implementation of the Pure Water Monterey Project may warrant updating the model again in 2025. Updating the model in 2018 cost $54,370 and that cost was shared 50% by the Watermaster and 50% by MPWMD/M1W. The amount budgeted for this work assumes the 2025 update would cost approximately $60,000 and that this same cost-share would be used, so the estimated cost to the Watermaster would be $30,000.						
(11) The BMAP was updated in 2018, and no further work on this Task is anticiapted in 2025.						
(12) Includes a 3% inflation factor on most annually recurring costs in the 2024 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 2025.						
(14) Work on this Task may not be performed in 2024, so work on this Task may need to be rebudgeted in 2025.						
(15) This Task is included to provide funds for the Watermaster to perform modeling and other investigative work to aid in making Basin management decisions that the Board may wish to perform in 2025.						

Monitoring and Management Program Capital Budget For Tasks to be Undertaken in 2024

No Capital projects are anticipated to be undertaken in 2024, so this budget is $0.

Monitoring and Management Program Capital Budget For Tasks to be Undertaken in 2025

No Capital projects are anticipated to be undertaken in 2025, so this budget is $0.

Seaside Groundwater Basin Watermaster

Replenishment Fund

Water Year 2024 (October 1 - September 30) / Fiscal Year (January 1 - December 31, 2023)

Proposed 2024 Budget

Replenishment Fund		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Assessment Water Year		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	WY 14/15	WY 15/16
Unit Cost:	a	$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	$2,702/$675.50	$2,702/$675.50
Cal-Am Water Balance Forward	b	**$ -**	**$ 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)**	**$ (676,704)**
Cal-Am Water Production (AF)	c	*3,710.00*	*4,059.90*	*3,862.90*	*2,966.02*	*3,713.52*	*3,416.04*	*3,070.90*	*3,076.61*	*3,232.10*	*2,764.73*	*1,879.21*
Cal-Am Water NSY Over-Production (AF)	d	*1,862.69*	*2,266.32*	*2,092.16*	*1,241.27*	*1,479.47*	*1,146.71*	*820.48*	*856.42*	*1,032.77*	*782.17*	-
Exceeding Natural Safe Yield Considering Alternative Producers	e	$ 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	$ 2,113,414	$ -
Operating Yield Overproduction Replenishment	f	$ -	$ 20,235	$ 8,511	$ -	$ -	$ -	$ 154,963	$ 181,057	$ 281,012	$ 312,103	$ -
Total California American	g	**$ 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**	**$ 2,425,516**	
CAW Credit Against Assessment	h	$ (465,648)		$ (12,305,924)	$ (3,741,714)	$ (5,095,213)	$ (5,425,799)	$ (5,111,413)				
CAW Unpaid Balance	i	***$ 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)***	***$ (676,704)***	***$ (676,704)***
City of Seaside Balance Forward	j	**$ -**	**$ 243,294**	**$ 426,165**	**$ 1,024,272**	**$ 1,619,973**	**$ 891,509**	**$ (110,014)**	**$ (773,813)**	**$ (1,575,876)**	**$ (2,889,325)**	**$ (3,346,548)**
City of Seaside Municipal Production (AF)	k	*332.00*	*287.70*	*294.20*	*293.44*	*282.87*	*240.68*	*233.72*	*257.73*	*223.64*	*185.01*	*195.16*
City of Seaside NSY Over-Production (AF)	l	*194.07*	*153.78*	*161.99*	*153.06*	*113.21*	*50.84*	*58.82*	*85.17*	*52.71*	*25.77*	*37.87*
Exceeding Natural Safe Yield Considering Alternative Producers	m	$ 219,689	$ 174,082	$ 402,540	$ 465,300	$ 314,721	$ 141,335	$ 163,509	$ 236,782	$ 142,410	$ 69,630	$ 102,330
Operating Yield Overproduction Replenishment	n	$ 12,622	$ 85	$ 4,225	$ 16,522	$ 20,690	$ -	$ 1,689	$ 27,007	$ 3,222	$ 38	$ 11,959
Total Municipal	o	$ 232,310	$ 174,167	$ 406,764	$ 481,823	$ 335,412	$ 141,335	$ 165,198	$ 263,788	$ 145,631	$ 69,667	$ 114,290
City of Seaside - Golf Courses (APA - 540 AFY)												
Exceeding Natural Safe Yield - Alternative Producer	p	$ -	$ -	$ 131,705	$ 69,701	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Operating Yield Overproduction Replenishment	q	$ -	$ -	$ 32,926	$ 17,427	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Golf Courses	r	$ -	$ -	$ 164,631	$ 87,128	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total City of Seaside*	s	**$ 232,310**	**$ 174,167**	**$ 571,395**	**$ 568,951**	**$ 335,412**	**$ 141,335**	**$ 165,198**	**$ 263,788**	**$ 145,631**	**$ 69,667**	**$ 114,290**
City of Seaside Late Payment 5%	t	$ 10,984	$ 8,704	$ 26,712	$ 26,750	$ 15,737						
In-lieu Credit Against Assessment	u					$ (1,079,613)	$ (1,142,858)	$ (828,996)	$ (1,065,852)	$ (1,459,080)	$ (526,890)	$ (162)
City of Seaside Unpaid Balance	v	***$ 243,294***	***$ 426,165***	***$ 1,024,272***	***$ 1,619,973***	***$ 891,509***	***$ (110,014)***	***$ (773,813)***	***$ (1,575,876)***	***$ (2,889,325)***	***$ (3,346,548)***	***$ (3,232,420)***
Mission Memorial Park												
Mission Memorial Park Production (AF)	w			*20.80*	*26.40*	*12.80*	*22.40*	*27.00*	*24.95*	*24.89*	*17.97*	*13.67*
Mission Memorial Park NSY Over-Production (AF)	x	-	-	-	-	-	-	-	-	-	-	-
Exceeding Natural Safe Yield - Alternative Producer	y	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Operating Yield Overproduction Replenishment	z	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Mission Memorial Park	aa	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Replenishment Fund Balance	bb	**$ 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)**	**$ (4,023,252)**	**$ (3,909,125)**
Replenishment Fund Balance Forward	cc	$ -	**$ 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)**	**$ (4,023,252)**
Total Replenishment Assessments	dd	$ 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	$ 2,495,183	$ 114,290
Total Paid and/or Credited	ee	$ (465,648)	$ -	$ (12,305,924)	$ (3,741,714)	$ (6,174,826)	$ (6,568,657)	$ (5,940,409)	$ (1,065,852)	$ (1,459,080)	$ (526,890)	$ (162)
Grand Total Fund Balance	ff	**$ 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)**	**$ (4,023,252)**	**$ (3,909,125)**

** 2010 = 319.55 AF golf course in-lieu replenishment and 68.8 AF 4-party agmt in-lieu replenishment*
2011 = 411.1 AF golf course in-lieu replenishment
2012 = 298.2 AF golf course in-lieu replenishment
2013 = 383.4 AF golf course in-lieu replenishment
2014 = 552.4 AF golf course in-lieu capped at 540 AF
2015 = 195.0 AF golf course in-lieu
2016 = 00.06 AF golf course in-lieu
2017 = 00.00 AF golf course in-lieu

Seaside Groundwater Basin Watermaster
Replenishment Fund
Water Year 2024 (October 1 - September 30) / Fiscal Year (January 1 - December 31, 2023)
Proposed 2024 Budget

Replenishment Fund		2017	2018	2019	2020	WY 2021	WY 2022	Budget WY 2023	Totals WY 2006 Through 2023	Budget WY 2024	Projected Totals Through WY 2024
Assessment Water Year		WY 16/17	WY 17/18	WY 18/19	WY 19/20	WY 20/21	WY 21/22	WY 22/23		WY 22/23	
Unit Cost:	a	$2,872 / $718	$2,872 / $718	$2,872 / $718	$2,872 / $718	$2,947 / $737	$3,260/ $815	$3,461/ $865		$3,461/ $865	
Cal-Am Water Balance Forward	b	**$ (676,704)**	**$ (491,747)**	**$ (48,797,949)**	**$ (47,979,852)**	**$ (46,855,121)**	**$ (46,855,121)**	**$ (46,855,121)**		**$ (46,735,121)**	
Cal-Am Water Production (AF)	c	*2,029.51*	*2,229.45*	*2,120.22*	*2,245.88*	*1,664.04*	*1,648.71*		*47,689.74*		
Cal-Am Water NSY Over-Production (AF)	d	*64.40*	*374.65*	*284.85*	*334.21*	-			*14,638.57*		
Exceeding Natural Safe Yield Considering Alternative Producers	e	$ 184,957	$ 1,075,995	$ 818,097	$ 959,859	$ -	$ -	$ 100,000	$ 33,650,034	$ 100,000	$ 33,750,034
Operating Yield Overproduction Replenishment	f				$ 164,872	$ -	$ -	$ 20,000	$ 1,142,753	$ 20,000	$ 1,162,753
Total California American	g	**$ 184,957**	**$ 1,075,995**	**$ 818,097**	**$ 1,124,731**	**$ -**	**$ -**	**$ 120,000**	**$ 34,792,786**	**$ 120,000**	**$ 34,912,786**
CAW Credit Against Assessment	h		$ (49,382,196)	$ -	$ -	$ -	$ -	$ -	$ (81,527,907)	$ -	$ (81,527,907)
CAW Unpaid Balance	i	***$ (491,747)***	***$ (48,797,949)***	***$ (47,979,852)***	***$ (46,855,121)***	***$ (46,855,121)***	***$ (46,855,121)***	***$ (46,735,121)***	***$ (46,735,121)***	***$ (46,615,121)***	***$ (46,615,121)***
City of Seaside Balance Forward	j	**$ (3,232,420)**	**$ (3,142,500)**	**$ (3,022,249)**	**$ (2,919,806)**	**$ (2,802,831)**	**$ (2,708,828)**	**$ (2,661,183)**		**$ (2,551,183)**	
City of Seaside Municipal Production (AF)	k	*188.31*	*184.63*	*178.40*	*181.65*	*174.69*			*3,733.83*		
City of Seaside NSY Over-Production (AF)	l	*30.47*	*32.46*	*27.82*	*32.06*	*25.52*			*1,235.62*		
Exceeding Natural Safe Yield Considering Alternative Producers	m	$ 87,512	$ 93,225	$ 79,893	$ 92,089	$ 75,197	$ 38,116	$ 100,000	$ 2,998,359	$ 100,000	$ 3,098,359
Operating Yield Overproduction Replenishment	n	$ 2,409	$ 27,026	$ 22,550	$ 24,886	$ 18,806	$ 9,529	$ 10,000	$ 213,263	$ 10,000	$ 223,263
Total Municipal	o	$ 89,920	$ 120,251	$ 102,443	$ 116,975	$ 94,003	$ 47,645	$ 110,000	$ 3,211,622	$ 110,000	$ 3,321,622
City of Seaside - Golf Courses (APA - 540 AFY)											
Exceeding Natural Safe Yield - Alternative Producer	p	$ -	$ -	$ -	$ -	$ -			$ 201,406		$ 201,406
Operating Yield Overproduction Replenishment	q	$ -	$ -	$ -	$ -	$ -			$ 50,353		$ 50,353
Total Golf Courses	r	$ -		$ -	$ -	$ -			$ 251,759		$ 251,759
Total City of Seaside*	s	**$ 89,920**	**$ 120,251**	**$ 102,443**	**$ 116,975**	**$ 94,003**	**$ 47,645**	**$ 110,000**	**$ 3,463,381**	**$ 110,000**	**$ 3,573,381**
City of Seaside Late Payment 5%	t								$ 88,887		$ 88,887
In-lieu Credit Against Assessment	u					-	-	-	$ (6,103,451)	-	$ (6,103,451)
City of Seaside Unpaid Balance	v	***$ (3,142,500)***	***$ (3,022,249)***	***$ (2,919,806)***	***$ (2,802,831)***	***$ (2,708,828)***	***$ (2,661,183)***	***$ (2,551,183)***	***$ (2,551,183)***	***$ (2,441,183)***	***$ (2,441,183)***
Mission Memorial Park (APA - 31 AFY)											
Mission Memorial Park Production (AF)	w	*13.74*	*14.43*	*16.07*	*20.00*	*46.77*	*31.00*		*332.89*		
Mission Memorial Park NSY Over-Production (AF)	x	-	-	-	-	*15.77*	*58.00*		*73.77*		
Exceeding Natural Safe Yield - Alternative Producer	y	$ -	$ -	$ -	$ -	$ 46,488	$ 9,608		$ 56,096		$ 56,096
Operating Yield Overproduction Replenishment	z	$ -	$ -	$ -	$ -	$ 11,626	$ 2,402		$ 14,028		$ 14,028
Board Approved (5/4/22) Credit Against Assessment						(33,114)		-	$ (33,114)	-	$ (33,114)
Mission Memorial Park Unpaid Balance	aa	$ -		$ -	$ -	***$ 25,000***	***$ 12,010***		$ 28,510		$ 28,510
Total Replenishment Fund Balance	bb	**$ (3,634,247)**	**$ (51,820,198)**	**$ (50,899,658)**	**$ (49,657,952)**	**$ (49,538,949)**	**$ (49,504,294)**	**$ (49,286,304)**	**$ (49,257,794)**	**$ (49,056,304)**	**$ (49,056,304)**
Replenishment Fund Balance Forward	cc	**$ (3,909,125)**	**$ (3,634,247)**	**$ (51,820,198)**	**$ (50,899,658)**	**$ (49,657,952)**	**$ (49,538,949)**	**$ (49,504,294)**		**$ (49,286,304)**	
Total Replenishment Assessments	dd	$ 274,877	$ 1,196,246	$ 920,540	$ 1,241,706	$ 119,003	$ 59,655	$ 230,000	$ 38,382,064	$ 230,000	**$ 38,612,064**
Total Paid and/or Credited	ee		$ (49,382,196)				$ (25,000)	$ (3,510)	$ (87,659,868)	$ -	**$ (87,659,868)**
Funds Expended (transfer to Admin Fund)								$ (8,500)	$ (8,500)		**$ (8,500)**
Grand Total Fund Balance	ff	**$ (3,634,247)**	**$ (51,820,198)**	**$ (50,899,658)**	**$ (49,657,952)**	**$ (49,538,949)**	**$ (49,504,294)**	**$ (49,286,304)**	**$ (49,286,304)**	**$ (49,056,304)**	**$ (49,056,304)**

TO: Watermaster Budget & Finance Committee
FROM: Laura Paxton, Administrative Officer and Robert Jaques, Technical Program Manager
DATE: August 21, 2023
SUBJECT: Water Year 2024 Overproduction Replenishment Assessment Unit Costs for Water

- -

RECOMMENDATION: Recommend to the Watermaster board at its September 6, 2023 board meeting to adopt a Replenishment Assessment Unit Cost of $3,461/AF and $865/AF, or $3,442/AF and $860.50/AF for Natural Safe Yield and Operating Yield Overproduction, respectively, for Water Year 2024.

BACKGROUND: Per page 33 of the Decision, "The per acre-foot (AF) 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 2023 will be used to calculate Replenishment Assessments for pumping that occurs during Water Year 2024 (October 1, 2023 through September 30, 2024).

For Water Years 2014, 2015, and 2016 the Board adopted a Replenishment Assessment Unit Cost of $2,702/AF for Natural Safe Yield Overproduction. This unit cost was developed starting with Water Year 2014 by taking the average of the Base Unit Cost ($/AF) of the four potential water supply projects that the Board felt were the most likely to be implemented. For Water Year 2017 the Board adopted a revised Replenishment Assessment Unit Cost of $2,872. This revised Unit Cost was calculated using updated unit cost data for the three projects which the Board at that time felt were the most likely to be implemented. The number of projects was reduced from four to three, because when the WY 2017 Unit Cost was being calculated, it was determined that two of the previous four projects (Regional Desalination and the Pure Water Monterey Groundwater Replenishment Projects) would be part of a combined project referred to as the Monterey Peninsula Water Supply Project (MPWSP). The unit cost for Water Year 2017 was carried over to the three subsequent Water Years because no updated cost data was available for those projects, and no other viable projects could be identified. In 2020, a blended unit cost value was provided for the Monterey Peninsula Water Supply Project based on a reduced size desalination plant offset by water to be provided by the Pure Water Monterey Project. Based on the updated Pure Water Monterey Project's unit cost, the blended unit cost for that combined project was updated from $4,591/AF to $4,817/AF, resulting in a Water Year 2021 Replenishment Assessment Unit Cost of $2,947/AF. In 2022, a blended unit cost value was calculated for the MPWSP based on an updated PWM unit cost for 3,500AF of potential volume from the project. The blended unit cost for that combined project was updated from $4,817/AF to $4,948/AF. For purposes of the 2022 Replenishment Assess Unit Cost calculation, $2,808 was used as the RUWAP cost/AF. In 2023, a blended unit cost value was calculated for the MPWSP based on an updated PWM and PWMX unit cost for an increased 5,750AF of potential volume from both projects. The blended unit cost for the combined projects was updated from $4,948/AF to $4,872/AF.

DISCUSSION: The attached 2024 Table of calculations includes the same actual and estimated project costs as 2023. Beginning in 2024, both flow-weighted and straight average unit costs of the combined desalination, PWM and PWMX projects are presented in the table footnotes for the committee to consider:

1) A flow-weighted average unit cost of the combined desalination and PWM and PWMX projects is (6,250 x $6,147 + 5,750 x $3,486)/12,000 = **$4,872.**
2) A straight average unit cost of the combined desalination and PWM and PWMX projects is ($6,147 + $3,486)/2 = **$4,817.**

The proposed Replenishment Assessment Unit Costs would therefore be:

1) Flow-weighted = **$3,461/AF**, calculated as: ($4,872+$2,025+$3,486)/3. These are the three bold-faced unit costs in the attached Table. Operating Yield Over Production Replenishment Assessment Unit Cost = 25% of that amount, or **$865**.
2) Straight average = **$3,442/AF**, calculated as ($4,817+2,025+$3,486)/3. Operating Yield Over Production Replenishment Assessment Unit Cost = 25% of that amount, or **$860.50.**

ATTACHMENTS: 2023; and 2024 Unit Cost Data Table (footnotes (3) & (6) only updated information from 2023)

WATER YEAR 2023 (October 1, 2022-September 30, 2023)

ANTICIPATED UNIT COSTS OF WATER COULD POTENTIALLY BE USED FOR REPLENISHMENT OF THE SEASIDE BASIN

POTENTIAL SOURCE OF REPLENISHMENT WATER	POTENTIAL DATE REPLENISHMENT 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]	2024	6,250	$6,147	2021
Pure Water Monterey and PWMX[6]	2020	5,750	$3,486	2021
Monterey Peninsula Water Supply Project (Combined Regional Desalination with Groundwater Replenishment Project)	PWM in 2020, Regional Desalination in 2024	12,000	**$4,872**[3]	2022
Seaside Basin ASR Expansion [4]	2021	1,000	**$2,025**	2016
Regional Urban Water Augmentation Project [5]	2021	1,400-1,700	**$3,486**	2021

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 4). For the PWM and PWMX this is the quantity of water that is being planned at this time by CAW for inclusion in its Monterey Peninsula Water Supply Project. *Note that if the desalination plant is not built, PWM and PWMX will to to bear conveyance, pumping, and delivery.*

(2) Base unit cost data based on PUC filing documents and provided by Dave Stoldt of MPWMD . The unit cost was confirmed in August 2021 by Ian Crooks of Cal Am as being the latest unit cost available for this project. *Note that if the desalination plant is not built, PWM and PWMX will to to bear conveyance, pumping, and delivery.*

(3) Flow-weighted average unit cost of the combined desalination and groundwater replenishment projects, calculated as:

(6,250x$6,147 + 5,750x$3,486)/12,000 = **$4,872**.

(4) Base unit cost data provided by MPWMD in 2016. No updated unit cost was provided for this project. 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.

(5) Project data updated in 2022. Patrick Breen of MCWD noted that to determine total cost per acre-foot, use the $3,486/acre-foot cost from Pure Water Monterey (which wold be RUWAP as well) and add MCWD O&M and Financing costs to be determined.

WATER YEAR 2024 (October 1, 2023-September 30, 2024)

ANTICIPATED UNIT COSTS OF WATER COULD POTENTIALLY BE USED FOR REPLENISHMENT OF THE SEASIDE BASIN

POTENTIAL SOURCE OF REPLENISHMENT WATER	POTENTIAL DATE REPLENISHMENT 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]	2024	6,250	$6,147	2021
Pure Water Monterey and PWMX[6]	2020	5,750	$3,486	2021
Monterey Peninsula Water Supply Project (Combined Regional Desalination with PWM and PWMX Projects)	PWM in 2020, Regional Desalination in 2024	12,000	**$4,872**[3]	2022
Seaside Basin ASR Expansion [4]	2021	1,000	**$2,025**	2016
Regional Urban Water Augmentation Project [5]	2021	1,400-1,700	**$3,486**	2021

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 4). For the PWM and PWMX 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 . The unit cost was confirmed in August 2021 by Ian Crooks of Cal Am as being the latest unit cost available for this project.

(3) Flow-weighted average unit cost of the combined desalination and PWM and PWMX projects, calculated as:

(6,250x$6,147 + 5,750x$3,486)/12,000 = **$4,872**.

Straight average unit cost of the combined desalination and PWM and PWMX projects, calculated as:

($6,147 + $3,486)/2 = **$4,817.**

(4) Base unit cost data provided by MPWMD in 2016. No updated unit cost was provided for this project. 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.

(5) Project data updated in 2022. Patrick Breen of MCWD noted that to determine total cost per acre-foot, use the $3,486/acre-foot cost from Pure Water Monterey (which wold be RUWAP as well) and add MCWD O&M and Financing costs which are yet to be determined.

ITEM 3

SEASIDE GROUNDWATER BASIN WATERMASTER

TO: Watermaster Budget & Finance Committee

FROM: Robert Jaques, Technical Program Manager

DATE: August 21, 2023

SUBJECT: Approve Supplemental Cost-Sharing Agreement for Installing a Replacement Monitoring Well for Monitoring Well FO-9 Shallow

- -

RECOMMENDATION: It is recommended that the Budget & Finance Committee approve the *Supplemental Memorandum of Agreement* and forward it to the Board for approval.

BACKGROUND:
As discussed in the 2021 and 2022 Watermaster Annual Reports, monitoring well FO-9 Shallow developed a leak in its casing and had to be destroyed to prevent cross-aquifer contamination. Capital Projects were included in the 2022 and 2023 Monitoring & Management Program (M&MP) Capital Budgets to design and install a replacement well. Data that will be obtained from the replacement well will be useful to MPWMD and MCWD as well as the Watermaster. Efforts in late 2022 and into early 2023 led to the development of a three-party cost-sharing agreement between these entities for the costs to install the replacement well.

At its February 14, 2023 meeting the Watermaster Board approved the attached *Memorandum of Agreement* for the Watermaster, MPWMD, and MCWD to share in the costs of that work. The Agreement was approved by the MPWMD on May 3, 2023.

MCWD said it was willing to approve the Agreement if it was provided assurances by the Watermaster that MCWD would be provided monitoring data obtained from the well by the Watermaster, and that MCWD would be able to access the well to obtain its own water quality and water level data, if it so desired. To provide those assurances, I prepared the attached *Supplemental Memorandum of Agreement* between the Watermaster and MCWD. MCWD approved both the *Memorandum of Agreement* and the *Supplemental Memorandum of Agreement* on July 20, 2023.

DISCUSSION:
Approval of the *Supplemental Memorandum of Agreement* will complete the process of entering into the three-party cost-sharing agreement which will significantly reduce the Watermaster's costs to have the replacement well installed.

ATTACHMENTS:
1. *Memorandum of Agreement*
2. *Supplemental Memorandum of Agreement*

MEMORANDUM OF AGREEMENT

BETWEEN THE SEASIDE BASIN WATERMASTER THE MONTEREY PENINSULA WATER MANAGEMENT DISTRICT AND THE MARINA COAST WATER DISTRICT

TO SHARE IN THE COSTS OF INSTALLING A GROUNDWATER MONITORING WELL

THIS AGREEMENT is made and entered into this _____ day of _____, 2023, by and between the SEASIDE BASIN WATERMASTER, hereinafter referred to as the "WATERMASTER", and the MONTEREY PENINSULA WATER MANAGEMENT DISTRICT, hereinafter referred to as the "DISTRICT", and the MARINA COAST WATER DISTRICT, hereinafter referred to as "MARINA COAST," as follows.

In this Agreement the terms "Party" and "Parties" refer to the WATERMASTER, the DISTRICT, and/or MARINA COAST, either individually or collectively.

RECITALS:

A. Under Case No. M66343, California Superior Court, Monterey County, on March 27, 2006 by entry of Judgment ("Judgment") the WATERMASTER was created. The purpose of the WATERMASTER is to assist the Court in the administration and enforcement of the provisions of the Judgment.

B. As part of carrying out its duties and responsibilities under the Judgement, the WATERMASTER carries out a Monitoring and Management Program (M&MP). Under the M&MP groundwater level and groundwater quality data is collected from a network of monitoring and production wells.

C. One of the monitoring wells, FO-9 Shallow, developed a casing leak and had to be destroyed. The Parties wish to install a new monitoring well to replace FO-9 Shallow.

D. The Parties wish to enter into this Agreement to share in the cost of installing the replacement well.

Terms and Conditions

In consideration of the mutual promises contained herein, the WATERMASTER, the DISTRICT, and MARINA COAST hereby agree to the following terms and conditions:

A. **Work to be performed.** The WATERMASTER will have its consultant, Montgomery & Associates, design and install the replacement monitoring well. The Scope of Work and the estimated costs to perform this work are described in Attachment 1 to this Agreement. The staff of each of the Parties to this Agreement will be invited to attend any key meetings and/or conference calls that are held between the WATERMASTER and its consultant as the work is being performed, in order to enable each of the Parties to stay abreast of the work, raise pertinent questions in a timely manner, and provide input as appropriate.

The Parties hereto understand, as stated in Attachment 1, that it is difficult for Montgomery & Associates to accurately estimate the costs to perform the work and that the costs listed in the table in Exhibit C in Attachment 1 are Montgomery & Associates' best estimates. In the event it is determined, during the course of the work, that the cost to complete the work will be greater than the total cost listed in that table, the Parties agree to meet and confer to reach agreement on a revised cost that will be shared as described in paragraph B, so that the work can be completed. Agreement on said revised cost shall not be binding on any Party unless and until that Party formalizes its agreement to the revised cost in writing to each of the other Parties.

B. **Costs of installing the replacement well to be shared.** The costs to be shared are the Total Costs shown in the bottom row of the table in Exhibit C of Attachment 1. These costs will be shared in the following percentages:

WATERMASTER share = 42.5% (estimated to be $119,763.73)
DISTRICT share = 15% (estimated to be $42,269.55)
MARINA COAST share = 42.5% (estimated to be $119,763.72)

(In the event a revised cost is agreed to, as described in paragraph A, these dollar figures will change in accordance with paragraph A).

C. **Documents to be provided.** Once the Draft Technical Specifications are prepared under Task 2 as described in Attachment 1, the WATERMASTER will provide the DISTRICT and MARINA COAST each with one copy of the Draft Technical Specifications for their review and comment. After receipt of those comments, and any comments the WATERMASTER provides, the Final Technical Specifications will be prepared incorporating any appropriate revisions to address those comments. The DISTRICT and MARINA COAST will each be provided one copy of the Final Technical Specifications that will be used for the installation of the replacement well, and will also be provided one copy of the Well Installation Report referred to in Task 3 of Attachment 1, following completion of installation of the replacement well.

D. **Payment of costs and reimbursement to the WATERMASTER.** The WATERMASTER will make progress payments to Montgomery & Associates as it satisfactorily performs the work described in Attachment 1. After the satisfactory completion of the work, the WATERMASTER will provide to the DISTRICT and to MARINA COAST, copies of the payments it made to Montgomery & Associates. Within 30 days of receiving those documents, the DISTRICT and MARINA COAST will reimburse the WATERMASTER for their percentage shares of those costs, subject to the limits set forth in sections A and B..

E. Term of Agreement. The term of this Agreement shall commence on the date of its execution, and shall continue in effect until the WATERMASTER has been reimbursed as described in paragraph D, , except that paragraphs F, G, H, and I shall continue in effect until the replacement well is destroyed..

F. Hold Harmless. Under this Agreement each of the Parties does hereby agree to indemnify, defend, and hold each of other the Parties and their Board members, officers, employees, agents, and representatives harmless from and against any and all liability, claims, suits, actions, damages, and causes of action of any kind arising out of the performance of the work described in this Agreement.

Notwithstanding any input from DISTRICT and/or MARINA COAST, the WATERMASTER shall have sole responsibility for the design, installation, operation, monitoring, repair, and any future replacement of the replacement monitoring well.

G. Venue. In the event that suit shall be brought by any Party to this Agreement, the Parties agree that venue shall be exclusively vested in the state courts of the County of Monterey, or, if brought in federal court, in the United States District Court handling matters arising in Monterey County. Further, the prevailing Party shall be entitled to reasonable attorney fees and costs.

H. Sharing of Well Data; Operational Changes. The WATERMASTER agrees to provide the other Parties with all monitoring data and other output information from the well and in a timely manner and to consult with the other Parties on any operational and other changes proposed to be made to the well.

I. Notices. Written notice shall be deemed to have been duly served if delivered in person or by mail to the individuals and at the addresses listed below:

A. WATERMASTER:
Technical Program Manager
Seaside Basin Watermaster
P.O. Box 51502
Pacific Grove, CA 93950

B. DISTRICT:
General Manager
Monterey Peninsula Water Management District
5 Harris Court, Building G
Monterey, CA 93940

B. MARINA COAST:
General Manager
Marina Coast Water District
11 Reservation Road
Marina, CA 93933

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement as of the dates shown below.

WATERMASTER

Date: _____ By: _____
(Name) Chair, Board of Directors

DISTRICT

Date: _____ By: _____
David Stoldt, General Manager

MARINA COAST

Date: _____ By: _____
Remleh Scherzinger, General Manager

ATTACHMENT 1

Scope of Work and Cost
to
Design and Install the Replacement Monitoring Well

Notes:

1. The Scope of Work in Exhibit A was taken from Montgomery & Associates' Proposal Letter Dated August 3, 2022
2. The well driller's cost quote dated 02/01/2023 is in Exhibit B.
3. The table showing the total estimated costs is in Exhibit C.

EXHIBIT A

MONTGOMERY & ASSOCIATES
Water Resource Consultants

Groundwater experts since 1984

August 3, 2022

Mr. Bob Jaques
Seaside Watermaster Technical Program Manager
83 Via Encanto
Monterey, CA 93940

SUBJECT: SCOPE AND FEE FOR REPLACEMENT MONITORING WELL FO-9 SHALLOW

Dear Mr. Jaques,

Montgomery & Associates (M&A) is pleased to submit this scope, fee, and schedule proposal to the Seaside Groundwater Basin Watermaster (Watermaster) to provide hydrogeological support and construction management services for a replacement monitoring well for FO-9 shallow. The current FO-9 shallow monitoring well is constructed of 2-inch diameter PVC well casing with a screen intake from 610 to 650-feet below ground surface. This proposal assumes a borehole depth of 660-feet below ground surface (bgs), total well depth of 650-feet bgs, and proposes 2.5-inch Schedule 80 PVC well casing and screen. The deeper depth assumed is because the replacement well may not be located at the location of the original FO-9 shallow monitoring well. The actual location of the well will be determined during Task 2. Schedule 80 PVC is proposed to increase the lifespan of the replacement well.

M&A currently anticipates retaining the support of Maggiora Brothers Drilling (Maggiora) of Watsonville, CA, for well installation and development services. The drilling contractor is subject to change based on project requirements and with prior approval from Watermaster. Martin Feeney will additionally be retained to provide hydrogeological review and monitoring well design recommendations based on his history with Watermaster, as requested.

SCOPE OF WORK

The scope of work includes technical specifications, bidding and contract support, construction management, and reporting. M&A proposes the following tasks to complete the project:

- Task 1 – Project Management
- Task 2 – Technical Specifications
- Task 3 – Construction Management
- Task 4 – Reporting

These tasks are described individually below.

Estimated Drilling Costs
Estimated costs for the construction and development of monitoring well FO-9 shallow are included for budgetary purposes. These costs will be revised based on the selection of the well site and the final details of the technical specifications under Task 2. Costs included herein represent good-faith estimates based on current project understanding and/or assumptions, but may be revised to account for adjustments based on site conditions, well construction details and/or logistics, project duration, changes in labor or material rates, and other such factors. The technical specifications prepared under Task 2 will include a detailed bid schedule and timeline which will be used to refine M&A and Maggiora cost estimates. M&A will

provide revised costs for Task 3 and negotiate any required contract changes prior to beginning well construction activities.

Task 1: Project Management

M&A will provide administrative and budgetary management duties throughout the duration of the project; including but not limited to coordination with Watermaster, attendance at project meetings, assistance with site selection, permitting and providing information needed for Watermaster to obtain approvals from the landowner, budget management, and schedule management.

This task assumes a contract completion date of December 31, 2023. Progress reports will be included with invoice submittals.

Task 2: Technical Specifications

M&A will prepare technical specifications for the FO-9 shallow monitoring well to describe well design features, construction logistics, and installation and development procedures. Technical specifications will be used to gain agreement on the well design, construction logistics, and construction approach. Key components of the well design include borehole drilling, borehole geophysics, well installation, well development, and surface completion.

Task 2 includes preparation of draft technical specifications, one round of comments from Watermaster on the draft, and finalization. Draft and final technical specifications will be transmitted electronically. This task includes costs for one visit to the proposed well site with Watermaster and Maggiora to assess access and other site logistics.

M&A will assist the Watermaster with site selection for the well, including assistance in providing the information needed for Watermaster to obtain any necessary permits and approvals from the landowner. Watermaster is ultimately responsible for obtaining necessary permits.

Task 3: Construction Management

M&A will retain Maggiora to complete well installation and development, and will provide construction management during these activities. M&A will observe and document construction activities, including development of a lithologic log and determination of the final well design based on observations during drilling.

ASSUMPTIONS

- M&A can reasonably rely on the accuracy, timeliness, and completeness of information provided by Watermaster.
- M&A is responsible for tracking, cataloging, and approving submittals. M&A will provide Watermaster copies of all approved contractor submittals.
- Fieldwork will generally be conducted during 12-hour workdays on a standard 5-day workweek.
- Equipment rentals and fieldwork consumable purchases may be required. These may include but are not limited to field notebooks, chip trays and other miscellaneous project supplies. Costs for these items are included herein.
- M&A will assist the Watermaster in coordinating property access with the property owner.

- Prior to the start of drilling activities, M&A will coordinate and oversee subsurface utility locating by a Subtronic Corporation or equally qualified subsurface utility locating company. M&A is specifically not responsible for damages to buried utilities not identified by the property owner, Watermaster, Underground Service Alert of Northern California or the private utility locator.
- M&A and Maggiora will pay for and secure the Monterey County well permit.
- Costs for wellhead surveying (latitude, longitude, and elevation), groundwater sampling and well equipping (datalogger, sample pump, etc.) are not included in this proposal. Costs for these services can be provided upon request.

Construction management costs provided herein are estimated based on anticipated durations for each activity. The following durations are assumed for cost estimating purposes, for a total of approximately 24 field days:

- Utility clearance – 1 day
- Mobilization – 2 days
- Borehole drilling – 13 days
- Well installation – 3 days
- Well development – 3 days
- Well completion and demobilization – 2 days

Actual durations are subject to site conditions, drilling progress, weather and other factors not controlled by M&A. As such, actual costs are subject to increase or decrease based on actual durations. Field oversight costs are based on the Scientist 2 hourly rate, but efforts will be made to use the most cost-efficient, responsible staff level where feasible.

Task 4: Reporting

M&A will prepare a Well Installation Report following completion of site activities. The report will include a description of the work completed, description of the methods and procedures used, results and discussion of drilling and testing activities, conclusions and relevant appendices. A draft well installation report will be prepared in Microsoft Word format for Watermaster comment. Final submittal of this report will include one hardcopy and one PDF copy. The hardcopy report will additionally include long-form print outs of downhole logging (geophysical, caliper, alignment, spinner), a copy of the complete video survey in MP4 format (provided on DVD or flash drive), and one set of drill cutting chip trays.

Maggiora will file the Well Installation Report with the appropriate agency(s) including Monterey County Department of Health.

SCHEDULE

M&A assumes Task 2 will be completed by the end of calendar year 2022, provided the contract is executed by mid-October 2022 and that site selection is also completed during this time period. Well construction would occur in 2023 according to driller availability. The Well Installation Report will be completed within approximately 45 days following the completion of field activities.

EXHIBIT B

MAGGIORA BROS. DRILLING, INC.

DRILLING CONTRACTORS - PUMP SALES & SERVICE

CALIFORNIA CONTRACTOR'S LICENSE NO. 249957

Corporate Office
595 Airport Blvd.
Watsonville, CA 95076

Tel: (831) 724-1338
Tel: (800) 728-1480
Fax: (831) 724-3228

Contractor Bid - 02/01/2023

Montgomery & Associates
1970 Broadway, Suite 225
Oakland, Ca 94612
Attn. Bill DeBoer P.G., C.Hg.

Re: Construction of 2.5" Dia. x 655', PVC cased, monitoring well in Seaside, Ca.

The following is Maggiora Bros. Drilling, Inc. proposal:

1	Mobilization, includes permits	LS	1	$10,000.00	$10,000.00
2	Drill 10.75" bore hole	LF	670	$92.00	$61,640.00
3	E-log	EA	1	$4,500.00	$4,500.00
4	Caliper Log	EA	1	$3,500.00	$3,500.00
5	2.5" Sch 80, FT, Blank Casing F&I	LF	615	$25.00	$15,375.00
6	2.5", Sch80, FT, .030" screen F&I	LF	40	$35.00	$1,400.00
7	F & I Gravel Pack	LF	75	$56.00	$4,200.00
8	F & I sanitary seal	LF	595	$55.00	$32,725.00
9	Well Development - Airlift	HR	8	$550.00	$4,400.00
10	Video well	EA	1	$3,500.00	$3,500.00
11	Disposal of fluids & cuttings	LS	1	$12,000.00	$12,000.00
12	Install flush box and 4' x 4' pad	EA	1	$1,950.00	$1,950.00
13	Standby time	HR	0	$550.00	$0.00

Price: includes labor, equipment, material, taxes, & freight: $155,190.00
Adder, if needed: 12",.250 wall x 60', MS Conductor: $12,480.00

1. Customer is to provide access to site and to mark location of well.
2. Drilling Contractor will USA for drilling. We recommend that the customer have a private locator verify utilities at well location if needed.
3. Customer to provide a source of water for drilling at site and provide a level site for the well drilling equipment.
4. Cuttings and drill fluids to remain on site and are the responsibility of the Customer, unless other provisions have been made.
5. Temp fencing, sound-walls, traffic control, or other BMP's are not included. These can be provided at an additional cost.
6. Drilling Contractor will provide a drilling permit from the County. All other permits are excluded.
7. Test hole destruction, if required, will be $75/ft. If drilling slows to < 8' in two hours, drilling converts to hourly at $550.00

8. Bonding is not included in this proposal, but can be provided on a cost/plus basis.
9. Maggiora Bros. Drilling, Inc. current backlog is such that we may not be able to start the project for 4 to 5 months.
10. Proposal is valid for 30 days.
11. Due to the volatility of material & fuel costs in the current market, Maggiora Bros. Drilling, Inc. reserves the right to adjust pricing based on the actual cost of materials at the time of order.

Maggiora Bros. Drilling, Inc is a Union company; Operating Engineers, Local #3, as well as, a Certified Small Business. (34073)

If you have any questions, feel free to contact us!

Sincerely,

Michael F. Maggiora

EXHIBIT C

		Bill DeBoer	Field/Staff Hydrogeologi	Editing			Subcontractors			M&A	
		Scientist 6	Scientist 2	Technical Editor	Labor		Martin	Maggiora	Subtronic	10%Markup	
	$/hr	$228	$138	$80	Costs	Expenses	Feeney	Bros.	Locating		TOTAL
1	**Project Management**										
	Progress tracking, coordination, meeting and	32	-	-	$ 7,296	$ -	-	-	-	-	$ 7,296
	Task 1 Subtotals	**32**	**0**	**0**	**$ 7,296**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 7,296**
2	**Technical Specifications**										
	Site Visit	14	10	-	$ 4,572	$ 300	-	-	-	$ 30	$ 4,902
	Draft Technical Specifications	18	32	4	$ 8,840	$ -	$ 1,000	-	-	$ 100	$ 9,940
	Final Technical Specifications	-	-	-	$ -	$ -	$ 500	-	-	$ 50	$ 550
	Construction Management cost revisions	4	-	-	$ 912	$ -	-	-	-	$ -	$ 912
	Task 2 Subtotals	**36**	**42**	**4**	**$ 14,324**	**$ 300**	**$ 1,500**	**$ -**	**$ -**	**$ 180**	**$ 16,304**
3	**Construction Management**										
	Subsurface Utility Locating	2	10	-	$ 1,836	$ 200	-	-	$ 1,600	$ 180	$ 3,816
	Mobilization, Drilling, Well Installation*	12	216	-	$ 32,544	$ 4,500	$ 500	$ 145,820	-	$ 15,082	$ 198,446
	Well Development	2	36	-	$ 5,424	$ 750	-	$ 7,900	-	$ 865	$ 14,939
	Wellhead Completion, Demobilization, Waste	2	24	-	$ 3,768	$ 500	-	$ 13,950	-	$ 1,445	$ 19,663
	SUBTOTAL COST				**$ 43,572**	**$ 5,950**	**$ 500**	**$ 167,670**	**$ 1,600**	**$ 17,572**	**$ 236,864**
	Contingency (5%) **				$ 2,179	$ 298	$ 25	$ 8,384	$ 80	$ 879	$ 11,843
	Task 3 Subtotals	**18**	**286**	**0**	**$ 45,751**	**$ 6,248**	**$ 525**	**$ 176,054**	**$ 1,680**	**$ 18,451**	**$ 248,707**
4	**Reporting**										
	Draft Well Installation Report	16	24	2	$ 7,120	$ -	$ 500	-	-	$ 50	$ 7,670
	Final Well Installation Report	4	6	1	$ 1,820	$ -	-	-	-	$ -	$ 1,820
	Task 4 Subtotals	**20**	**30**	**3**	**$ 8,940**	**$ -**	**$ 500**	**$ -**	**$ -**	**$ 50**	**$ 9,490**
	TOTAL HOURS	**106**	**358**	**7**							
	TOTAL COST	**$ 24,168**	**$ 49,404**	**$ 560**	**$ 76,311**	**$ 6,548**	**$ 2,525**	**$ 176,054**	**$ 1,680**	**$ 18,681**	**$ 281,797**

* Includes addition of 12" conductor, if needed.

** To provide for uncertainties in field conditions and cost changes mentioned in well driller's quote Footnote 11.

SUPPLEMENTAL MEMORANDUM OF AGREEMENT

BETWEEN THE SEASIDE BASIN WATERMASTER AND THE MARINA COAST WATER DISTRICT

TO PROVIDE MONITORING DATA AND ACCESS TO A GROUNDWATER MONITORING WELL

THIS SUPPLEMENTAL AGREEMENT is made and entered into this _____ day of _____, 2023, by and between the SEASIDE BASIN WATERMASTER, hereinafter referred to as the "WATERMASTER" and the MARINA COAST WATER DISTRICT, hereinafter referred to as "MARINA COAST," as follows.

In this Supplemental Agreement the terms "Party" and "Parties" refer to the WATERMASTER and/or MARINA COAST, either individually or collectively.

RECITALS:

A. The Parties intend to enter into an agreement titled *"Memorandum of Agreement Between the Seaside Basin Watermaster, the Monterey Peninsula Water Management District, and the Marina Coast Water District, to Share in the Costs of Installing a Groundwater Monitoring Well."* The monitoring well that is the subject of that Agreement is referred to a monitoring well FO-9 Shallow.

B. The WATERMASTER will use this well to obtain water level and water quality data in order to fulfill its *Monitoring and Management Program* commitments. MARINA COAST will be able to use this well to augment its monitoring well network as described in Section 9.4.7 of the *Groundwater Sustainability Plan for the Monterey Subbasin.*

C. MARINA COAST wishes to be assured that in return for its sharing in the costs of installing FO-9 Shallow, it will be provided the monitoring data that WATERMASTER obtains from that well, and also that it will be able to access the well to collect its own monitoring data, should it desire to do so.

D. The Parties wish to enter into this Supplemental Agreement to provide these assurances.

Terms and Conditions

In consideration of the mutual promises contained herein, the WATERMASTER and MARINA COAST hereby agree to the following terms and conditions:

A. Sharing of Well Data. The WATERMASTER agrees to provide to MARINA COAST all monitoring data that it collects from FO-9 Shallow.

B. **Access to Well.** The WATERMASTER hereby grants MARINA COAST the right to access FO-9 Shallow when/if MARINA COAST wishes to obtain its own monitoring data from that well. The location of the well, and the dimensions of the easement within which the well may be accessed by MARINA COAST, are shown in Attachment 1.

C. **Term of Agreement.** The term of this Supplemental Agreement shall commence on the date of execution by MARINA COAST of the cost-sharing Agreement referred to in Recital A, and shall continue in effect until terminated in writing by both Parties.

D. **Venue**. In the event that suit shall be brought by any Party to this Supplemental Agreement, the Parties agree that venue shall be exclusively vested in the state courts of the County of Monterey, or, if brought in federal court, in the United States District Court handling matters arising in Monterey County. Further, the prevailing Party shall be entitled to reasonable attorney fees and costs.

E. **Notices**. Written notice shall be deemed to have been duly served if delivered in person or by mail to the individuals and at the addresses listed below:

A. WATERMASTER: Technical Program Manager
Seaside Basin Watermaster
P.O. Box 51502
Pacific Grove, CA 93950

B. MARINA COAST: General Manager
Marina Coast Water District
11 Reservation Road
Marina, CA 93933

IN WITNESS WHEREOF, the Parties hereto have executed this Supplemental Agreement as of the dates shown below.

WATERMASTER

Date: _____

By: _____
Ian Oglesby, Chair, Board of Directors

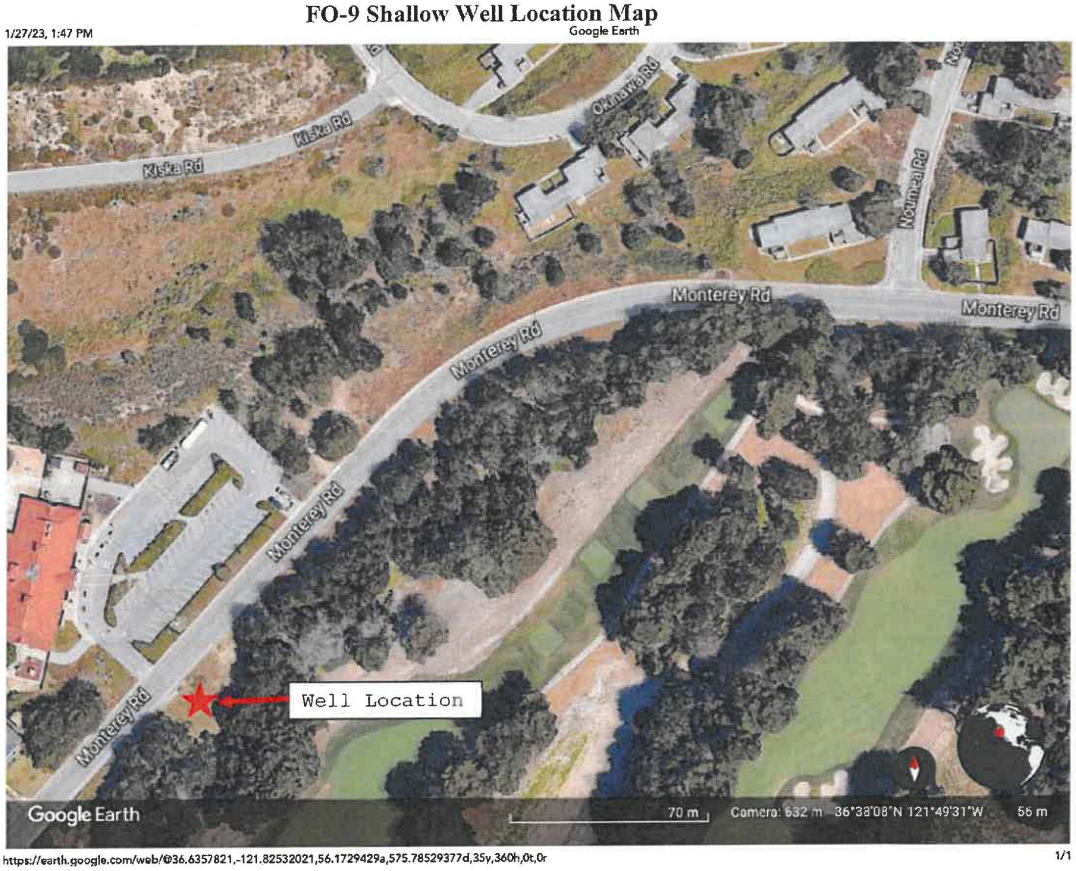
MARINA COAST

Date: 7/20/23

By: _____
Remleh Scherzinger, General Manager

ATTACHMENT 1

FO-9 Shallow Well Location Map



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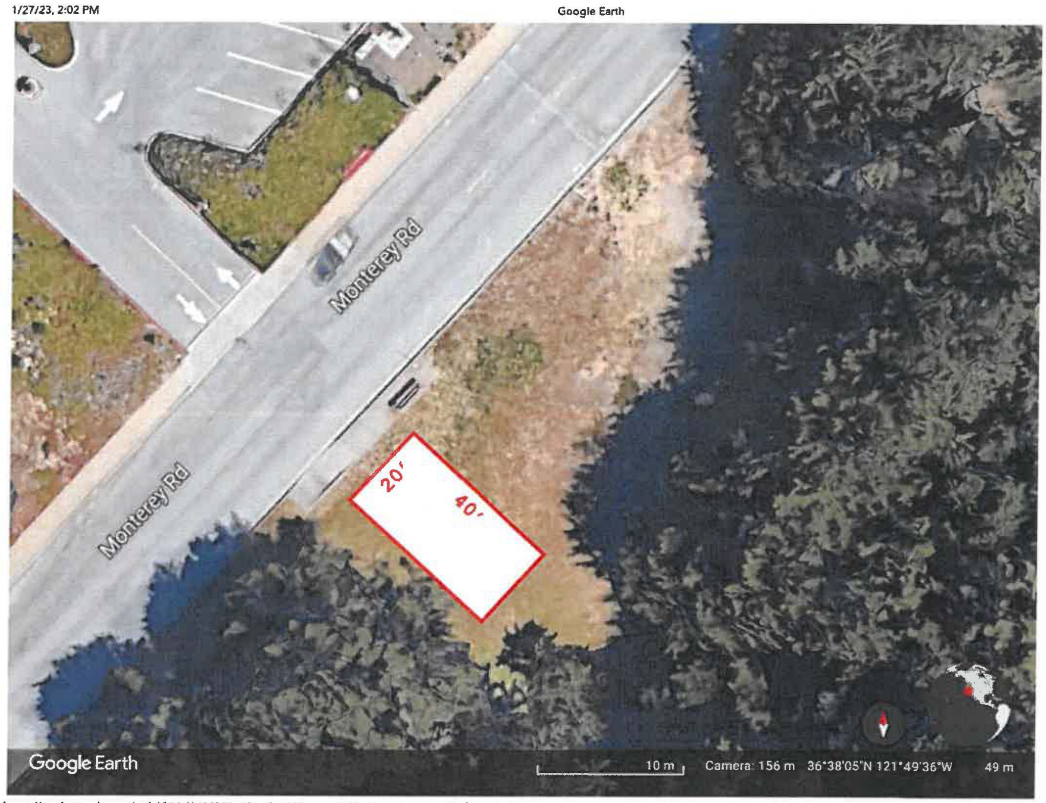
FO-9 Shallow Well Easement Dimensions



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