SEASIDE GROUNDWATER BASIN WATERMASTER
REGULAR MEETING OF THE BOARD OF DIRECTORS

Wednesday, September 1, 2021 – 2:00pm Virtual Meeting
Agenda

YOU MAY ATTEND AND PARTICIPATE IN THE MEETING BY JOINING FROM A PC, MAC, IPAD, IPHONE OR ANDROID DEVICE AT THIS WEB ADDRESS:
https://us02web.zoom.us/j/86288814855?pwd=a0owbXdqRjN5bXNZWkdOWEgrOGdlZz09
Or use the following information in your Zoom screen: Meeting ID: 862 8881 4855 **Password:** 003028
If joining the meeting by phone, dial either: +1 408 638 0968 (San Jose) or **+1 669 900 6833 (San Jose)**

Watermaster Board
Coastal Subarea Landowner – Director Paul Bruno
City of Seaside – Mayor Ian Oglesby
California American Water – Director Christopher Cook
City of Sand City – Mayor Mary Ann Carbone
Monterey Peninsula Water Management District (MPWMD) – Director George Riley
Laguna Seca Subarea Landowner – Director Wesley Leith
City of Monterey – Councilmember Dan Albert
City of Del Rey Oaks – Councilmember John Gaglioti
Monterey County/Monterey County Water Resources Agency – Supervisor Mary Adams, District 5

I. CALL TO ORDER

II. ROLL CALL

III. PUBLIC COMMUNICATIONS
Oral communications are on each meeting agenda in order to provide members of the public an opportunity to address the Watermaster on matters within its jurisdiction. Matters not appearing on the agenda will not receive action at this meeting but may be referred to the Watermaster Administrator or may be set for a future meeting. Presentations will be limited to three minutes or as otherwise established by the Watermaster. In order that the speaker may be identified in the minutes of the meeting, it is helpful if speakers state their names.

IV. REVIEW OF AGENDA
A vote may be taken to add to the agenda an item that arose after the 72-hour posting deadline pursuant to the requirements of Government Code Section 54954.2(b). (A 2/3-majority vote is required).

V. MINUTES: Approve Minutes of Regular Board meeting held May 5, 2021 3

VI. ORAL PRESENTATION – Progress on development of the Monterey Subbasin Groundwater Sustainability Plan – Sarah Hardgrave, Chair, Monterey Subbasin Committee and Robert Jaques, Watermaster Technical Program Manager

VII. CONSENT CALENDAR
A. Consider Approving Summary of Payments made April through July 2021 totaling **$56,059.90** 9
B. Consider Approving Fiscal Year 2021 Financial Reports through July 31, 2021 15
C. Consider Approving new Master Agreement with Monterey Peninsula Water Management District 19

VIII. NEW BUSINESS

IX. OLD BUSINESS

X. INFORMATIONAL REPORTS (No Action Required)

XI. DIRECTOR'S REPORTS

XII. STAFF COMMENTS

XIII. NEXT REGULAR MEETING DATE

A. Consider setting the next regular meeting date for **October 6, 2021- 2:00 P.M.**

XIV. ADJOURNMENT

This agenda was forwarded via e-mail to the City Clerks of Seaside, Monterey, Sand City and Del Rey Oaks; the Clerk of the Monterey Board of Supervisors, the Clerk to the Monterey Peninsula Water Management District; the Clerk at the Monterey County Water Resources Agency, Monterey One Water and the California American Water Company for posting on August 26, 2021 per the Ralph M. Brown Act, Government Code Section 54954.2(a).

SEASIDE GROUNDWATER BASIN WATERMASTER (Watermaster)
REGULAR MEETING MINUTES

Via Zoom Teleconference
May 5, 2021

I. CALL TO ORDER – The meeting was called to order at 2:20 p.m. after technical difficulties.

II. ROLL CALL
Coastal Subarea Landowner – Director Paul Bruno – Chair
City of Seaside – Mayor Ian Oglesby
Laguna Seca Subarea Landowner – Director Wesley Leith
City of Sand City – Mayor Mary Ann Carbone
California American Water (CAW) – Director Christopher Cook
City of Monterey – Council Member Dan Albert – Vice Chair
Monterey Peninsula Water Management District (MPWMD) – Director George Riley
Monterey County/Monterey County Water Resources Agency – Supervisor Mary Adams

Absent: City of Del Rey Oaks – Council Member John Gaglioti

Others Present
Robert Jaques, Watermaster Technical Program Manager (TPM)
Laura Paxton, Watermaster Administrative Officer (AO)
Sarah Hardgrave, Policy Analyst, Office of Supervisor Adams
Ed Ghandour, Security National Guaranty (SNG)
Jonathan Lear, Water Resources Manager, MPWMD
Vibeke Norgaard, Legal Counsel, City of Sand City
Tim O'Halloran, Engineering Manager, CAW
Aiko Yamakawa, Attorney, CAW
Susan Schiavone
Patrick Breen, Marina Coast Water District (MCWD)
Melodie Chrislock, Public Water Now

III. PUBLIC COMMUNICATIONS: None

IV. REVIEW OF AGENDA: Item 9A. was moved next on the agenda.

VIII. NEW BUSINESS:

A. Consider Action in Response to Water Quality Sampling Results from Security National Guaranty (SNG) Well

Mr. Ed Ghandour, SNG stated he is already responding to detected high chloride levels (8,660 mg/L) from recent sampling of SNG well water and asked that this item be tabled. The well is scheduled to be videoed and assessed by a pump company and hydrologist and repaired as needed, conceivably within the next 60 days. The board concurred to receive the item as informational and await Mr. Ghandour reporting back on the outcome.

V. APPROVAL OF MINUTES: It was moved by Council Member Albert and seconded by Mayor Carbone to approve as presented the minutes of the Regular Board meeting held February 3, 2021. Director Cook – Aye; Council Member Albert – Aye; Mayor Carbone – Aye; Supervisor Adams – Aye; Director Riley – Aye; Director Bruno – Aye; Director Leith – Aye; Mayor Oglesby – Aye. Motion carried.

VI. CONSENT CALENDAR

A. Consider Approving Summary of Payments made January through March 2021 totaling **$91,921.65**

B. Consider Approving Amendment No. 1 to Martin Feeney RFS No. 2021-01, and transfer $10,338.50 from the Monitoring and Management—Operations Fund Contingency line-item to Collect Quarterly Water Quality Samples and Perform Sentinel Well Induction Logging Subtask I.2.b.3 to cover the cost of this Amendment

C. Consider Approving a budget transfer of $35,000 from Monitoring and Management—Operations Fund Basin Management Subtask I.3.a.3. line-item to Technical Program Manager line-item

D. Consider Approving Fiscal Year 2020 Financial Reports through December 31, 2020

E. Consider Approving Fiscal Year 2021 Financial Reports through March 31, 2021

Supervisor Adams requested Item C. be pulled for comment; Director Riley requested Item E. be pulled for question.

It was moved by Director Riley and seconded by Supervisor Adams to approve consent calendar items A, B. and D as presented. Director Cook – Aye; Director Leith – Aye Council Member Albert – Aye; Mayor Oglesby – Aye; Mayor Carbone – Aye; Supervisor Adams – Aye; Director Riley – Aye; Director Bruno – Aye. Motion carried.

Supervisor Adams commented on Item C., that her chief of staff Sarah Hardgrave is involved with the Monterey Subbasin Groundwater Sustainability Plan (GSP) as is Mr. Jaques. Perhaps the Watermaster Board should discuss areas of needed collaboration between the Seaside Basin and the Monterey Subbasin in the near term, such as Hardgrave and Jaques partnering to develop a presentation on the Coral de Tierra management area. Director Cook supported Supervisor Adams' suggestion to receive presentations regarding surrounding basins, as Mr. Jaques feels is appropriate. Director Bruno noted the April 27, 2021 Budget and Finance Committee meeting discussion on Mr. Jaques' heavy workload and the need to be mindful of not overstressing him.

Staff responded to Director Riley's inquiry regarding Item E. whether the Total Available of $352,763 at the bottom of the Operations Fund Report is a comparatively high balance, stating it is somewhat higher than in past periods but not significantly.

It was moved by Director Riley and seconded by Supervisor Adams to approve consent calendar items C. and E. as presented. Director Cook – Aye; Director Leith – Aye Council Member Albert – Aye; Mayor Oglesby – Aye; Mayor Carbone – Aye; Supervisor Adams – Aye; Director Riley – Aye; Director Bruno – Aye. Motion carried.

VII. ORAL PRESENTATION: None

VIII. OLD BUSINESS: None

A. Consider Action Regarding MPWMD Water Supply Committee Meeting Agenda Items 1) Ability of Pure Water Monterey to provide protective well levels in the Seaside Basin, and 2) Update on Seaside Well FO-09 and seawater intrusion. Watermaster Board Members Riley and Adams are on the MPWMD Water Supply Committee.

Mr. Jaques reviewed his transmittal on this item. Supervisor Adams foresaw the need to use all replenishment water available from any and all of the water supply projects to be able to restore Basin health. Whatever approach is taken, clarity is needed on the availability of replenishment water from any of the projects. The Decision has not provided the guidance that the Sustainable Groundwater Management Act now provides on achieving sustainability. She felt that now is an opportune time, as the Monterey Subbasin Groundwater Sustainability Plan is developed, to garner direction on achieving protective groundwater levels in the Seaside Basin.

Council Member Albert stressed the need to precisely calculate protective groundwater levels, and the amount of replenishment water that needs to be added annually to the Basin to achieve them, and whether MPWMD uses that calculated amount in its dealings. Mr. Jaques responded that protective groundwater levels were determined in 2013 by Watermaster's hydrogeologic consultant, HydroMetrics, and that an update is planned per board direction. He knew of no other protective level information that MPWMD uses besides what is in the HydroMetrics report.

Director Cook questioned "excess water" from the Pure Water Monterey (PWM) and PWM Expansion (PWMX) projects, as CAW would be purchasing all of the anticipated water supply from those projects leaving no excess. He saw the Watermaster role as not one of purchasing, but of accounting for the disposition of the CAW-purchased water, such as into what reserves water supply over demand would be stored, and tracking CAW over-pumping payback. He felt Watermaster does not need to consider financing replenishment water at this point.

Director Bruno stated that replenishment water from any source remains years away and Watermaster has no financing authority. He felt that determining realistic Natural Safe Yield and concomitant production levels were Basin protection measures that could be addressed now.

Susan Schiavone, a member of the public stated her desire that the PWMX be fast-tracked for completion prior to 2023 using federal grant funding assistance if available. This should be combined with a concrete plan with Basin water users to reduce draw to address overdraft of the safe operating yield, and continued research into intrusion [high chloride level] occurrences. She expressed that the thought of losing the Basin to seawater intrusion is heartbreaking to her.

Director Riley urged substantial policy-related discussion by the Watermaster board on a funding mechanism for replenishing the over-drafted basin to protective groundwater elevations. He requested the issue be placed on the next board meeting agenda, with discussion of his criticisms of the Replenishment Fund calculations – the inconsistent weighting of project costs in

calculating the Replenishment Assessment Unit Cost, and the need to replace estimated costs with real costs of the PWM project since it is now operational. Director Riley felt the Replenishment Fund should be completely restructured with an aim at purchasing excess water that becomes available. Chair Bruno stated the Replenishment Fund is structured according to the requirements of the Decision, is a calculation of the amount of wet water to be returned to the Basin by Standard Producers that have over-pumped designated yields, and has no actual monetary basis; attempting to redesign the fund to attribute replenishment funding viability would not be time productively spent by the board, especially since there is no replenishment water source available to purchase for years. Director Cook felt the topic was discussed in depth at the last Budget and Finance Committee meeting and that other topics take precedence at this time.

Regarding the second item the Water Supply Committee considered, Supervisor Adams noted the monitoring wells were the only wells in the boundary area of the Monterey Subbasin/Seaside Basin, and are on the edge of the seawater intrusion line of the 180/400' aquifer. Both the Watermaster and Marina Coast Water District (MCWD) through its Groundwater Sustainability Plan (GSP) definitely need continued monitoring in the area. It seems continued monitoring would be important to MPWMD also with regard to the Aquifer Storage and Recovery and PWM projects. Even though the basins may not be threatened by seawater intrusion in the near term, the nearby water projects make monitoring necessary. Supervisor Adams strongly encouraged staff to work cooperatively with both MPWMD and MCWD to continue monitoring in this area. Director Cook supported collaboration with all surrounding basin management efforts.

It was moved by Supervisor Adams and seconded by Council Member Albert for staff to send a formal letter to Marina Coast Water District requesting their participation in monitoring the boundary areas between the Seaside Basin and the Marina Ord management area of the Monterey Subbasin; and encourage collaboration with Monterey Peninsula Water Management District for a workable solution to the need for continued monitoring. Director Cook – Aye; Director Leith – Aye; Council Member Albert – Aye; Mayor Carbone – Aye; Supervisor Adams – Aye; Director Riley – Aye; Director Bruno – Aye. Motion carried. (Mayor Oglesby lost connection to the meeting during the vote.)

B. Consider Board Actions Concerning Possible Detection of Seawater Intrusion (SWI) in Monitoring Wells FO-9 and FO-10 Shallow

Mr. Jaques reviewed his transmittal on this item and responded to Director Riley's questions regarding high chloride levels in FO-09 well and groundwater flow direction and velocity, and Director Cook's questions regarding FO-10 chloride levels and data integrity. Director Riley requested implementation costs be assigned to contingency actions contained in Section 4 of the Seawater Intrusion Response Plan.

Director Cook stated CAW is planning redundancy for larger production wells, especially along General Jim Moore Boulevard. Redundancy gives more options for pumping re-distribution, especially should it be needed in the event of seawater intrusion.

Supervisor Adams stressed the need for the board to consider a regional approach to the water supply issue for not only the Seaside Basin and the Peninsula, but for Marina and northern Salinas Valley also. This could be work closely coordinated with additional analysis and recommendations coming from the Monterey Subbasin GSP, MCWD Groundwater Sustainability Agency (GSA), and Salinas Valley Basin GSA. It is time to look globally instead of myopically. She suggested a Gantt chart of actions by the Watermaster coordinated and timed with the efforts of the work coming out of the SVBGSA.

Director Bruno did not agree that negotiations with CAW/MPWMD/M1W to establish project replenishment water terms and conditions should include the Watermaster board, but should be worked out amongst the three agencies.

It was moved by Supervisor Adams and seconded by Council Member Albert to:

1. **Start Board-level negotiations with both California American Water (Cal Am) and MPWMD/M1W to establish terms and conditions under which replenishment water could be provided by the Desalination Project or the PWM Expansion Project, respectively.**
2. **Direct Staff to:**
   a. **Determine how the cost to install a new monitoring well to replace the existing Monitoring Well FO-9 Shallow can be funded.**
   b. **Obtain scope-of-work and cost proposals from Montgomery & Associates to:**
      i. **Update the 2013 groundwater modeling to provide a more accurate indication of current replenishment water needs.**
      ii. **Update the SIRP to provide site-specific indicators of SWI (e.g., chloride threshold levels) for additional wells.**
      iii. **Develop flow direction and flow velocity maps.**
   c. **Research financial consultants that could develop a plan to finance the cost of obtaining such replenishment water for the Basin and provide recommendations to the Board.**

Mayor Oglesby – Aye	**Director Bruno – No**
Director Riley – Aye	**Mayor Carbone – No**
Supervisor Adams – Aye	**Director Cook – No**
Council Member Albert – Aye	**Director Leith – Abstain**

Motion carried.

IX. NEW BUSINESS:

A. Consider Action in Response to Water Quality Sampling Results from Security National Guarantee (see beginning of meeting).

B. Consider Action Regarding MPWMD Contracting Issues

Ms. Paxton reviewed the item transmittal. Mr. Jaques responded in the affirmative to Director Riley's inquiry whether there are potential replacement consultants to perform MPWMD services to Watermaster. Director Bruno felt it important for Watermaster to review options although continuing with MPWMD would be more efficient. Supervisor Adams felt it reasonable for MPWMD to update the 2008 Watermaster contract and that Watermaster should negotiate to retain MPWMD services.

It was moved by Director Riley and seconded by Director Oglesby to direct staff to concurrently seek to (1) Negotiate a resolution to MPWMD's issues of concern regarding their contract with the Watermaster, and (2) Investigate the potential benefit of having another party take over MPWMD's Monitoring and Management Program work for the Watermaster. Director Cook – Aye; Mayor Oglesby – Aye; Council Member Albert – Aye; Mayor Carbone – Aye; Supervisor Adams – Aye; Director Riley – Aye; Director Bruno – Aye; Director Leith – Aye. Motion carried.

X. INFORMATIONAL REPORTS:

A. Minutes from the Technical Advisory Committee (TAC) meetings held February 10 and March 10, 2021, and draft minutes from the meeting held April 14, 2021

B. Watermaster Report of Production of the Seaside second quarter Water Year 2021 (January 1, 2021 – March 31, 2021)

C. Watermaster correspondence to Local Agency Formation Commission (LAFCO)

D. Report on the MPWMD LAFCO Filing and Discussion with the General Counsel of MPWMD to the Seaside Basin Watermaster

XI. DIRECTOR'S REPORTS: Director Bruno, Supervisor Adams, and Council Member Albert were in favor of resuming in-person meetings as Covid restrictions are lifted, possibly by the July board meeting.

XII. STAFF COMMENTS: It will be determined after the May 12, 2021 TAC meeting whether a June Watermaster board meeting is necessary.

XIII. NEXT MEETING DATE: The next meeting of the Watermaster board is scheduled for Wednesday, June 2, 2021.

XIV. There being no further business, Chair Bruno adjourned the meeting at 3:43p.m.

TO: Board of Directors
FROM: Laura Paxton, AO
DATE: September 1, 2021
SUBJECT: Summary of Payments made from April through July 2021

RECOMMENDATIONS:

Consider approving payment of bills submitted and authorized to be paid April - July 2021

Summary of Payments Made April 2021

Christopher Campbell, Baker Manock & Jensen (WM Legal Counsel) 2.2 300 **660.00**
April 1, 2021 through April 30, 2021
Review with WM staff LAFCO response to WM letter sent re: MPWMD application. E-mail discussion with Laura about how to address LAFCO to ensure that the Watermaster maintains control in the basin as required by the Judgment. Review of the LAFCO Process and the discussion with David Larado and first draft of a memo to the Watermaster and e-mail same to AO Paxton for review and comment. AO Paxton email to approve the revised memo to the Watermaster concerning the MPWMD application to LAFCO.

Paxton Associates (Administrative Officer (AO))
March 26, 2021 through April 25, 2021 36.5 **3,650.00**
Responded to telephone inquiries, e-mail, and other correspondence as needed regarding the Seaside Basin. Arrange 4/27 Budget & Finance Committee meeting. Review LAFCO response to comment letter w/WM legal counsel. Feeney budget adjustment for FO-09 work. Draft agenda for 5/5 board meeting. Research checks paid to WM not deposited by Seaside. Draft budget transfer for TPM additional costs for FO-09 work. Post 2nd qtr production & followup on non-reporters. Post request/post PWM reserve account data. Draft agenda & transmittals for 4/27 BF Committee meeting. Prepare summary of pymts and financials Jan - Mar 21. Prepare Budget & Finance Com mtg pkt & distribute. Routinely picked up mail from PO Box; reconciled accounts to the City of Seaside Watermaster accounts; prepared financial reports; processed invoices; reviewed and posted items to web site.

Robert Jaques (Technical Program Manager)
April 1, 2021 through April 30, 2021 41 **6,150.00**
Responded to emails, telephone inquiries, and other correspondence on a variety of Watermaster issues. Prepare and send background into to G. Riley and M. Adams for their 5/5/21 MPWMD Water Supply Meeting. Start work on RFS amendments for M&A and MPWMD for TAC agenda; review report from M. Feeney on FO-9 and FO-10 induction logging and telecon with him re: same. Review/approve M&A invoice; resend TAC agenda packet to Seaside reps. Telecon with Jim Johnson, Monterey Herald reporter, to answer his questions about SWI possibly being detected. Review MPWMD Cross-aquifer contamination study from 2012. Review/approve Todd Groundwater invoice. Review DWR AEM info and send request for geophysical data to J. Lear and M. Feeney. Research MoCo Well Regulations and Feeney info re: SNG well. Review of 2019 MCWD AEM report. Send golf course reclaimed water report to W. Leith and S. Ottmar. Review materials from MPWMD re: contract cancellation issues. Prepare board agenda transmittals. Prepare TAC agenda packet. Prep for/attend 4/14 TAC meeting. Prep for/attend 4/27 Budget & Finance Committee meeting. Prepare minutes of 4/14 TAC meeting. Prep for/attend SVBGSA/SWIG/Monterey Subbasin GSP meetings.

Montgomery & Associates (Technical Consultant)

April 1, 2021 - April 30, 2021			
RFS 2020-01 General Hydrogeologic Consulting	1.5	215	**322.50**
	0.5	195	**97.50**
			420.00

Professional services: respond to B. Jaques questions regarding developing flow direction/velocity vector maps to show potential travel of sea water intrusion; respond to B. Jaques request on data logger processing costs; and participate in April TAC meeting.

Todd Groundwater (Hydrogeological Peer Review)	1.3	240	**300.00**
April 1, 2021 through April 30, 2021	0.3	125	**31.25**
Professional services in connection with groundwater modeling peer review.			**331.25**

Total for April 2021	**$**	**11,211.25**

Summary of Payments Made May 2021

Paxton Associates (Administrative Officer (AO))

April 26, 2021 through May 25, 2021	55.0	**5,500.00**

Responded to telephone inquiries, e-mail, and other correspondence as needed regarding the Seaside Basin. Reconcile WM to Seaside books & send corrections needed. 2021 financials thru 3/31; LAFCO study session; deposit level/quality pymts at City of Seaside. Prepare for and attend Budget and Finance Meeting. Prepare board packet for 5/5 board meeting and distribute. Attend 5/5 board meeting and prepare minutes. Followup on DBO data collection contract and resolve Todd Sheller DBO misrouted payment. Review packet for 2/10 Contact Evan & Doughtry regarding Watermaster services. Prep for and attend 5/12 TAC Meeting. Draft letter to MPWMD regarding FO-09. Finalize Bruno's letters to MCWD and MPWMD. Prep for and attend 5/14 SVGWBLGSA Advisory Committee meeting. Prep for and attend SVBGSA Advisory Committee meeting. Replenishment letter to recipients. Begin minutes of 5/5 board mtg; DBO collection sevices check to Seaside. Routinely picked up mail from PO Box; reconciled accounts to the City of Seaside Watermaster accounts; prepared financial reports; processed invoices; reviewed and posted items to web site.

Robert Jaques (Technical Program Manager)

May 1, 2021 through May 31, 2021	40.5		**6,075.00**

Responded to emails, telephone inquiries, and other correspondence on a variety of Watermaster issues. Finish review of 2012 Cross-Aquifer Contamination Study. Telecon with M. Feeney re: FO-9 and PCA-West well issues. Telecon with T. Voss re: crossaquifer contamination issues. Review the seawater extraction wells portion of the SVBGSA 180/400-foot aquifer GSP. Prepare monthly meetings summary for distribution to Board; discuss Board meeting follow-up items with L. Paxton. Prepare and submit comments on Draft Chapter 7 of the Monterey Subbasin GSP. Review of well completion records to send to DWR for their use in doing the AEM work for the Monterey Subbasin. Telecon with J. Lear and T. Voss re: SNG well issues; work on compiling well completion records to send to DWR for their use in doing the AEM work for the Monterey Subbasin. Telecon with T. Voss re: monitoring program issues. Zoom discussion with P. Benito and G. King of M&A re: flow vector and replenishment modeling issues. Review and suggest edits to draft letter from P. Bruno to MPWMD, M1W, and Cal Am regarding replenishment water. Send scope and cost proposal requests to M&A for replenishment and vector analysis work. Review/approve L. Paxton April invoice.

Montgomery & Associates (Technical Consultant)	1.0	260	**260.00**
May 1, 2021 through May 31, 2021	3.5	215	**752.50**
RFS 2020-01 General Hydrogeologic Consulting	2.5	195	**487.50**
			1,500.00

Martin B. Feeney, PG, CHg - Consulting Hydrogeologist	12.0	155	**1,860.00**
May 2021	11.0	195	**2,145.00**
RFS 2021-06	Reimbursements		**5,475.40**
Induction/Resistivity Logging of Sentinel Wells. Data review and presentation.			**9,480.40**

	Total for May 2021	**$**	**22,555.40**

Summary of Payments Made June 2021

Christopher Campbell, Baker Manock & Jensen (WM Legal Counsel)	0.8	300	**$ 240.00**
Jun1 1, 2021 through June 30, 2021			
the memo to the Board concerning the LAFCO process to assist a of CAL AM by the MPWMD.			**240.00**

Paxton Associates (Administrative Officer (AO))

May 26, 2021 through June 25, 2021	30.5		**3,050.00**

Responded to telephone inquiries, e-mail, and other correspondence as needed regarding the Seaside Basin. Complete 5/5 Board meeting minutes. Vibeke Norgaard Teleconference. In person meeting followup with M1W. TAC packet review and attend TAC meeting. Prepare invoices for payment. Email Lear re: new WM contract. Cancel July 7 Board meeting. Notification to MA that their invoices will be processes one month later. Review SVBGSA advisory meeting packet.New Contract costs for MPWMD services. Review SVBGSA advisory committee agenda packet. Review SVBGSA advisory committee meeting packet and attend meeting. Recieve invoices. Notes of 6/17 advisory committee meeting to Jaques. Review MPWMD new master agreement. Confer with Jaques re: MPWMD agreement. Routinely picked up mail from PO Box; reconciled accounts to the City of Seaside Watermaster accounts; prepared financial reports; processed invoices; reviewed and posted

Robert Jaques (Technical Program Manager)

June 1, 2021 through June 30, 2021	31		**4,650.00**

Responded to emails, telephone inquiries, and other correspondence on a variety of Watermaster issues. Review scope/cost proposal from P. Benito of M&A re: flow velocity and vector modeling and send questions to him. Review/edit revised proposal from P. Benito. Telecon w/ C. Cook re: his questions about replenishment water. Work on M&MP for 2022. Review/edit Draft Master Agreement from MPWMD. telecon w/ D. Williams re: Sustainable Yield issues. analysis of MPWMD M&MP Cost Estimate for 2022 and update Table 2 from existing M&MP RFS with MPWMD. Work on preparing Excel version of MPWMD's pdf version of their Cost Estimate; telecon w/ G. King re: replenishment

Todd Groundwater (Hydrogeological Peer Review)	1.3	240	**300.00**
June 1, 2021 through June 30, 2021	0.3	125	**31.25**
Professional services in connection with groundwater modeling peer review.			**331.25**
Monterey Peninsula Water Management District	0.0	149	-
July through September 2020 RFS 2020-01	14.0	62	**868.00**
		Direct costs	**525.00**
Monitoring July- September 2020			**1,393.00**
Monitoring July- September 2020 additional amount			**494.00**
			1,887.00
		Total for June 2021	**$ 10,158.25**

Summary of Payments Made July 2021

Paxton Associates (Administrative Officer (AO))

June 26, 2021 through July 25, 2021	26		**2,600.00**

Responded to telephone inquiries, e-mail, and other correspondence as needed regarding the Seaside Basin. 6/29 Replenishment meeting. Recieve invoices. schedule for Replenishment meeting. Process invoices for submission to Seaside. Determine MPWMD back up and additional charges. Revisions to MPWMD master agreement. Suggested MA edits to lear. Prep for and attend TAC meeting. Prep for and attend SVBGSA advisory committee meeting. Cancel 8/4 Board meeting. SNG well update. Prep for and attend replenishment meeting. post production and levels. Routinely picked up mail from PO Box; reconciled accounts to the City of Seaside Watermaster accounts; prepared financial reports; processed invoices; reviewed and posted items to web site.

Robert Jaques (Technical Program Manager)

July 1, 2021 through July 31, 2021	46.5		**6,975.00**

Responded to emails, telephone inquiries, and other correspondence on a variety of Watermaster issues. Work on edits to Replenishment Water Modeling Scope of Work. review of Draft Chapter 8 of the Monterey Subbasin GSP. Prepare and submit comments on Draft Chapter 8 of the Monterey Subbasin GSP; telecon with Ed Ghandour re: SNG well issues. Prepare draft summary of telecon and send to Ed Ghandour for his review/edits. Work on 2022 consultant contracts. prep. for and attend Replenishment Water meeting w/ MPWMD, M1W, and Cal Am at M1W offices; draft Scope of Work for MPWMD's 2022 M&MP contract using new Master Agreement format. Review SVBGSA Monterey Subbasin GSP agenda packet. Review/approve M&A invoice. Discuss Sustainable Yield vs. NSY issues w/ L. Paxton. work on 2022 M&MP Budgets. work on M&A RFS No. 2021-01 Amendment No. 2 for Replenishment Water Modeling update.

Montgomery & Associates (Technical Consultant)	2.0	260	**520.00**
June 1, 2021 through June 31, 2021	4.5	215	**967.50**
RFS 2020-01 General Hydrogeologic Consulting.	5.5	195	**1,072.50**
			2,560.00

Professional services: respond to questions from B. Jaques regarding the benefits of modeling sustainable yield, natural safe yield, and protective groundwater elevations; call B. Jaques regarding sustainable yield analysis and cost proposal for recharge modeling; review SIRP to prepare SIRP chloride threshold update scope of work; prepare Replenishment modeling scope; respond to B. Jaques emails on sustainable yield and protective elevations; correspond with R. Knight on potential AEM work in Monterey Bay; review G. Yates response on sustainable yield and protective elevations; review 2013 Replenishment Modeling report; communicate with R. Knight on AEM opportunities; call with B. Jaques on approach for Replenishment modeling; get update on predictive model status and time period; develop revised scope of work and cost estimate for travel time estimates and flow paths in both Paso Robles and Santa Margarita aquifers and communicate with B. Jaques on proposed revisions to travel time scope of work; incorporate revisions to travel time scope of work and cost tables; communicate/coordinate with Salinas Valley GSP modeling team on questions/challenges for incorporating Seaside model future scenario results into EKI Monterey subbasin model and also info on model layering; meet with EKI to review/discuss future boundary conditions data needs and approach for Monterey Subbasin Model; and attend TAC meeting and respond to questions

Total for July 2021	**$**	**12,135.00**
Grand Total April - July 2021	**$**	**56,059.90**

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Seaside Groundwater Basin Watermaster

Budget vs. Actual Administrative Fund

Fiscal Year (January 1 - December 31, 2021)
Balance through July 31, 2021

	2021 Adopted Budget	Contract Amount	Year to Date Revenue / Expenses
Available Balances & Assessments			
Dedicated Reserve	-		-
FY (Rollover)	38,000.00		54,000.00
Admin Assessments	62,000.00		62,000.00
Available	**100,000.00**		**116,000.00**
Expenses			
Contract Staff	50,000.00	50,000.00	28,200.00
Legal counsel	25,000.00	25,000.00	8,487.00
Filing fees and postage			-
Total Expenses	**75,000.00**	**75,000.00**	**36,687.00**
Total Available	25,000.00		
Dedicated Reserve	25,000.00		25,000.00
Net Available	**-**		**54,313.00**

Seaside Groundwater Basin Watermaster

Budget vs. Actual Monitoring & Management - Operations Fund

Fiscal Year (January 1 - December 31, 2021)

Balance through July 31, 2021

	2021 Adopted Budget		2021 Adopted Budget Amended 05/05/21*		Contract Encumbrance	Year to Date Revenue/Expenses
Available Balances & Assessments						
Operations Fund Assessment	$ 220,000.00		$ 220,000.00		$ -	$ 220,000.00
Pass Through					3,915.00	-
FY 2020 Rollover	64,069.00		64,069.00		-	180,964.60
Total Available	**$ 284,069.00**		**$ 284,069.00**		**$ 3,915.00**	**$ 400,964.60**
Appropriations & Expenses						
GENERAL						
Technical Project Manager*	$ 60,000.00	*	$ 95,000.00	*	$ 95,000.00	$ 51,075.00
Contingency @ 10% (not including TPM)	20,370.00	*	10,032.00		-	
Total General	**$ 80,370.00**		**$ 105,032.00**		**$ 95,000.00**	**$ 51,075.00**
CONSULTANTS (Montgomery; Web Site Database)						
Program Administration	$ 17,320.00		$ 21,320.00		$ 19,720.00	$ 14,167.50
Production/Lvl/Qlty Monitoring	2,400.00		2,400.00			
Basin Management	80,000.00	*	41,000.00			
Seawater Intrusion Analysis Report	26,310.00		26,310.00		26,310.00	-
Total Consultants	**$ 126,030.00**		**$ 91,030.00**		**$ 46,030.00**	**$ 14,167.50**
MPWMD						
Production/Lvl/Qlty Monitoring	$ 49,926.00		$ 49,926.00		49,926.00	-
Pass Through 2021					3,915.00	-
Basin Management	-		-			-
Seawater Intrusion	1,192.00		1,192.00		1,192.00	-
Direct Costs	-		-		-	-
Total MPWMD	**$ 51,118.00**		**$ 51,118.00**		**$ 55,033.00**	**$ -**
CONTRACTOR (Martin Feeney)						
Hydrogeologic Consulting Services	$ 4,000.00		$ 4,000.00		4,000.00	-
Production/Lvl/Qlty Monitoring	18,551.00	*	28,889.50	*	28,839.00	19,778.30
	$ 22,551.00		**$ 32,889.50**		**$ 32,839.00**	**$ 19,778.30**
CONTRACTOR (Todd Groundwater)						
Hydrogeologic Consulting Services	**$ 4,000.00**		**$ 4,000.00**		**$ 4,000.00**	1,653.75
Total Appropriations & Expenses	**$ 284,069.00**		**$ 284,069.50**		**$ 232,902.00**	**$ 86,674.55**
Total Available	**-**		**(0.50)**			**314,290.05**

Seaside Groundwater Basin Watermaster — **ITEM VI.B.**

Replenishment Fund — 12/2/20

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

Balance through October 31, 2020

Replenishment Fund	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Assessments:	WY 05/06	WY 06/07	WY 07/08	WY 08/09	WY 09/10	WY 10/11	WY 11/12	WY 12/13	WY 13/14
Unit Cost:	$1,132 / $283	$1,132 / $283	$2,485 / 621.25	$3,040 / $760	$2,780 / $695	$2,780 / $695	$2,780 / $695	$2,780 / $695	$675.50
Cal-Am Water Balance Forward	**$ -**	**$ 1,641,004**	**$ 4,226,710**	**$ (2,871,690)**	**$ (2,839,939)**	**$ (3,822,219)**	**$ (6,060,164)**	**$ (8,735,671)**	**$ (6,173,771)**
Cal-Am Water Production	*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*
Cal-Am Water NSY Over-Production (AF)	*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*
Exceeding Natural Safe Yield Considering Alternative Producers	2,106,652	2,565,471	5,199,014	3,773,464	4,112,933	3,187,854	2,280,943	2,380,842	2,790,539
Operating Yield Overproduction Replenishment	-	20,235	8,511	-	-	-	154,963	181,057	281,012
Total California American	**$ 2,106,652**	**$ 2,585,706**	**$ 5,207,525**	**$ 3,773,464**	**$ 4,112,933**	**$ 3,187,854**	**$ 2,435,907**	**$ 2,561,899**	**$ 3,071,550**
CAW Credit Against Assessment	(465,648)		(12,305,924)	$ (3,741,714)	(5,095,213)	(5,425,799)	(5,111,413)	-	-
CAW Unpaid Balance	***$ 1,641,004***	***$ 4,226,710***	***(2,871,690)***	***$ (2,839,939)***	***$ (3,822,219)***	***$ (6,060,164)***	***$ (8,735,671)***	***$ (6,173,771)***	***$ (3,102,221)***
City of Seaside Balance Forward	**$ -**	**$ 243,294**	**$ 426,165**	**$ 1,024,272**	**$ 1,619,973**	**$ 891,509**	**$ (110,014)**	**$ (773,813)**	**$ (1,575,876)**
City of Seaside Municipal Production	*332.00*	*287.70*	*294.20*	*293.44*	*282.87*	*240.68*	*233.72*	*257.73*	*223.64*
City of Seaside NSY Over-Production (AF)	*194.07*	*153.78*	*161.99*	*153.06*	*113.21*	*50.84*	*58.82*	*85.17*	*52.71*
Exceeding Natural Safe Yield Considering Alternative Producers	219,689	174,082	402,540	465,300	314,721	141,335	163,509	236,782	142,410
Operating Yield Overproduction Replenishment	12,622	85	4,225	16,522	20,690	-	1,689	27,007	3,222
Total Municipal	232,310	174,167	406,764	481,823	335,412	141,335	165,198	263,788	145,631
City of Seaside - Golf Courses									
Exceeding Natural Safe Yield - Alternative Producer	-	-	131,705	69,701	-	-	-	-	-
Operating Yield Overproduction Replenishment	-	-	32,926	17,427	-	-	-	-	-
Total Golf Courses	-	-	164,631	87,128	-	-	-	-	-
Total City of Seaside*	**$ 232,310**	**$ 174,167**	**$ 571,395**	**$ 568,951**	**$ 335,412**	**$ 141,335**	**$ 165,198**	**$ 263,788**	**$ 145,631**
City of Seaside Late Payment 5%	10,984	8,704	26,712	26,750	15,737				
In-lieu Credit Against Assessment	-		-	$ -	(1,079,613)	(1,142,858)	(828,996)	(1,065,852)	(1,459,080)
City of Seaside Unpaid Balance	***$ 243,294***	***$ 426,165***	***$ 1,024,272***	***$ 1,619,973***	***$ 891,509***	***$ (110,014)***	***$ (773,813)***	***$ (1,575,876)***	***$ (2,889,325)***
Total Replenishment Fund Balance	**$ 1,884,298**	**$ 4,652,874**	**$ (1,847,417)**	**$ (1,219,966)**	**$ (2,930,710)**	**$ (6,170,178)**	**$ (9,509,483)**	**$ (7,749,648)**	**$ (5,991,546)**
Replenishment Fund Balance Forward	-	**$ 1,884,298**	**$ 4,652,874**	**$ (1,847,417)**	**$ (1,219,966)**	**$ (2,930,710)**	**$ (6,170,178)**	**$ (9,509,483)**	**$ (7,749,648)**
Total Replenishment Assessments	2,349,946	2,768,576	5,805,632	4,369,165	4,464,082	3,329,189	2,601,104	2,825,688	3,217,182
Total Paid and/or Credited	(465,648)	-	(12,305,924)	(3,741,714)	(6,174,826)	(6,568,657)	(5,940,409)	(1,065,852)	(1,459,080)
Grand Total Fund Balance	**$ 1,884,298**	**$ 4,652,874**	**$ (1,847,417)**	**$ (1,219,966)**	**$ (2,930,710)**	**$ (6,170,178)**	**$ (9,509,483)**	**$ (7,749,648)**	**$ (5,991,546)**

Seaside Groundwater Basin Watermaster

Replenishment Fund

Water Year 2020 (October 1 - September 30) / Fiscal Year (January 1 - December 31, 2021)

Balance through July 31, 2021

2015	2016	2017	2018	2019	2020	Totals WY 2006 Through 2020	Budget WY 2021	Projected Totals Through WY 2021
WY 14/15	WY 15/16	WY 16/17	WY 17/18	WY 18/19	WY 19/20		WY 20/21	
$675.50	$675.50	$2,872 / $718	$2,872 / $718	$2,872 / $718	$2,872 / $718		$2,947 / $737	
$ (3,102,221)	**$ (676,704)**	**$ (676,704)**	**$ (491,747)**	**$ (48,797,949)**	**$ (47,979,851)**		**$ (46,855,120)**	
2,764.73	*1,879.21*	*2,029.51*	*2,229.45*	*2,120.22*	*2,245.88*	*44,376.99*		
782.17	-	*64.40*	*374.65*	*284.85*	*334.21*	*14,638.57*		
2,113,414	-	184,957	1,075,995	818,097	959,859	$ 33,550,035	100,000	$ 33,650,035
312,103	-	-	-	-	164,872	1,122,753	20,000	1,142,753
$ 2,425,516		**$ 184,957**	**$ 1,075,995**	**$ 818,097**	**$ 1,124,731**	**$ 34,672,787**	**$ 120,000**	**$ 34,792,787**
-	-		(49,382,196)	-	-	(81,527,907)	-	(81,527,907)
$ (676,704)	***$ (676,704)***	***$ (491,747)***	***$ (48,797,949)***	***$ (47,979,851)***	***$ (46,855,120)***	***$ (46,855,120)***	***$ (46,735,120)***	***$ (46,735,120)***
$ (2,889,325)	**$ (3,346,548)**	**$ (3,232,420)**	**$ (3,142,500)**	**$ (3,022,249)**	**$ (2,919,806)**		**$ (2,802,831)**	
185.01	*195.16*	*188.31*	*184.63*	*178.40*	*181.65*	*3,559.14*		
25.77	*37.87*	*30.47*	*32.46*	*27.82*	*32.06*	*1,210.10*		
69,630	102,330	87,512	93,225	79,893	92,089	$ 2,785,045	100,000	$ 2,885,045
38	11,959	2,409	27,026	22,550	24,886	174,929	10,000	184,929
69,667	114,290	89,920	120,251	102,443	116,975	2,959,974	110,000	3,069,974
-	-	-	-	-	-	201,406	-	201,406
-	-	-	-	-	-	50,353	-	50,353
-	-	-	-	-	-	251,759	-	251,759
$ 69,667	**$ 114,290**	**$ 89,920**	**$ 120,251**	**$ 102,443**	**$ 116,975**	**$ 3,211,733**	**$ 110,000**	**$ 3,321,733**
						88,887		88,887
(526,890)	(162)	-	-	-	-	(6,103,451)	-	(6,103,451)
$ (3,346,548)	***$ (3,232,420)***	***$ (3,142,500)***	***$ (3,022,249)***	***$ (2,919,806)***	***$ (2,802,831)***	***$ (2,802,831)***	***$ (2,692,831)***	***$ (2,692,831)***
$ (4,023,252)	**$ (3,909,125)**	**$ (3,634,247)**	**$ (51,820,198)**	**$ (50,899,657)**	**$ (49,657,951)**	**$ (49,657,951)**	**$ (49,427,951)**	**$ (49,427,951)**
$ (5,991,546)	**$ (4,023,252)**	**$ (3,909,125)**	**$ (3,634,247)**	**$ (51,820,198)**	**$ (50,899,657)**		**$ (49,657,951)**	
2,495,183	114,290	274,877	1,196,246	920,540	1,241,706	37,973,407	230,000	**38,203,407**
(526,890)	(162)	-	(49,382,196)	-	-	(87,631,358)	-	**(87,631,358)**
$ (4,023,252)	**$ (3,909,125)**	**$ (3,634,247)**	**$ (51,820,198)**	**$ (50,899,657)**	**$ (49,657,951)**	**(49,657,951)**	**$ (49,427,951)**	**$ (49,427,951)**

SEASIDE GROUNDWATER BASIN WATERMASTER

TO: Board of Directors

FROM: Laura Paxton, Administrative Officer

DATE: September 1, 2021

SUBJECT: Consider Approving a Master Agreement with Monterey Peninsula Water Management District (MPWMD) effective January 1, 2022.

- -

RECOMMENDATIONS:
It is recommended that the Board approve the attached Master Agreement with Monterey Peninsula Water Management District effective January 1, 2022.

BACKGROUND:
In mid-2021 MPWMD requested changing from Watermaster's Professional Services Agreement format to a new format of Master Agreement they had created. (Rather than RFSs, this new Master Agreement calls for actual work assignments to be made through the issuance of "Scopes of Work" (SOW) under Master Agreement umbrella language. The SOW No. 2022-01 is presented with other consultant contracts for the board to consider approving later in this meeting.)

The Watermaster Board at its May 5, 2021 meeting had approved staff investigating the potential benefit of having another party take over MPWMD's monitoring and Management Program work. Staff did investigate and found the complexities of access to MPWMD wells and property by another party prohibitive.

DISCUSSION:
The proposed Master Agreement was reviewed and edited by both MPWMD and Watermaster staff with agreed upon input. The MPWMD board approved the Master Agreement at its August 16th board meeting after further changes were made by MPWMD without Watermaster review. The attached version of the agreement includes minor edits by Watermaster to Section 7 Indemnification, adding the word "grossly" into the second paragraph to match the wording in the first paragraph of that section. Per the request of MPWMD, if approved by the Watermaster Board at today's meeting, the agreement will be re-submitted to MPWMD for Administrative Committee and Board re-approval and execution.

This agreement is being presented to the Board for approval at today's meeting to ensure it will be in effect by the start of 2022.

ATTACHMENTS:
Master Agreement with MPWMD effective January 1, 2022

EXHIBIT 5-A

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

MASTER SERVICES AGREEMENT FOR GROUNDWATER MONITORING AND DATABASE SERVICES

This Services Agreement (the "Agreement") sets forth terms under which Monterey Peninsula Water Management District a California Special District ("DISTRICT") shall provide services to Seaside Groundwater Basin Watermaster, a Monterey County Superior Court Administrative Entity (the "WATERMASTER"). This Agreement is effective as of January 1, 2022 ("Effective Date").

1. **Services.** The DISTRICT shall provide groundwater monitoring and database services for purposes of supporting the WATERMASTER's Monitoring and Maintenance plan ("Services") as described on one or more Statements of Work signed by the DISTRICT and the WATERMASTER that reference this Agreement ("**SOW**" or "**Statement of Work**"). The DISTRICT shall perform groundwater monitoring as outlined in the SOW to collect and enter groundwater data into the WATERMASTER's database, report data to appropriate parties, and respond to data requests ("Deliverable") for the WATERMASTER no later than the due date specified (if applicable) in the SOW ("Completion Date"). This due date is subject to change in accordance with the Change Order process defined in the applicable SOW. WATERMASTER shall assist DISTRICT by promptly providing all information requests known or available and relevant to the Services in a timely manner.

DATA FURNISHED BY WATERMASTER

For the purpose of aiding DISTRICT in the performance of its obligations under this Agreement and SOWs issued under it, WATERMASTER shall furnish DISTRICT all relevant data in its possession and shall render all reasonable assistance to DISTRICT in connection with its performance hereunder. WATERMASTER is responsible for the reasonable correctness of data so furnished, but it shall likewise be the responsibility of DISTRICT to apply reasonable caution in its use and interpretation of the data and to promptly advise WATERMASTER of any incorrectness or suspected incorrectness in the data furnished.

WATERMASTER shall provide to DISTRICT in a timely manner all materials, decisions, and direction necessary to the progress of the work and which are basically the prerogative of WATERMASTER, but which DISTRICT is not required to determine or provide under the terms of this Agreement.

RESPONSIBILITIES OF DISTRICT

DISTRICT is employed to render professional service only, and any payments made are compensation solely for such services.

DISTRICT shall be responsible for the professional quality, technical accuracy, timely completion, and the coordination of all data collection, QA/QC, preparation of data tabulation, data requests, and database support.

For all work performed under this Agreement and all SOWs thereto, DISTRICT shall provide to WATERMASTER copies of all plans, drawings, specifications, studies, data tabulation reports, and all other work products and supporting documentation developed in the course of performing the work authorized by this Agreement. The costs for reproducing, assembling, and delivering said copies of these documents to WATERMASTER shall be considered to have been included in the price for performing each SOW, whether or not specifically stated therein. Unless stated otherwise in the SOW the electronic file (e.g., in MS Word, MS Excel, etc.) of each document shall be provided by DISTRICT to WATERMASTER. WATERMASTER shall have the right, and permission of DISTRICT, to use any such document for any purpose WATERMASTER deems appropriate. Use of documents for other than their intended purpose shall be at WATERMASTER's risk. WATERMASTER shall hold DISTRICT harmless from all claims and damages arising out of improper use of said documents.

DISTRICT shall be and remain liable in accordance with applicable law for damages to WATERMASTER caused by DISTRICT's negligent performance of any of the services performed by the DISTRICT under this Agreement. The only exception in this regard will be for errors, omissions or other deficiencies to the extent attributable to WATERMASTER, WATERMASTER-furnished data, or any third party not under the control of DISTRICT. DISTRICT shall not be responsible for any time delays in Services caused by circumstances beyond DISTRICT's control.

DISTRICT shall perform the services hereunder as an independent contractor, and nothing herein contained shall be construed to be inconsistent with this relationship or status. The employees of DISTRICT assigned to Services shall not be deemed to be the employees of WATERMASTER, and WATERMASTER shall have no right to control the physical conduct of DISTRICT employees.

2. **Contract Price.** For performance of the Services and rendering the Deliverable, WATERMASTER shall pay to DISTRICT all fees due under the applicable SOW.

3. **Dates of Performance.** DISTRICT will begin performing Services upon receipt of signed Agreement. Unless terminated as provided for in this Agreement, the DISTRICT will complete Services by the Completion Date. Deliverable shall be furnished to WATERMASTER or WATERMASTER's consultants.

4. **Change in Services.** Either party, at its discretion and from time to time, may request to revise, correct, or modify the work to be performed under a SOW. All such change requests shall be made formally and in writing. Should DISTRICT determine that said changes will result in an increase or decrease in costs to DISTRICT, these costs shall be evaluated by WATERMASTER and DISTRICT for negotiation as to adjustment in the compensation due DISTRICT. Written agreement as to said changes and adjustment in costs shall be reached between the parties prior to commencement of any work that will cause an increase or decrease in DISTRICT's costs.

5. **Termination.** DISTRICT shall have the right to modify, reject, or terminate any SOW and any related work in process with thirty (30) days written notice to WATERMASTER. In the

event the DISTRICT terminates the SOW prior to completion of Services, the WATERMASTER shall pay the DISTRICT the fees due under the SOW with respect to Services completed as of the date of termination. Upon settlement of funds due to DISTRICT, all WATERMASTER provided materials will be returned to WATERMASTER.

WATERMASTER reserves the right to terminate any SOW to this Agreement at any time prior to the completion of the Services to be furnished by DISTRICT under said SOW by giving thirty (30) days written Notice of Termination to DISTRICT, in which event WATERMASTER shall pay DISTRICT only for work done and direct costs incurred by DISTRICT under said SOW prior to receipt of such Notice of Termination. Such costs will include reasonable costs to bring the work to a halt, and costs to deliver to WATERMASTER the documentation described in the following paragraph. Termination of a particular SOW will not affect any other operative SOW.

Upon receipt of a Notice of Termination, DISTRICT shall (1) promptly discontinue all services affected (unless the notice directs otherwise), and (2) deliver to WATERMASTER all data, drawings, specifications, reports, estimates, summaries, and such other information and materials as may have been accumulated by DISTRICT in performing work under a particular SOW, whether completed or in process.

Upon termination WATERMASTER may take over the work and prosecute the same to completion by agreement with another party or otherwise. Any work taken over by WATERMASTER for completion will be completed at WATERMASTER's risk, and WATERMASTER will hold harmless DISTRICT from all claims and damages arising out of improper use of DISTRICT'S work.

6. **Payment of Services.** In exchange for DISTRICT's Services under this Agreement, the Watermaster shall pay DISTRICT the contract price set forth in the SOW. DISTRICT shall invoice WATERMASTER quarterly for work completed during the previous quarter. All invoices shall be due and payable within thirty (30) days of the date of receipt by WATERMASTER, provided all costs included in the invoice are adequately supported by documentation accompanying the invoice. If payment is not made within sixty (60) days of the date of receipt by WATERMASTER, interest on the unpaid balance will accrue beginning with the sixty-first day at the rate of 1.0 percent per month, or the maximum interest rate permitted by law, whichever is the lesser. Such interest shall become due and payable at the time said overdue payment is made.

   Time-and-Material Payment Method - WATERMASTER will pay the DISTRICT on a time-and-material basis in accordance with the DISTRICT'S most current Standard Schedule of Compensation. The hourly rates set forth in the Standard Schedule of Compensation shall be inclusive of all direct and indirect salary costs, overhead, fringe benefits, and other costs, and shall reflect the total hourly charge for each listed job category. Other direct non-salary expenses for the performance of work authorized under the Time-and-Material Payment Method shall be all identifiable costs directly chargeable to each SOW including, but not limited to: travel and subsistence expenses; work subcontracted to others; reproduction of plans, specifications, reports and other documents; equipment rental; and, drafting and stenographic supplies used in the work. The chargeable rate for automobile mileage for the work to be performed under this Agreement

shall be stated in the SOW. Direct non-salary expenses shall be compensated for at their actual cost, unless otherwise stated in the SOW, providing they have been authorized in advance by WATERMASTER. A Total Price, which may not be exceeded without WATERMASTER's prior written approval, will be established for each specific SOW.

Projected Cost Overruns Under Time-and-Material Payment Method - If, at any time in the performance of the work of a specific SOW under the Time-and-Material payment method, DISTRICT has reason to believe that the costs which it expects to incur to complete the work of that SOW will exceed the total amount authorized for that SOW, DISTRICT shall notify WATERMASTER in writing to that effect. The notice shall: State the reason(s) why DISTRICT anticipates a cost overrun, state the estimated amount of additional funds beyond the total amount currently authorized that will be required to complete the work authorized by the SOW, and provide recommendations of how the overrun can be avoided.

Penalty for Late Performance - The DISTRICT is not responsible for delays in the schedule caused by events outside DISTRICT's reasonable control. However, in the event DISTRICT fails to properly complete work within thirty (30) days of the Completion Date, because of events within DISTRICT's reasonable control, WATERMASTER shall reduce the total compensation established for the work of that SOW by ten percent (10%). Said reduction shall be deemed liquidated damages for the untimely performance of work required by this Agreement. DISTRICT shall be deemed to have waived any claim for such amount by reason of its failure to perform in a timely fashion.

7. **Indemnification.** DISTRICT shall indemnify and hold harmless WATERMASTER and its officers, officials, employees and agents from and against all losses, claims, demands, payments, suits, actions, recoveries, and judgments of every nature and description brought or recoverable against it or them by reason of any grossly negligent act, grossly negligent error, or grossly negligent omission of DISTRICT, its agents, or employees for work performed under this Agreement.

   WATERMASTER shall indemnify and hold harmless DISTRICT and its officers, officials, employees and agents from and against all losses, claims, demands, payments, suits, actions, recoveries, and judgments of every nature and description brought or recoverable against it or them by reason of any grossly negligent act, grossly negligent error, or grossly negligent omission of WATERMASTER, its agents, or employees for work performed under this Agreement.

8. **Limitation of Liability.** DISTRICT understands that this Agreement is with WATERMASTER alone, and that none of the members of WATERMASTER are liable for any sums which may be payable hereunder, or for any debts of WATERMASTER.

9. **Compliance with Laws.** Each party shall perform all of its obligations under this Agreement in compliance at all times with all foreign, federal, state and local statutes, orders and regulations, including those relating to privacy and data protection.

10. **General.** Neither party may assign this Agreement without the prior written consent of the other party and any attempt to do so will be void. Any notice or consent under this Agreement will be in writing to the addresses specified below. If any part of this Agreement is found to be

in conflict with applicable laws, such part shall be inoperative, null and void insofar as it is in conflict with said laws, but the remainder of the Agreement shall be in full force and effect. Any waivers or amendments shall be effective only if made in writing signed by a representative of the respective parties. Both parties agree that this Agreement is the complete and exclusive statement of the mutual understanding of the parties, and supersedes and cancels all previous written and oral agreements and communications relating to the subject matter of this Agreement. This Agreement is to be signed by a representative from each party duly authorized to bind to Agreement terms and services and no consent from any third party is required.

Both parties hereby reserve the right to amend the provisions of this Agreement from time to time as may be in the best interest of WATERMASTER and DISTRICT. Such amendments, upon written acceptance by DISTRICT and by WATERMASTER, shall become and be considered as part of this Agreement, and all provisions herein shall apply to such amendments.

This Agreement constitutes the entire agreement between the parties relative to the subject matters hereof, and no modifications thereof shall be effective unless and until such modifications are evidenced by written amendments, signed by both parties to this Agreement. There are no understandings, agreements, conditions, representations, warranties, or promises with respect to the subject matter of this Agreement which are not actually contained in this Agreement, except those expressly contained in such written amendments.

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:
Administrative Officer
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
PO Box 85
Monterey, CA 93942-0085

11. Choice of Law. This Agreement will be deemed to have been made in, and shall be construed pursuant to, the laws of the State of California without regard to conflicts of laws provisions thereof. Any suit or proceeding arising out of or relating to this Agreement shall be commenced in a State court in Monterey County, California and each party irrevocably submits to the jurisdiction and venue of such courts.

12. Remedies. If any legal action is necessary to enforce or interpret the terms or provisions of this Agreement and all amendments thereto, and the respective rights and duties of the parties

hereunder, the prevailing party shall be entitled to reasonable attorneys' fees in addition to any other entitled relief.

13. Insurance. DISTRICT shall procure and maintain for the duration of this Agreement insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by DISTRICT, its agents, representatives, employees or subcontractors.

A. Minimum Scope and Limits of Insurance

DISTRICT shall maintain the types of insurance with limits no less than those set forth below, and having no deductibles, except as noted.

General Liability Insurance: Combined single limit of $1,000,000 per occurrence and $2,000,000 annual aggregate for bodily injury, personal injury, and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this Agreement, or the general aggregate limit shall be twice the required occurrence limit.

Automobile Liability Insurance: $1,000,000 per accident for bodily injury and property damage.

Employer's Liability Insurance: $1,000,000 per accident for bodily injury or disease.

Workers' Compensation Insurance: As required by the State of California.

B. Other Insurance Provisions

The general liability and automobile liability policies are to contain, or be endorsed to contain, the following provisions:

1. WATERMASTER, its officers, officials, employees, and volunteers are to be covered as insureds as respects: liability arising out of activities performed by or on behalf of DISTRICT; products and completed operations of DISTRICT; premises owned, occupied or used by DISTRICT; or, automobiles owned, leased, hired or borrowed by DISTRICT. The coverage shall contain no special limitations on the scope of protection afforded to WATERMASTER, its officers, officials and employees.

2. For any claims related to this Agreement, DISTRICT insurance coverage shall be primary insurance as respects WATERMASTER, its officers, officials, employees, and volunteers. Any insurance or self-insurance maintained by WATERMASTER, its officers, officials, employees, or volunteers shall be excess of DISTRICT insurance and shall not contribute with it.

3. Any failure to comply with reporting or other provisions of the policies including breaches of warranties shall not affect coverage provided to WATERMASTER, its officers, officials and employees.

4. DISTRICT's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

5. Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, canceled by either party, reduced in coverage or in limits except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to WATERMASTER.

6. Coverage shall not extend to any indemnity coverage for the active negligence of the additional insured in any case where an agreement to indemnify the additional insured would be invalid under Subdivision (b) of Section 2782 of the Civil Code.

C. Verification of Coverage

DISTRICT shall furnish WATERMASTER with Certificates of Insurance effecting coverage required by this section. All Certificates of Insurance are to be received by WATERMASTER before work commences.

[Signature Page Follows]

Accepted and agreed to as of the Effective Date by the authorized representative of each party:

WATERMASTER	**DISTRICT**
Signature: _____	Signature: _____
Print Name: Paul Bruno	Print Name: [NAME]
Print Title: Board Chairman	Print Title: [TITLE]
Date: [MM/DD/YYYY]	Date: [MM/DD/YYYY]

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SEASIDE GROUNDWATER BASIN
WATERMASTER

TO: Board of Directors

FROM: Laura Paxton, Administrative Officer

DATE: September 1, 2021

SUBJECT: Consider Approving Budget Transfer to Cover Costs for Montgomery & Associates to Perform Flow Direction/Flow Velocity Modeling and for Updated Replenishment Water Modeling

- -

RECOMMENDATIONS:
Approve budget transfer to cover costs for Montgomery & Associates to perform extended general consulting services, flow direction/flow velocity modeling, and for updated replenishment water modeling in 2021.

BACKGROUND:
At its February 13, 2021 meeting the Board directed the TAC to undertake several actions in response to the possible detection of seawater intrusion in Monitoring Well FO-9 Shallow. These actions included:

1. Developing maps that would enable the Watermaster to estimate the directions and velocities that seawater intruded water would move toward production wells.
2. Updating the 2013 groundwater modeling to provide a more accurate indication of current replenishment water needs.

DISCUSSION:
At its March and August 2021 meetings the TAC approved two contract amendments with Montgomery & Associates to perform this work. The combined contract amount to perform this work is $56,800, broken down as follows:

1. $19,290 to develop flow direction/flow velocity maps.
2. $37,510 to update the 2013 groundwater modeling.

Both of these items would fall under Task I.3.a.3 of the 2021 Monitoring and Management Program, which is titled *"Evaluate Replenishment Scenarios and Develop Answers to Basin Management Questions."* The amount budgeted for this Task is $70,000.

$35,000 was transferred out of this Task earlier this year to cover the Technical Program Manager's increased workload in 2021, leaving $35,000 remaining in the budget line-item for this Task. The $56,800 cost to perform this work would exceed the remaining budget amount by $21,800.

In addition, it will be necessary to augment the cost authorization for Montgomery & Associates by $5,000 for general consulting services for the remainder of 2021. This is because we have needed to use them more than originally expected, primarily for them to provide documents to, and interact with, consultants for the Marina Coast Water District and Salinas Valley GSAs in conjunction with those GSAs development of the Groundwater Sustainability Plan for the Monterey Subbasin.

At its August 16, 2021 meeting the Budget and Finance Committee approved making transfers totaling $29,200 to cover these shortfalls. However, subsequent to that meeting it was discovered that an incorrect dollar amount for the flow direction/flow velocity modeling had been used, and that the correct amount was only $19,290, not the $21,690 discussed at that Committee meeting. Consequently, a transfer totaling only $26,800 is needed.

To cover the $26,800 shortfall the following budget transfers are recommended:

1. Transfer $10,000 from M&MP Task I.3.e (budgeted at $10,000 to perform geochemical modeling if necessary for Cal Am's desal plant) since it is clear that the desal plant will not start construction in 2021.
2. Transfer $10,000 from the Contingency line-item (originally budgeted at $20,370 and still having slightly more than $10,000 in it).
3. Transfer $3,400 from M&MP Task M.1.c, d, and e (Preparation for and Attendance at Meetings and Peer Review of Documents and Reports) because we do not expect to need to use all of the funds that were budgeted for this Task. (Note: The Budget and Finance Committee approved making a $4,000 transfer from this Task).
4. Transfer $3,400 from the Technical Program Manager line-item as it appears the Technical Program Manager's costs will total about $90,000 by year-end, which is less than the $95,000 that was budgeted. (Note: The Budget and Finance Committee approved making a $4,000 transfer from this line-item).

ATTACHMENTS: None.

Seaside Groundwater Basin Watermaster

Budget vs. Actual Monitoring & Management - Operations Fund

Fiscal Year (January 1 - December 31, 2021)

Balance through July 31, 2021

	2021 Adopted Budget	2021 Adopted Budget Amended 05/05/21*	2021 Proposed Adopted Budget Amended 09/01/21*	Contract Encumbrance	Year to Date Revenue/Expenses
Available Balances & Assessments					
Operations Fund Assessment	$ 220,000.00	$ 220,000.00	$ 220,000.00	$ -	$ 220,000.00
Pass Through				3,915.00	-
FY 2020 Rollover	64,069.00	64,069.00	64,069.00	-	180,964.60
Total Available	**$ 284,069.00**	**$ 284,069.00**	**$ 284,069.00**	**$ 3,915.00**	**$ 400,964.60**
Appropriations & Expenses					
GENERAL					
Technical Project Manager*	$ 60,000.00 *	$ 95,000.00 *	$ 91,600.00 *	$ 95,000.00	$ 51,075.00
Contingency @ 10% (not including TPM)	20,370.00 *	10,032.00	32.00	-	
Total General	**$ 80,370.00**	**$ 105,032.00**	**$ 91,632.00**	**$ 95,000.00**	**$ 51,075.00**
CONSULTANTS (Montgomery; Web Site Database)					
Program Administration	$ 17,320.00	$ 21,320.00	$ 22,320.00 *	$ 19,720.00	$ 14,167.50
Production/Lvl/Qlty Monitoring	2,400.00	2,400.00	2,400.00		
Basin Management	80,000.00 *	41,000.00	56,800.00 *		
Seawater Intrusion Analysis Report	26,310.00	26,310.00	26,310.00	26,310.00	-
Total Consultants	**$ 126,030.00**	**$ 91,030.00**	**$ 107,830.00**	**$ 46,030.00**	**$ 14,167.50**
MPWMD					
Production/Lvl/Qlty Monitoring	$ 49,926.00	$ 49,926.00	$ 49,926.00	49,926.00	-
Pass Through 2021				3,915.00	-
Basin Management	-	-	-		-
Seawater Intrusion	1,192.00	1,192.00	1,192.00	1,192.00	-
Direct Costs	-	-	-	-	-
Total MPWMD	**$ 51,118.00**	**$ 51,118.00**	**$ 51,118.00**	**$ 55,033.00**	**$ -**
CONTRACTOR (Martin Feeney)					
Hydrogeologic Consulting Services	$ 4,000.00	$ 4,000.00	$ 600.00 *	4,000.00	-
Production/Lvl/Qlty Monitoring	18,551.00 *	28,889.00 *	28,889.00	28,839.00	19,778.30
	$ 22,551.00	**$ 32,889.00**	**$ 29,489.00**	**$ 32,839.00**	**$ 19,778.30**
CONTRACTOR (Todd Groundwater)					
Hydrogeologic Consulting Services	**$ 4,000.00**	**$ 4,000.00**	**$ 4,000.00**	**$ 4,000.00**	1,653.75
Total Appropriations & Expenses	**$ 284,069.00**	**$ 284,069.00**	**$ 284,069.00**	**$ 232,902.00**	**$ 86,674.55**
Total Available	**-**	**-**	**-**		**314,290.05**

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SEASIDE GROUNDWATER BASIN WATERMASTER

TO: Board of Directors

FROM: Robert S. Jaques, Technical Program Manager

DATE: September 1, 2021

SUBJECT: Consider approving two Montgomery & Associates amendments to RFS No. 2021-01 for Flow Direction/Flow Velocity Mapping and Replenishment Water Modeling.

\- -

RECOMMENDATIONS:

It is recommended to approve the following amendments to the Watermaster's contract with Montgomery & Associates for Flow Direction/Flow Velocity Mapping and Replenishment Water Modeling:

1. RFS No. 2021-01 Amendment No. 1 for $19,290
2. RFS No. 2021-01 Amendment No. 2 for $37,510

BACKGROUND:

At its February 13, 2021 meeting the Board directed the TAC to undertake several actions in response to the possible detection of seawater intrusion in Monitoring Well FO-9 Shallow. These actions included:

1. Developing maps that would enable the Watermaster to estimate the directions and velocities that seawater intruded water would move toward production wells.
2. Updating the 2013 groundwater modeling to provide a more accurate indication of current replenishment water needs.

At its February and August 2021 meetings the TAC approved two contract amendments with Montgomery & Associates to perform this work. The combined contract amount to perform this work is $56,800, broken down as follows:

1. $19,290 to develop flow direction/flow velocity maps.
2. $37,510 to update the 2013 groundwater modeling.

DISCUSSION

The replenishment water modeling work will consist of updating the 2013 replenishment water study using the Basin groundwater model to estimate how much replenishment injection would be needed to achieve protective elevations in Watermaster coastal protective elevation wells. Included in this work will include the impacts of the Pure Water Monterey Project, Carmel River ASR, Cal Am's planned over-pumping payback of 700 AFY, and sea level rise.

The flow direction/flow velocity mapping will provide information about the trajectories and potential range of travel times of potential seawater intrusion from locations along the coastline to water supply wells screened in the Paso Robles aquifer in the Northern Coastal Subarea of the Seaside Basin. The seawater intrusion flow paths will be shown color-coded by the travel times from their initial locations to provide a clear visualization of the potential pathways and travel times from the coastline.

ATTACHMENTS:

1. Montgomery & Associates RFS No. 2021-01, Amendment No. 1
2. Montgomery & Associates RFS No. 2021-01, Amendment No. 2

SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: September 2, 2021 RFS NO. 2021-01 Amendment No. 1
(To be filled in by WATERMASTER)

TO: Hale Barter
Montgomery & Associates
PROFESSIONAL

FROM: Robert Jaques
WATERMASTER

Services Needed and Purpose: Perform additional hydrogeologic consulting services as described herein.

Completion Date: All work of this RFS shall be completed not later than December 31, 2021, and shall be performed in accordance with the Schedule described in Attachment 2.

Method of Compensation: Time and Materials (As defined in Section V of Agreement.)

Total Price The Total Price for RFS No. 2021-01 is increased by $19,290.00 by this Amendment No. 1, and the Total Price for RFS No. 2021-01 is therefore increased to $36,610.00.

Total Price may not be exceeded without prior written authorization by WATERMASTER in accordance with Section V. COMPENSATION.

Requested by: _____ Date:_____.
WATERMASTER Technical Program Manager

Agreed to by: _____ Date:_____.
PROFESSIONAL

ATTACHMENT 1

SCOPE OF WORK

PROFESSIONAL was authorized by RFS No. 2021-01 to perform general on-call hydrogeologic consulting services. WATERMASTER wishes to also have PROFESSIONAL perform an analysis of groundwater flow directions and velocities to determine where seawater that might potentially intrude into the Paso Robles aquifer along the coastline will move and at what speed. This Amendment No. 1 to RFS No. 2021-01 authorizes the performance of the work described in Attachment 2 hereto.

ATTACHMENT 2

MONTGOMERY & ASSOCIATES
Water Resource Consultants

www.elmontgomery.com
1814 Franklin Street, Ste. 501
Oakland, CA 94612
510.903.0458

June 3, 2021

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

SUBJECT: SCOPE FOR ASSESSMENT OF SEASWATER INTRUSION TRAVEL TIME TO SEASIDE PRODUCTION WELLS

Dear Mr. Jaques

Montgomery & Associates (M&A) appreciates the opportunity to provide this scope of work for assessing the trajectories and potential range of travel times of potential seawater intrusion from locations along the coastline to municipal and irrigation water supply wells screened in the Paso Robles formation in the Northern Coastal Subarea of the Seaside Basin. As per your request, we also provide an additional cost estimate for an expanded scope to perform the same the analysis for both the shallow Paso Robles and the deeper Santa Margarita aquifers.

While the Seaside Basin Watermaster Model ("the Model") could be used for this type of analysis, this would require first updating the model to reflect current and recent pumping operations, estimated groundwater recharge and boundary conditions, and validating the updated model against recently observed water levels. The Model was most recently updated in 2018 to include historical operations and conditions through the end of 2017. Some of these new model update activities are already scheduled to occur as part of ongoing work that M&A is carrying out in support of the permitting for the Pure Water Monterey (PWM) aquifer replenishment project, which will also include estimates on the impacts of the PWM injection future water levels. These PWM activities, however, will likely not be completed until later this summer and would thus delay a preliminary analysis of potential seawater intrusion travel times.

What we propose as an alternative, is a hybrid analytic approach for estimating travel trajectories and travel times from the coastline that integrates aquifer parameters for the Paso Robles formation from the calibrated Seaside model, including aquifer thickness, hydraulic conductivity and storage coefficients, with groundwater elevation maps based on recent groundwater level monitoring data in the shallow aquifer that reflect current conditions and operations in and around the Northern Coastal Subarea of the basin. These groundwater elevation maps would be conceptually similar to the contour maps of the shallow aquifer that are regularly developed for the annual Sea Water Intrusion Analysis Reports, but would focus only on the Northern Coastal subarea and would include refined contours based on all available monitoring data, including available data from the Cal-Am ASR and PWM projects.

The contour maps will represent the potentiometric surface that drives groundwater flow and in combination with the aquifer parameters from the model by applying Darcy's law, they can be used to generate flow fields that can be used to estimate groundwater velocities and travel times from one point in the aquifer to another. The advantage of this approach is that we benefit both from using aquifer data already developed for the Model combined with actual groundwater level measurements reflecting current basin operations and conditions.

The travel trajectory and travel time analysis can be automated in GIS using an existing groundwater particle tracking toolset implemented and available within the ESRI ArcGIS Spatial Analyst Toolbox. M&A has recently used these tools in support of work in the Santa Cruz Mid-County groundwater basin to estimate travel times between proposed injection wells and water supply and will adapt existing workflows developed during that work to minimize the effort necessary for this analysis. Particles will be released along the entire extent of the coastline of the Seaside basin and the portions of the neighboring Monterey basin and tracked inland to determine if, and when they reach the vicinity of the supply wells screened in the Paso Robles formation. Groundwater travel times are very sensitive to the effective porosity of the aquifer; and since the effective porosity of the Paso Robles is not a calibrated parameter from the Model, upper and lower bound estimates on the travel times will be developed based on considering a reasonable range of aquifer effective porosities supported by available field data and literature values to provide a range of possible travel times.

A map displaying the trajectories of the released particles, color coded by the travel times from their initial locations will be produced to provide a clear visualization of the potential pathways and travel times from the coastline. Similar types of visualization have been developed in support of planning and permitting for the Pure Water Monterey project and the Cal-AM/MPWMD ASR projects. An example is shown in Figure 1 which shows simulated particle travel paths and travel times from existing and proposed Pure Water Monterey deep injection wells to downgradient productions wells in the Santa Margarita formation for modeling conducted in support of the proposed Pure Water Monterey Project Expansion Supplemental EIR. For the analysis proposed in this scope of work we would instead have these particle path-lines that start off along the coastline and then move inland, with the color-coding indicating estimates for how much time it takes to move inland.

The tasks to be performed are detailed in the following scope of work.

Scope of Work

TASK 1 – Develop Groundwater Elevation Surface Map Snapshots of Aquifer(s)

M&A will review available groundwater level monitoring data for supply and monitoring wells in the Northern Coastal Subarea and will develop a dataset to be used for creating a groundwater elevation map of the Paso Robles aquifer, representative of recent conditions in the subarea. Generally speaking, even when groundwater levels fluctuate seasonally in relation to seasonal demands, the average velocity can be evaluated through use of an

average groundwater level (e.g. during periods of peak pumping, gradients are steeper and groundwater velocities are faster, and in periods of lower pumping, the gradients decrease and groundwater velocities are slower, and average gradients will adequately represent the average velocities). The groundwater elevation map will incorporate observed levels in the Paso Robles aquifer (and optionally also the Santa Margarita aquifer) along the coastline and will also incorporate overlapping pumping cones of depression and injection mounds associated with extraction and injection wells during the monitoring period.

The analysis will assume that average groundwater levels remain at the same conditions for the duration of the travel time analysis.

TASK 2 – Perform Particle Tracking and Travel Time Analysis on the Developed Water Elevation Map

M&A will extract the spatially variable hydraulic aquifer properties from the Model grid and convert into the GIS format used by the particle tracking tool set.

The travel time analysis tools assume that hydraulic heads remain constant for the duration of the analysis. This is equivalent to assuming that moving forward the pumping and recharge conditions in the basin will be such that the current hydraulic heads would still be a representative snapshot of conditions in the future. This is a simplification that will allow for an initial assessment of an average ground water velocity field representative of current basin conditions and a range of potential travel times under the assumption that we could temporarily freeze the conditions in the basin. The approach also assumes that flow is two-dimensional and horizontal and uniform across the thickness of the aquifer. Broadly speaking this is the same approach used for preliminary assessment of well head protection zones for the Pure Water Monterey Project.

The particle tracking analysis will be performed for the groundwater level map developed in Task 1, and a lower and upper range effective porosity will be evaluated, for a total of two sets of particle tracking runs.

The analysis considers only advective groundwater transport and does not consider spreading of a potential salinity plume due to hydrodynamic dispersion which would have the effect of some particle flow paths getting farther out in a shorter amount of time.

From the results of the particle tracking analysis the map that will be produced will show the path that particles of water released at the coast take as they travel inland, color-coded by the estimated travel time. A table will also be produced summarizing the range of estimated travel times to the supply wells for the simulated conditions.

TASK 3 –Technical Memorandum and TAC Presentation

M&A will prepare a technical memorandum which documents Tasks 1 and 2, with a synthesis of the results for the conditions and scenarios evaluated. For costing purposes, we

assume preparing one draft, responding to and addressing one round of review comments, and one final version of the report. The report will be provided in Microsoft Word and PDF formats.

M&A will present the results to the Seaside Basin Technical Advisory Committee (TAC) at a regularly scheduled TAC meeting. The presentation will review the analysis assumptions and results, and provide any additional information requested by the TAC. After making the TAC presentation M&A will also make a similar presentation of the results to the Watermaster Board at one of its meetings.

Staffing Plan

Georgina King, P.G., C.Hg., will be the project manager, and Pascual Benito, Ph.D. will be the technical lead overseeing the work. Pascual is an experienced hydrogeologist who is currently supporting the Pure Water Monterey indirect potable reuse project and as needed hydrogeological services for the Seaside Basin Watermaster and it also supporting modeling work for the Salinas Valley groundwater basin sustainability plans. Derrik Williams, P.G., C. Hg., will provide senior review.

Project Budget and Schedule

We anticipate that the work for only the Paso Robles aquifer can be completed within a two-month period, though the timing may depend on the scheduling of TAC and Board meetings. We can begin work on this immediately following notice to proceed.

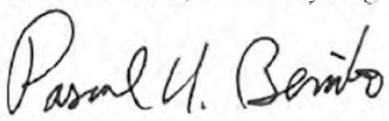
The total cost estimate for these tasks for the Paso Robles aquifer is $19,290 as detailed in the attached Table 1.

Please feel free to contact us with any questions about the proposed scope of work and budgets.

Sincerely,

E.L. MONTGOMERY & ASSOCIATES

Pascual Benito, Senior Hydrogeologist



Georgina King, Senior Hydrogeologist

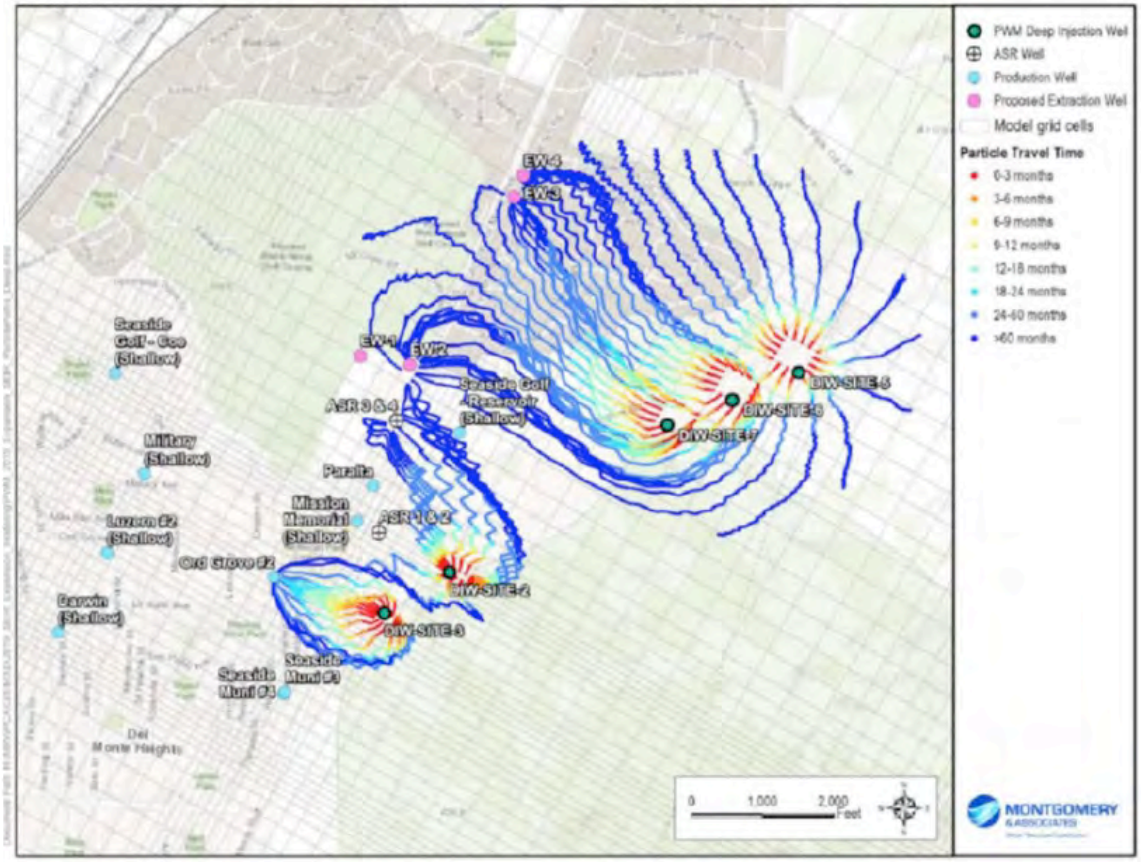


Figure 1. Sample visualization of particle travel paths and travel times. Source: Expanded Pure Water Monterey Groundwater Replenishment Project Supplemental EIR Groundwater Modeling Analysis Memo (M&A, 2919).

MONTGOMERY & ASSOCIATES

Table 1. Detailed Cost Table –Analysis for Paso Robles Aquifer Only

Cost Estimate for Seaside Basin Sea Water Intrusion Travel Time Estimates									
		Montgomery & Associates Labor						Other Direct Costs	TOTALS
		Scientist VIII	Scientist VI	Scientist V	Scientist III	Labor Total			
		D. Williams	G. King	P. Benito					
Task	Hourly Rates	$260	$215	$195	$150	Hours	($)	($)	
1.0	DEVELOP GROUNDWATER LEVEL MAPS								
	Review and compile monitoring data & previous modeling results and develop hydraulic head maps for current conditions	1	2	6	12	21	$3,660	$0	$3,660
	Task 1 Subtotal	*1*	*2*	*6*	*12*	*21*	*$3,660*	*$0*	*$3,660*
2.0	PERFORM PARTICLE TRACKING & TRAVEL TIME ANALYSIS								
2.1	Prepare Aquifer Parameter + hydraulic head GIS grid input files	0	0	4	8	12	$1,980	$0	$1,980
2.2	Particle Tracking Runs & Travel Analysis	0	0	8	16	24	$3,960	$0	$3,960
2.3	Develop travel time maps and tables	0	0	4	14	18	$2,880	$0	$2,880
	Task 2 Subtotal	*0*	*0*	*16*	*38*	*54*	*$8,820*	*$0*	*$8,820*
3.0	TECHNICAL MEMORANDUM AND TAC & BOARD PRESENTATIONS								
	Document, Summarize & Synthesize Analysis and Results	4	8	10	14	36	$6,810	$0	$6,810
	Task 3 Subtotal	*4*	*8*	*10*	*14*	*36*	*$6,810*	*$0*	*$6,810*
	Total	**5**	**10**	**32**	**64**	**111**	**$19,290**	**$0**	**$19,290**

SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: September 2, 2021

RFS NO. 2021-01 Amendment No. 2
(To be filled in by WATERMASTER)

TO: Hale Barter
Montgomery & Associates
PROFESSIONAL

FROM: Robert Jaques
WATERMASTER

Services Needed and Purpose: Perform additional hydrogeologic consulting services as described herein.

Completion Date: All work of this RFS shall be completed not later than December 31, 2021, and shall be performed in accordance with the Schedule described in Attachment 2.

Method of Compensation: Time and Materials (As defined in Section V of Agreement.)

Total Price The Total Price for RFS No. 2021-01 is increased by $37,510.00 by this Amendment No. 2, including Optional Task 1.3 pertaining to the incorporation of sea level rise, and the Total Price for RFS No. 2021-01 is therefore increased to $74,120.00.

Total Price may not be exceeded without prior written authorization by WATERMASTER in accordance with Section V. COMPENSATION.

Requested by: _____ Date: _____.
WATERMASTER Technical Program Manager

Agreed to by: _____ Date: _____.
PROFESSIONAL

ATTACHMENT 1

SCOPE OF WORK

PROFESSIONAL was authorized by RFS No. 2021-01 to perform general on-call hydrogeologic consulting services. WATERMASTER wishes to also have PROFESSIONAL perform groundwater modeling to determine how much replenishment water will be needed to achieve protective groundwater elevations in the Basin. This Amendment No. 2 to RFS No. 2021-01 authorizes the performance of the work described in Attachment 2 hereto.

ATTACHMENT 2

MONTGOMERY & ASSOCIATES
Water Resource Consultants

Groundwater experts since 1984

July 30, 2021

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

SUBJECT: SCOPE AND COST TO UPDATE PREDICTIVE MODELING OF BASIN REPLENISHMENT OPTIONS TO ACHIEVE PROTECTIVE ELEVATIONS

Dear Mr. Jaques

Per your request, this letter contains a scope of work and estimated cost to update a previous replenishment study using the basin groundwater model to estimate how much replenishment injection would be needed to achieve protective elevations in Watermaster coastal protective elevation wells.

BACKGROUND

In April 2013, HydroMetrics Water Resources Inc. (now acquired by Montgomery & Associates) completed a groundwater modeling study that evaluated 3 scenarios:

- **Scenario 1**: A 25-year groundwater overpumping replenishment program proposed by California American Water (Cal-Am) which replenishes their overpumping by in-lieu recharge through reducing pumping from their Seaside Basin wells production wells.
- **Scenario 2:** A set of pumping reductions by Standard and Alternative Producers to achieve protective groundwater levels over a 25-year period
- **Scenario 3:** Cal-Am's replenishment plan coupled with additional injection into the Santa Margarita aquifer to achieve protective elevations in 25 years.

Scenario 1 did not achieve protective elevations as 700 AFY is too little to raise groundwater levels. This scenario will not be updated as part of the update.

Under Scenario 2, a pumping reduction by Standard and Alternative Producers of just over 2,000 AFY (including Cal Am's 700 AFY reduction) was needed to achieve protective water levels. Scenario 2 is not a practical solution as Standard and Alternative producers do not have access to supplemental sources of water. This scenario will not be updated as part of the update.

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The results of Scenario 3 show that when combined with Cal-Am's 25-year repayment schedule of 700 acre-feet per year, protective elevations can be achieved by injecting an additional 1,000 acre-feet per year of water into existing ASR wells. Recharged water is left in the basin, and not pumped by Standard or Alternative producers. This approach requires less water to implement than the pumping reduction approach for Scenario 2.

The predictive simulation for the 2013 scenarios only took into account historical Carmel River ASR by MPWMD and not Pure Water Monterey (PWM), since in early 2013 PWM was only in the very early planning stages.

TASK 1. DEVELOP BASELINE SCENARIO

Subtask 1.1. Extend Historical Hydrology Baseline Scenario

Since 2009, all predictive simulations using the model have been based on repeating the historical hydrology from the 22-year model calibration period of 1987 – 2008. The previous predictive simulation runs from 2009 through 2042. While maintaining this approach allows for direct comparison between new simulations and previous simulations, it does not take advantage of the additional nine years of hydrologic and climatic data that have been incorporated into the historical model. The historical model was updated in 2014 and 2018, and now includes a continuous 31-year hydrologic record from 1987 through 2017. Significantly, this 31-year hydrologic record includes the recent 2012-2015 drought. We propose that this full 31-year historical hydrology and climate dataset be used as basis for all predictive modeling, as this incorporates a broader range of potential climate variability. The extended hydrology would repeat the 31-year hydrology from 1987 – 2017, so that the baseline scenario is extended out 31-years from 2018 to 2048.

The previous replenishment modeling effort assumed protective elevations must be reached in 25 years from the time supplemental water is available to offset pumping (assumed at that time to be in 2016) thereby resulting in protective elevations being reached in 2041. Per the TACs direction, the update will determine how much replenishment water is needed to achieve protective coastal elevations in 20 years. Extending the hydrology to 2048 covers the 20-year target to be used for evaluating replenishment volumes that achieve protective elevations.

Subtask 1.2. Incorporate all Existing and Approved/Planned Projects into Baseline Model

The Baseline scenario will include the following:

1. PWM injection of 3,500 AFY based on hydrology and planned amount extracted each year
2. Carmel River ASR current planned operations based on hydrology

3. Cal-Am's 700 AFY reduction in pumping as part of its 25-year groundwater overpumping replenishment program, assumed to begin in 2024

Monthly PWM injection rates have some dependence on hydrology because injection is reduced during drought years to send some recycled water to CSIP in Salinas Valley, and they also have a drought reserve that needs to be managed. Similarly, Cal-Am extraction of ASR water also depends on hydrology. All these operating requirements need to be considered when developing the monthly injection and extraction rates to be simulated.

Additionally, it may be necessary to revise the assumptions on Cal-Am annual demand since the assumptions used in the 2013 replenishment modeling have changed. We may potentially update the new demand forecast spreadsheet model that MPWMD (Jon Lear) developed for PWM expansion modeling for the expanded hydrology. The demand forecast has a uniform increase in demand over time and is tied to the hydrology cycle and takes into account all the water rights and allocations and demand/supply sources which are then distributed to Cal-Am extraction wells.

Subtask 1.3. Incorporate Sea Level Rise at Ocean Boundaries (Optional)

An optional item that incorporates sea level rise into the groundwater model is included in the cost estimate attached. We will incorporate estimates of projected sea level rise into the predictive model simulation by adjusting the head boundary conditions specified along the ocean boundary. Generally speaking, sea level rise is expected to increase seawater intrusion and/or the risk of sea water intrusion in coastal aquifers, though the magnitude of the effects due to sea level rise alone are highly dependent on local conditions. The sea level rise estimates will be based on the projected levels for Monterey Bay from the 2018 update of the State of California Sea-Level Rise Guidance document recently released by the California Ocean Protection Council (OPC, 2018). It should be noted that adjustments to the sea level elevations will also entail simple equivalent adjustments to the protective head elevations as they are tied to sea level.

TASK 2. DEVELOP ITERATIVE SCENARIO TO ACHIEVE PROTECTIVE ELEVATIONS IN 20 YEARS

An iterative model scenario to evaluate additional replenishment required to meet protective elevations is based on the Baseline scenario but with additional replenishment injection iteratively adjusted until coastal protective groundwater elevations are achieved within 20 years. As per direction from the TAC, injection will be simulated at PWM injection wells regardless of injection capacity. If existing injection capacity is insufficient to replenish the basin, additional infrastructure to increase injection capacity would be needed.

TASK 3. REPORTING

Subtask 3.1. Prepare Technical Memorandum

A technical memorandum summarizing the assumptions made in developing the Baseline and iterative scenarios, the results of the iterative modeling of replenishment injection needed to achieve protective elevations within 20 years presented on tables and maps, and conclusions of the study will be prepared as a draft. Based on review by Mr. Jaques and the TAC, a final version will be provided as both a PDF and MS Word document.

Subtask 3.2. Presentation

A PowerPoint presentation summarizing the findings of the study will be prepared for presentation to the TAC. It assumed that a similar presentation will be made to the Board. Both presentations are assumed to be made via Zoom.

PROJECT COST ESTIMATE AND SCHEDULE

We anticipate that this work can be completed within a two-month period, though the timing may depend on the scheduling of TAC and Board meetings. We can begin work on this immediately following notice to proceed.

The total estimated cost for the above-described tasks is $37,510, including the optional task of incorporating sea level rise into the baseline scenario. Without the optional seal level rise task, the estimated cost is $32,230. The attached cost estimate provides a breakdown of costs by task and subtask.

The hourly rates contained in this proposal are valid through December 31, 2021. If the work will substantially be completed in 2022, the cost estimate will need to be updated with 2022 rates.

Please feel free to contact us with any questions about the proposed scope of work and budget.

Sincerely,

E.L. MONTGOMERY & ASSOCIATES

Georgina King, Senior Hydrogeologist

MONTGOMERY & ASSOCIATES
Water Resource Consultants

Cost Estimate to Update Predictive Modeling of Basin Replenishment to Achieve Protective Elevations

		Montgomery & Associates Labor							Other Direct Costs	TOTALS
		Scientist VIII	Scientist VI	Scientist V	Scientist III	Technical Editor	Labor Total			
		D. Williams	G. King	P. Benito						
Task	Hourly Rates	$260	$215	$195	$150	$80	Hours	($)	($)	
1.0	**DEVELOP BASELINE SCENARIO**									
1.1	Extend Historical Hydrology Baseline Scenario	0	2	10	4	0	16	$2,980	$0	$2,980
1.2	Incorporate all Existing and Approved/Planned Projects and Cal-Am's 700 AFY Replenishment Repayment	2	2	30	16	0	50	$9,200	$0	$9,200
1.3	Incorporate Sea Level Rise at Ocean Boundaries (Optional)	2	4	20	0	0	26	$5,280	$0	$5,280
	Task 1 Subtotal	*4*	*8*	*60*	*20*	*0*	*92*	*$17,460*	*$0*	*$17,460*
2.0	**DEVELOP ITERATIVE SCENARIO TO ACHIEVE PROTECTIVE ELEVATIONS IN 20 YEARS**									
	Iterative Modeling to Determine How Much Water is Needed to Achieve Protective Elevations within 20 Years	0	4	30	8	0	42	$7,910	$0	$7,910
	Task 2 Subtotal	*0*	*4*	*30*	*8*	*0*	*42*	*$7,910*	*$0*	*$7,910*
3.0	**REPORTING**									
3.1	Prepare Technical Memorandum describing Scenarios, Findings, and Conclusions	2	16	24	8	4	54	$10,160	$0	$10,160
3.2	Prepare Presentation and Present Findings to TAC and Board via Zoom	0	6	2	2	0	10	$1,980	$0	$1,980
	Task 3 Subtotal	*2*	*22*	*26*	*10*	*4*	*64*	*$12,140*	*$0*	*$12,140*
	Total with Optional Task Incorporating Sea Level Rise	**6**	**34**	**116**	**38**	**4**	**198**	**$37,510**	**$0**	**$37,510**
	Total without Optional Task Incorporating Sea Level Rise	**4**	**30**	**96**	**38**	**4**	**172**	**$32,230**	**$0**	**$32,230**

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SEASIDE GROUNDWATER BASIN WATERMASTER

TO: Watermaster Board of Directors

FROM: Laura Paxton, Administrative Officer (AO)

DATE: September 1, 2021

SUBJECT: Proposed Fiscal Year (Calendar Year) 2022 Annual Administrative Fund Budget

RECOMMENDATION:
Recommend approval of the attached proposed Administrative Fund Budget for FY 2022.

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 2021 has been minimal with $8,487 spent to date. There is nothing foreseen for 2022 of legal significance. A $25,000 administrative reserve is in place that could cover unforeseen legal issues that may arise. Therefore, the Legal line item has been reduced to $20,000.

It is proposed that the Administrative Officer receive a 10% rate increase, from $100/hour that began with appoint to the AO position in 2016, to $110/hour. The CPI has increased an average of 2.96% each year over the last five years-or roughly 15% total (April figures SF-Oakland-Hayward All Items), and COLA has increased 8% over the last 5 years. Furthermore, publicly recorded rates of four comparable water management agency administrative positions (although Watermaster AO is a somewhat unique position) had pay increases ranging from 8.5%-18%, averaging 13.25% over a three-to-four-year period:

Sr. Admin Specialist	Water Replenishment District of SoCal	8.5% over three years
Water Demand Manager	MPWMD	16.0% over three years
Executive Assistant	Marina Coast Water District	10.6% over three years
Executive Assistant	San Gabriel Water Quality Authority	18.0% over four years

Such an increase in AO rate calculates to a budgeted amount of $55,000, up from $50,000.

FISCAL IMPACT:
An estimated $34,500 in unspent 2021 funds are expected to be carried over to 2022. An Administrative Fund Assessment of $65,500 is proposed:
$55,000(AO)+$20,000(Legal)+$25,000(Reserve) = $100,000-$34,500(Carryover) = $65,500

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

California American Water 83.0%	$54,365
City of Seaside 14.4%	9,432
City of Sand City 2.6%	1,703

At its August 16, 2021 meeting the Budget and Finance Committee reviewed, discussed, and approved this budget.

ATTACHMENTS
1) Proposed Administrative Fund Budget for FY (Calendar Year) 2022

Seaside Groundwater Basin Watermaster
Administrative Fund
Proposed Budget August 16, 2021
Administrative Year 2022

	2021 Adopted Budget	2021 Total	2022 Adopted Budget
Assessment Income			
Reserve/Rollover*	$ 38,000	$ 56,000	$ 34,500
Administrative Assessment	62,000	62,000	65,500
Totals	100,000	118,000	100,000
Expenditures			
Contractual Services - Administrative	50,000	48,000	55,000
Legal Services	25,000	10,500	20,000
Total Expenses	75,000	58,500	75,000
Total Available	25,000	59,500	25,000
Less Reserve	25,000	25,000	25,000
Net Available	$ -	$ 34,500	$ -

** Note: The reserve/rollover balance of $34,500 was determined upon completion by Watermaster staff of a detailed reconciliation from 2006 through March 2021 of the Administrative Fund financial records held at the Watermaster office against the Administrative Fund financial records held by the City of Seaside - the Watermaster fiscal agent.*

SEASIDE GROUNDWATER BASIN WATERMASTER

TO: Board of Directors

FROM: Robert S. Jaques, Technical Program Manager

DATE: September 1, 2021

SUBJECT: Proposed Fiscal Year 2022 Monitoring and Management Program (M&MP) and the 2022 and 2023 M&MP Operations and Capital Budgets

- -

RECOMMENDATIONS:

Approve, or make changes to and then approve, the below:

1. FY 2022 M&MP
2. FY 2022 M&MP Operations Fund Budget
3. FY 2022 M&MP Capital Fund Budget

The projected 2023 Operations and Capital Fund Budgets are informational only, and no action on those budgets is required.

BACKGROUND:

At its August 11, 2021 meeting the TAC reviewed, discussed, and approved the attached FY 2022 M&MP and its associated Operations and Capital Budgets. At its August 16, 2021 meeting the Budget and Finance Committee reviewed, discussed, and approved these Budgets.

DISCUSSION

2022 M&MP:

Most of the differences between the 2021 M&MP and the proposed 2022 M&MP are relatively minor. Note, however, that doing replenishment modeling update work is included under Task I.2.b.3 in the 2022 M&MP, even though it is already included in the 2021 M&MP. This was done in case the Board decides to defer doing that work until 2022, so it can first get the results of the flow direction/flow velocity modeling report, which the Board asked staff to obtain a scope and cost proposal for at its May 5, 2021 meeting. If the Board elects to proceed with the replenishment modeling update work in 2021, then it will be removed from the 2022 M&MP.

The TAC strongly recommends performing this updated modeling work, which will be focused on determining the additional amount of water (replenishment water) above and beyond that which would be injected to supply customer demands by the desalination plant or the PWM Expansion Project (depending on which of these moves forward to construction), and not extracted in order to raise groundwater levels to protective elevations Basin-wide.

2022 M&MP Budgets:

Attached are the proposed M&MP Operations and Capital Budgets for 2022 and 2023. The Board has asked that two-year budgets be developed to alert the Board to potential changes in scope and/or cost in near future years. The projected 2023 Operations and Capital Fund Budgets are informational only, and no action on those budgets is required.

The following are comments and/or principal revisions from the 2021 M&MP Budget:

Technical Program Manager: Due to the large number of meetings being held by the Salinas Valley Basin's and Marina Coast Water District's Groundwater Sustainability Agency's committees that I serve on representing the Watermaster, and the increasing work associated with working toward obtaining replenishment water to protect the Seaside Basin against the threat of seawater intrusion, the budget amount for the Technical Program Manager had to be increased in 2021 through a mid-year budget amendment from an initial $60,000 to $95,000. I anticipate that this increased workload will begin to reduce in 2022 after the Monterey Subbasin GSP has been completed. Therefore, the proposed line-item budget amount has been reduced to $75,000 in 2022.

Tasks M.1.c, M.1.d, and M.1.e (On-call/as-needed Consulting Services): In 2020 and again in 2021 we have needed a greater amount of assistance from Montgomery and Associates in evaluating a number of different issues that have come before the TAC, than has been the case in prior years. In 2022 there will be some hourly rate increases for the Montgomery and Associates staff that will likely be the ones to provide on-call/as-needed hydrogeological consulting services under Tasks M.1.c, M.1.d, and M.1.e (Derrik Williams, Pascual Benito, and Georgina King). I also anticipate that there may be an ongoing need for a greater level of services in 2022, and have accordingly increased the on-call consulting services allowance for this budget line-item.

Task M.1.g (SGMA Documentation Preparation): Although the scope of work for this Task is unchanged from 2021, in 2022 there will be some hourly rate increases for the Montgomery and Associates staff that perform this work. Therefore, the amount proposed for 2022 is slightly increased from 2021 amount.

Tasks I.2.a.1 (Conduct Ongoing Data Entry/ Database Maintenance/Enhancement), I.2.b.2 (Collect Water Levels), and I.2.b.3 (Collect Quarterly Water Quality Samples and Perform Sentinel Well Induction Logging): Although the scope of work for these Tasks is essentially unchanged from 2021, in 2022 there will be significant hourly rate increases for the MPWMD staff that perform this work, and additional charges for direct and indirect MPWMD costs associated with performing this work. Also, under the new Scope of Work being used with MPWMD under the new Master Agreement starting in 2022, some of the cost allocations between their work on these Tasks is slightly different than in 2021.

The proposed cost for the induction logging work that is performed by Mr. Feeney and his subcontractor in Task I.2.b.3 is slightly higher than it was in 2021. This is because more maintenance work on the Sentinel wells is anticipated in 2022, and the induction logging contractor's costs have gone up.

Therefore, the amounts proposed for these Tasks in 2022 differ significantly from the 2021 amounts, and are generally higher than they were in 2021.

Task I.2.b.6 (Reports): Although the scope of work for this Task is unchanged from 2021, in 2022 there will be hourly rate increases for the MPWMD staff that perform this work. Therefore, the amount proposed for 2022 is slightly increased from 2021 amount.

Task I.2.b.7 (CASGEM Data Submittal for Watermaster's Voluntary Wells): MPWMD expects to be able to reduce the amount of time needed to format and submit this data to DWR in 2022 to comply with the SGMA requirements for adjudicated basins. Even with MPWMD's hourly rate increases, it has been possible to reduce the budget for this Task in 2022 from the amount budgeted in 2021.

Task I.3.a.3 (Evaluate Replenishment Scenarios and Develop Answers to Basin Management Questions): Included in Task I.3.a.3 is $40,000 to perform work to update modeling performed in 2013 pertaining to injection of water to raise groundwater levels. This additional work was initially proposed for 2020, but was removed based on input from Todd Groundwater and Montgomery & Associates that pointed out that if all the water injected by the PWM and desalination plant projects is subsequently extracted, there would be little if any net increase in groundwater levels. Reinstating that work was proposed for 2021 in order to work on getting additional water above and beyond that which would be injected by the desalination plant or the PWM Expansion Project (depending on which of these moves forward to construction) and not extracted, in order to raise groundwater levels to protective elevations Basinwide. However, in the event the Board decides to defer this work until 2022, funds to perform that work have been included in the 2022 budget for this Task. If the Board proceeds with that work in 2021, the scope and budget for it will be deleted from the 2022 M&MP and its budget.

Task I.4.c (Annual Report- Seawater Intrusion Analysis): Although the scope of work for this Task is essentially unchanged from 2021, Montgomery & Associates has been able to slightly reduce its costs to prepare the 2022 Seawater Intrusion Analysis Report, and no costs for MPWMD to perform work under this Task are anticipated. Therefore, the amount proposed for 2022 is lower than the 2021 amount.

SUMMARY:
As indicated by the right-hand column titled "Comparative Costs from 2021 Budget" in the proposed 2022 M&MP Operations Budget in Attachment 1, the proposed 2022 Budget is $30,809 higher ($314,878-$284,069) than the 2021 Budget. However, if the replenishment water modeling update work in Task I.3.a.3 is performed 2021 rather than in 2022, the 2022 Budget will be $9,191 lower than the 2021 Budget.

It is anticipated that a new well to replace monitoring well FO-9 Shallow will be constructed in 2022. The 2022 M&MP Capital Budget includes $66,667, which is the Watermaster's estimated share of the cost to perform that work. There is an estimated $94,878 available in the Operations Fund balance at the end of 2021 that has been deducted from the 2022 proposed budget amount. Proposed 2022 Operations Fund assessments are as follows:

$314,878 + 66,667 - $94,878 = $286,667

California American Water	91.0%	$260,866
City of Seaside	7.0%	20,068
DBO Development No. 30	0.9%	2,580
Graniterock	0.9%	2,580
Cypress/Calabrese	0.2%	573
	Total	$286,667

1. Proposed 2022 M&MP
2. M&MP: Operations Fund Budget Proposed for 2022
3. M&MP: Operations Fund Budget Projected for 2023
4. M&MP: Capital Fund Budgets proposed for 2022 and projected for 2023

Seaside Groundwater Basin
2022 Monitoring and Management Program

The tasks outlined below are those that are anticipated to be performed during 2022. Some Tasks listed below are specific to 2022, 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** **($27,560)**	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 teleconference connection), including providing periodic progress reports to the Watermaster for inclusion in the agenda packets for the TAC meetings, when requested by the Watermaster to do so. These progress reports will typically include project progress that has been made, problem identification and resolution, and planned upcoming work. • From time-to-time when Watermaster staff asks Consultants to make special presentations to the Watermaster Board and/or the TAC, and which are not included in the Consultant's contracts for other tasks. Appropriate Consultant representatives will attend TAC meetings (either in person or by teleconference 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 ($2,380)	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 ($23,176)	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 2022. 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 2022.
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 2022.

I. 2 b. 2 **Collect Water Levels** **($21,490)**	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.** **($39,335)**	Water quality data will be collected quarterly from certain of the monitoring wells, but will no longer be collected from the four coastal Sentinel Wells. Discontinuing water quality sampling in those wells is the result of the finding made in 2018 that the water quality samples being extracted from those wells are not representative of the aquifer. Those wells were designed for the purpose of electric induction logging, and will therefore continue to be induction logged twice a year in WY 2022. In 2012 water quality analyses were expanded to include barium and iodide ions, to determine the potential benefit of performing these additional analyses. These two parameters have been useful in analyzing seawater intrusion potential in other vulnerable coastal groundwater basins, and are briefly mentioned in the Watermaster's annual Seawater Intrusion Analysis Reports. These parameters were added to the annual water quality sampling list for the 3 most coastal MPWMD monitoring wells (MSC, PCA, and FO-09). Barium and iodide analyses will continue being performed on the 3 most coastal MPWMD monitoring wells in 2022. As discussed in the 2013 Annual Report, the Watermaster reduced the frequency of water quality sampling at monitoring well SBWM-5 (the Camp Huffman well) to once every 3 years beginning in WY 2014. This was based on the January 2010 well construction report in which the well installation hydrogeologic consultant (Martin Feeney) recommended doing initial sampling annually for several years, then reducing the frequency of sampling once it was felt that the water chemistry had been established. Mr. Feeney suggested going to once every five years after initial water quality had been established. Starting with WY 2014 the Watermaster elected to go to once every three years as a more conservative approach. The results from water quality sampling that has performed to date on these wells shows there has been little change in water quality at these wells. Therefore, the sampling frequency has been reduced to once every five years beginning in 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.

	Under this Task in 2013 retrofitting to use the low-flow purge approach for getting water quality samples was completed on all of the wells that are sampled. This sampling equipment sits in the water column and may periodically need to be replaced or repaired. Accordingly, an allowance to perform maintenance on previously installed equipment has been included in this Task. Also, in the event a sampling pump fails or is found to be no longer adequate due to declining groundwater levels, an allowance of $900 to purchase a replacement sampling pump has been included in this Task. Improvements to the QA/QC program for the water quality sampling work were adopted in mid-2017 and will be included in this work in 2022.
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 2022.
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, is expected to be installed in 2022. The costs for this work are included in the 2022 M&MP Capital Budget, and are not included in the 2022 Operations Budget.
I. 2. b. 6 Reports ($3,136)	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 ($4,704)	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 2022.
I. 3. a. 2 **Develop Protective Water Levels** **($0)**	A series of cross-sectional models was created in 2009 in order to develop protective water levels for selected production wells, as well as for the Basin as a whole. This work is discussed in Hydrometrics' "Seaside Groundwater Basin Protective Water Elevations Technical Memorandum." In 2013 further work was started to refine these protective water levels, but it was found that the previously developed protective water levels were reasonable. Protective water levels will be updated, if appropriate, as part of the work of Task I.3.c.
I. 3. a. 3 **Evaluate Replenishment Scenarios and Develop Answers to Basin Management Questions** **($60,000)**	In 2009 the updated Model was used to evaluate different scenarios to determine such things as the most effective methods of using supplemental water sources to replenish the Basin and/or to assess the impacts of pumping redistribution. This work is described in HydroMetrics' "Seaside Groundwater Basin Groundwater Model Report." In 2010, and again in 2013, HydroMetrics used the updated Model to develop answers to some questions associated with Basin management. Modeling performed 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. Within the next few years there may be the ability of either of two projects to provide additional water for Basin replenishment. One of these is the Monterey Peninsula Water Supply Project's (MPWSP) desalination plant. The other is the Pure Water Monterey (PWM) Expansion Project. 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. The original 3,500 AFY PWM Project is already in operation, and construction of either the MPWSP desalination plant or the PWM Expansion Project is expected to begin within the next few years. Modeling to determine the additional amount of replenishment water needed to achieve protective groundwater level elevations throughout the Basin, after either or both of those projects are constructed, would be performed to aid the Watermaster in pursuing approaches to obtain that additional water for Basin replenishment. Based on input from Montgomery & Associates it is expected to cost about $40,000 to update the earlier replenishment water modeling that was performed in 2013. Hence, this Task includes a $40,000 allowance to perform this modeling, if so directed by the Watermaster Board.

	Modeling performed in 2014, 2015, and 2016 led to the conclusion that groundwater levels in parts of the Laguna Seca Subarea will continue to fall, even if all pumping within that subarea is discontinued, because of the influence of pumping from areas near to, but outside of, the Basin boundary. Additional modeling work may be performed in 2022 after the Groundwater Sustainability Plan for the Monterey Subbasin (being jointly prepared by the Salinas Valley Basin and the Marina Coast Water District Groundwater Sustainability Agencies) to further examine this situation. This Task provides a $20,000 allowance to perform modeling or other work to develop answers to basin management questions, if so directed by the Watermaster Board.
I. 3. b. **Complete Preparation of Basin Management Action Plan** **($0)**	The Watermaster's Consultant completed preparation of the Basin Management Action Plan (BMAP) in February 2009. The BMAP serves as the Watermaster's long-term seawater intrusion prevention plan. The Sections that are included in the BMAP are: Executive Summary Section 1 – Background and Purpose Section 2 – State of the Seaside Groundwater Basin Section 3 – Supplemental Water Supplies Section 4 –Groundwater Management Actions Section 5 – Recommended Management Strategies Section 6 – References
I. 3. c. **Refine and/or Update the Basin Management Action Plan** **($0)**	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 2022. However, although no funds are budgeted for this Task in 2022, at some point after the Groundwater Sustainability Plan (GSP) for the adjacent Monterey Subbasin of the Salinas Valley Groundwater Basin is completed, it may be appropriate to further update the BMAP to reflect the impacts of implementing that GSP. That GSP is scheduled to be completed by early 2022.
I. 3. d. **Evaluate Coastal Wells for Cross-Aquifer Contamination Potential** **($0)**	If seawater intrusion were to reach any of the coastal wells in any aquifer, and if a well was constructed without proper seals to prevent cross-aquifer communication, or if deterioration of the well led to casing leakage, it would be possible for the intrusion to flow from one aquifer to another. An evaluation of this was completed in 2012 and is described in MPWMD's Memorandum titled "Summary of Seaside Groundwater Basin Cross-Aquifer Contamination Wells Investigation Process and Conclusions" dated August 8, 2012. This Memorandum did not recommend performing any further work on this matter, other than to incorporate into the Watermaster's Database data from wells that were

newly identified by the work performed in 2012. That data has now been incorporated into the Database. 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.

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

No further work of this type is anticipated in 2022.

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

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

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

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

If 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 for each of these projects, to develop model scenarios to see if the problem(s) can be averted by changing delivery schedules and delivery quantities. This Task includes an allowance of $10,000 to have Montgomery and Associates perform such modeling, if necessary.

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

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

I. 4. a. **Oversight of Seawater Intrusion Detection and Tracking** **($0)**	Consultants will provide general oversight over the Seawater Intrusion detection program under the other Tasks in this Work Plan.
I. 4. c. **Annual Report- Seawater Intrusion Analysis** **($26,290)**	At the end of each water year, a Consultant will reanalyze all water quality data. Water level and water quality data will be provided to the Consultant in MS Access format. The Consultant will put this data into a report format and will include it as an attachment to the Seawater Intrusion Analysis Report. 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 annual EM logs will be analyzed to identify changes in seawater wedge locations. All analyses will be incorporated into an annual report that follows the format of the initial, historical data report. Potential seawater intrusion will be highlighted in the report, and if necessary, recommendations will be included. The annual report will be submitted for review by the TAC and the Board. Modifications to the report will be incorporated based on input from these bodies, as well as Watermaster staff.
I. 4. 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 2022.
I. 4. f. **If Seawater Intrusion is Determined to be Occurring, Implement Contingency Response Plan** **($0)**	The SIRP will be implemented if seawater intrusion, as defined in the Plan, is determined by the Watermaster to be occurring.

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ATTACHMENT 2

Monitoring and Management Program Operations Budget For Tasks to be Undertaken in 2022								Comparative Costs from 2021 Budget
Task	Subtask	Sub-Subtask	Cost Description	CONSULTANTS & CONTRACTORS[3] MPWMD	Private Consultants	Contractors	Total	
			Labor					
			Technical Project Manager[18]	$0	$75,000	$0	$75,000	$60,000
M.1 Program Administration								
	M.1.a		Project Budget and Controls	$0	$0	$0	$0	$0
	M.1.b		Assist with Board and TAC Agendas	$0	$0	$0	$0	$0
	M.1.c, M.1.d, & M.1.e		Preparation for and Attendance at Meetings and Peer Review of Documents and Reports[8]	$0	$27,560	$0	$27,560	$23,000
	M.1.f		QA/QC	$0	$0	$0	$0	$0
	M.1.g		SGMA Documentation Preparation	$0	$2,380	$0	$2,380	$2,320
I.1 Initial Phase 1 Monitoring Well Construction (Task Completed in Phase 1)								
I.2 Production, Water Level and Quality Monitoring								
	I. 2. a.		Database Management					
		I. 2. a. 1.	Conduct Ongoing Data Entry/ Database Maintenance/Enhancement[15]	$20,776	$2,400	$0	$23,176	$17,004
		I. 2. a. 2.	Verify Accuracy of Production Well Meters	$0	$0	$0	$0	$0
	I. 2. b.		Data Collection Program					
		I. 2. b. 1.	Site Representation and Selection[7]	$0	$0	$0	$0	$0
		I. 2. b. 2.	Collect Water Levels[6]	$21,490	$0	$0	$21,490	$3,726
		I. 2. b. 3.	Collect Quarterly Water Quality Samples and Perform Sentinel Well Induction Logging[1][5]	$18,770	$0	$20,565	$39,335	$42,101
		I. 2. b. 4.	Update Program Schedule and Standard Operating Procedures.	$0	$0	$0	$0	$0
		I. 2. b. 5.	Monitor Well Construction[7]	$0	$0	$0	$0	$0
		I. 2. b. 6.	Reports	$3,136	$0	$0	$3,136	$2,086
		I. 2. b. 7.	CASGEM Data Submittal for Watermaster's Voluntary Wells	$4,704	$0	$0	$4,704	$5,960
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	$60,000	$0	$60,000	$70,000
	I. 3. b.		Complete Preparation of Basin Management Action Plan	$0	$0	$0	$0	$0
	I. 3. c.		Refine and/or Update the Basin Management Action Plan	$0	$0	$0	$0	$0
	I. 3. d		Evaluate Coastal Wells for Cross-Aquifer Contamination Potential	$0	$0	$0	$0	$0
	I. 3. e		Seaside Basin Geochemical Model[13]	$0	$10,000	$0	$10,000	$10,000
I.4 Seawater Intrusion Contingency Plan								
	I. 4. a.		Oversight of Seawater Intrusion Detection and Tracking[17]	$0	$0	$0	$0	$0
	I. 4. c.		Annual Report- Seawater Intrusion Analysis[16]	$0	$26,290	$0	$26,290	$27,502
	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		**$68,876**	**$128,630**	**$20,565**		
			SUBTOTAL not including Technical Program Manager =				$218,071	$203,699
			Contingency (not including Technical Program Manager) @ 10%[4]=				$21,807	$20,370
			Technical Program Manager =				$75,000	$60,000
			TOTAL[19]=				**$314,878**	**$284,069**

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

(2) The response plan would only be implemented in the event sea water intrusion is determined to be occurring.

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

(4) Due to the uncertainties of the exact scopes of some of the larger Tasks listed above at the time of preparation of this Budget it is recommended that a Contingency of approximately 10% be included in the Budget.

(5) The MPWMD portion of this Task includes: (1) $900 to purchase a new sampling pump if an existing one needs to be replaced, (2) $476 for vehicle mileage costs for both this Task and Task I.2.b.2, (3) $6,200 for laboratory analytical costs, (4) $150 for CO2 bottles to run the sample pumps, and (5) $504 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. Includes the purchase and installation of one new replacement datalogger at a price of $850 including installation parts, or to keep in inventory as a spare if needed,

(7) A replacement for monitoring well FO-9 Shallow is expected to be constructed in 2022. The costs for this work are contained in the Capital Budget for 2022 and no costs for it are included in the Operations Budget for 2022.

(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) The 2021 budget line-item for this Task included doing replenishment water updated modeling for an estimated $50,000. A cost proposal for this work was received and it was found that this work could be performed for approximately $40,000.The 2021 budget also included $20,000 for evaluating other issues the Board might wish to evaluate. Depending on direction from the Board, the replenishment modeling update work may be performed in 2021. If so, the funds in this Task would only be used if there were other issues the Board wished to evaluate and which were not covered in the updated BMAP, and the budget amount for this Task would be reduced from $60,000 to $20,000.

(11) The Model was updated and recalibrated in 2018, so no costs for this Task are anticipated in 2022.

(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 2022.

(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 2022 would only be used if geochemical modeling is performed in 2022 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) This Task is included to provide funds for the Watermaster to perform modeling and other investigative work to aid in making Basin management decisions.

(15) Includes $200/month for an outside consultant to maintain the Watermaster's website and post documents on it. Also includes $1,960 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.

(18) The amount originally budgeted for the Technical Program Manager in 2021 was $60,000. However, this was increased to $95,000 by a budget amendment in mid-year when it became apparent that more work needed to be done than was originally anticipated.

(19) As noted in footnote 10, the Total Cost for the 2022 M&MP budget would be reduced by $40,000 if the replenishment water modeling update is performed in 2021.

ATTACHMENT 3

Monitoring and Management Program Operations Budget
For Tasks to be Undertaken in 2023[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	$28,387	$0	$28,387
	M.1.f		QA/QC	$0	$0	$0	$0
	M.1.g		SGMA Documentation Preparation	$0	$2,451	$0	$2,451
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	$21,399	$2,472	$0	$23,871
		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]	$22,135	$0	$0	$22,135
		I. 2. b. 3.	Collect Quarterly Water Quality Samples[1][5][6]	$19,333	$0	$21,182	$40,515
		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	$3,230	$0	$0	$3,230
		I. 2. b. 7.	CASGEM Data Submittal for Watermaster's Voluntary Wells	$4,845	$0	$0	$4,845
I.3 Basin Management							
	I. 3. a.		Enhanced Seaside Basin Groundwater Model	(Costs Shown in Subtasks Below)			
		I. 3. a. 1	Update the Existing Model	$0	$0	$0	$0
		I. 3. a. 2	Develop Protective Water Levels	$0	$0	$0	$0
		I. 3. a. 3	Evaluate Replenishment Scenarios and Develop Answers to Basin Management Questions	$0	$20,000	$0	$20,000
	I. 3. b.		Complete Preparation of Basin Management Action Plan	$0	$0	$0	$0
	I. 3. c.		Refine and/or Update the Basin Management Action Plan [11]	$0	$0	$0	$0
	I. 3. d		Evaluate Coastal Wells for Cross-Aquifer Contamination Potential[13]	$0	$0	$0	$0
	I. 3. e		Seaside Basin Geochemical Model[14]	$0	$0	$0	$0
I.4 Seawater Intrusion Contingency Plan							
	I. 4. a.		Oversight of Seawater Intrusion Detection and Tracking	$0	$0	$0	$0
	I. 4. b.		Analyze and Map Water Quality from Coastal Monitoring Wells	(Costs Included Under I.4.a)			
	I. 4. c.		Annual Report- Seawater Intrusion Analysis	$0	$27,079	$0	$27,079
	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		**$70,942**	**$80,389**	**$21,182**	
						SUBTOTAL not including Technical Program Manager =	$172,513
						Contingency (not including Technical Program Manager) @ 10%[4]=	$17,251
						Technical Program Manager	$75,000
						TOTAL=	**$264,764**

Footnotes:						
(1) Under this Subtask the Watermaster will directly contract with an outside contractor to perform the Sentinel Well induction logging work, and to also collect water level data in conjunction with doing the induction logging. MPWMD will perform the other portions of the work of this Subtask.						
(2) The response plan would only be implemented in the event sea water intrusion is determined to be occurring.						
(3) Within the context of this document the term "Consultant" refers either to a Private Consultant providing professional engineering or other types of technical services, or to the Monterey Peninsula Water Management District (MPWMD). The term "Contractor" refers to a firm providing construction or field services such as well drilling, induction logging, or meter calibration.						
(4) Due to the uncertainties of the exact scopes of some of the Tasks listed above at the time of preparation of this Budget, it is recommended that a 10% Contingency be included in the Budget.						
(5) A portion of this cost is for maintaining sampling equipment that was installed in prior years.						
(6) Does not include costs for MPWMD to collect water level data or water quality samples from wells other than those that are part of the basic monitoring well network, i.e. for private well owners who have requested that the Watermaster obtain this data for them. Costs to obtain that data are to be reimbursed to the Watermaster by those well owners, so there should be no net cost to the Watermaster for that portion of the work under these Tasks.						
(7) No additional monitoring well is expected to be constructed in 2023.						
(8) For Montgomery and Associates, Todd Groundwater, and Martin Feeney to provide hydrogeologic consulting assistance to the						
Watermaster, beyond that associated with performing other specified Tasks, when requested to do so by the Technical Program Manager.						
(9) If work under this Task is found to be necessary, it will be funded through the Contingency line item in this Budget.						
(10) Not used.						
(11) If necessary to reflect knowledge gained from modeling work or other data sources. Since the BMAP was updated in 2018, no work on this Task is anticipated in 2022.						
(12) Includes a 3% inflation factor on most annually recurring costs in the 2022 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 2023.						
(14) It is assumed that all work of this Task will be completed in 2022.						

ATTACHMENT 4

Monitoring and Management Program Capital Budget For Tasks to be Undertaken in 2022

A replacement for monitoring well FO-9 Shallow is expected to be constructed in 2022. All costs including consultants for design and the well drilling contractor for construction are included in this Capital Budget. It is assumed that there will be a 3-way cost sharing agreement between the Watermaster, MPWMD, and MCWD for that work. MPWMD estimated the cost of a replacement well with a depth of 600 feet would be approximately $114K, based on an estimated per-foot cost of $140 and a construction supervision cost of $30K. Mr. Feeney estimated it would cost about $280 per-foot, which would increase the MPWMD estimated cost to $198K. The amount budgeted for this Task is based on a 3-way share of an estimated cost of $200K, with the Watermaster's share being $66,667.

Monitoring and Management Program Capital Budget For Tasks to be Undertaken in 2023

No Capital projects are anticipated to be undertaken in 2023, so this budget is $0.

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Seaside Groundwater Basin Watermaster

Replenishment Fund

Water Year 2021 (October 1 - September 30) / Fiscal Year (January 1 - December 31, 2021)

Proposed 2021 Budget

Replenishment Fund	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Assessments:	WY 05/06	WY 06/07	WY 07/08	WY 08/09	WY 09/10	WY 10/11	WY 11/12	WY 12/13	WY 13/14
Unit Cost:	$1,132 / $283	$1,132 / $283	$2,485 / 621.25	$3,040 / $760	$2,780 / $695	$2,780 / $695	$2,780 / $695	$2,780 / $695	$2,702 / $675.50
Cal-Am Water Balance Forward	**$ -**	**$ 1,641,004**	**$ 4,226,710**	**$ (2,871,690)**	**$ (2,839,939)**	**$ (3,822,219)**	**$ (6,060,164)**	**$ (8,735,671)**	**$ (6,173,771)**
Cal-Am Water Production	*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*
Cal-Am Water NSY Over-Production (AF)	*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*
Exceeding Natural Safe Yield Considering Alternative Producers	2,106,652	2,565,471	5,199,014	3,773,464	4,112,933	3,187,854	2,280,943	2,380,842	2,790,539
Cal-Am Water OY Over-Production (AF)	-	*71.50*	*13.70*	-	-	-	*222.97*	*260.51*	*416.01*
Operating Yield Overproduction Replenishment	-	20,235	8,511	-	-	-	154,963	181,057	281,012
Total California American	**$ 2,106,652**	**$ 2,585,706**	**$ 5,207,525**	**$ 3,773,464**	**$ 4,112,933**	**$ 3,187,854**	**$ 2,435,907**	**$ 2,561,899**	**$ 3,071,550**
CAW Credit Against Assessment	(465,648)		(12,305,924)	$ (3,741,714)	(5,095,213)	(5,425,799)	(5,111,413)	-	-
CAW Unpaid Balance	***$ 1,641,004***	***$ 4,226,710***	***(2,871,690)***	***$ (2,839,939)***	***$ (3,822,219)***	***$ (6,060,164)***	***$ (8,735,671)***	***$ (6,173,771)***	***$ (3,102,221)***
City of Seaside Balance Forward	**$ -**	**$ 243,294**	**$ 426,165**	**$ 1,024,272**	**$ 1,619,973**	**$ 891,509**	**$ (110,014)**	**$ (773,813)**	**$ (1,575,876)**
City of Seaside Municipal Production	*332.00*	*287.70*	*294.20*	*293.44*	*282.87*	*240.68*	*233.72*	*257.73*	*223.64*
City of Seaside NSY Over-Production (AF)	*194.07*	*153.78*	*161.99*	*153.06*	*113.21*	*50.84*	*58.82*	*85.17*	*52.71*
Exceeding Natural Safe Yield Considering Alternative Producers	219,689	174,082	402,540	465,300	314,721	141,335	163,509	236,782	142,410
City of Seaside OY Over-Production (AF)	*44.60*	*0.30*	*6.80*	*21.47*	*29.77*	*0.00*	*222.97*	*38.86*	*4.77*
Operating Yield Overproduction Replenishment	12,622	85	4,225	16,522	20,690	-	1,689	27,007	3,222
Total Municipal	232,310	174,167	406,764	481,823	335,412	141,335	165,198	263,788	145,631
City of Seaside - Golf Courses	*464.70*		*593.00*	*562.93*	*100.61*	*0.01*	*0.13*	*0.05*	*0.57*
City of Seaside NSY Over-Production (AF)	-	-	*53.00*	*22.93*	-	-	-	-	-
Exceeding Natural Safe Yield - Alternative Producer	-	-	131,705	69,701	-	-	-	-	-
City of Seaside OY Over-Production (AF)			*53.00*	*22.93*	-	-	-	-	-
Operating Yield Overproduction Replenishment	-	-	32,926	17,427	-	-	-	-	-
Total Golf Courses	-	-	164,631	87,128	-	-	-	-	-
Total City of Seaside*	**$ 232,310**	**$ 174,167**	**$ 571,395**	**$ 568,951**	**$ 335,412**	**$ 141,335**	**$ 165,198**	**$ 263,788**	**$ 145,631**
City of Seaside Late Payment 5%	10,984	8,704	26,712	26,750	15,737				
In-lieu Credit Against Assessment	-		-	$ -	(1,079,613)	(1,142,858)	(828,996)	(1,065,852)	(1,459,080)
City of Seaside Unpaid Balance	***$ 243,294***	***$ 426,165***	***$ 1,024,272***	***$ 1,619,973***	***$ 891,509***	***$ (110,014)***	***$ (773,813)***	***$ (1,575,876)***	***$ (2,889,325)***
Total Replenishment Fund Balance	**$ 1,884,298**	**$ 4,652,874**	**$ (1,847,417)**	**$ (1,219,966)**	**$ (2,930,710)**	**$ (6,170,178)**	**$ (9,509,483)**	**$ (7,749,648)**	**$ (5,991,546)**
Replenishment Fund Balance Forward	-	**$ 1,884,298**	**$ 4,652,874**	**$ (1,847,417)**	**$ (1,219,966)**	**$ (2,930,710)**	**$ (6,170,178)**	**$ (9,509,483)**	**$ (7,749,648)**
Total Replenishment Assessments	2,349,946	2,768,576	5,805,632	4,369,165	4,464,082	3,329,189	2,601,104	2,825,688	3,217,182
Total Paid and/or Credited	(465,648)	-	(12,305,924)	(3,741,714)	(6,174,826)	(6,568,657)	(5,940,409)	(1,065,852)	(1,459,080)
Grand Total Fund Balance	**$ 1,884,298**	**$ 4,652,874**	**$ (1,847,417)**	**$ (1,219,966)**	**$ (2,930,710)**	**$ (6,170,178)**	**$ (9,509,483)**	**$ (7,749,648)**	**$ (5,991,546)**

Seaside Groundwater Basin Watermaster

Replenishment Fund

Water Year 2022 (October 1 - September 30) / Fiscal Year (January 1 - December 31, 2022)

Proposed 2022 Budget

Replenishment Fund	2015	2016	2017	2018	2019	2020	Budget WY 2021	Totals WY 2006 Through 2020	Budget WY 2022	Projected Totals Through WY 2021
Assessments:	WY 14/15	WY 15/16	WY 16/17	WY 17/18	WY 18/19	WY 19/20	WY 20/21		WY 21/22	
Unit Cost:	$2,702 / $675.50	$2,702 / $675.50	$2,872 / $718	$2,872 / $718	$2,872 / $718	$2,872 / $718	$2,947 / $737		$3,062 / $815	
Cal-Am Water Balance Forward	**$ (3,102,221)**	**$ (676,704)**	**$ (676,704)**	**$ (491,747)**	**$ (48,797,949)**	**$ (47,979,851)**	**$ (46,855,120)**		**$ (46,735,120)**	
Cal-Am Water Production	*2,764.73*	*1,879.21*	*2,029.51*	*2,229.45*	*2,120.22*	*2,245.88*		*44,376.99*		
Cal-Am Water NSY Over-Production (AF)	*782.17*	-	*64.40*	*374.65*	*284.85*	*334.21*		*14,638.57*		
Exceeding Natural Safe Yield Considering Alternative Producers	**2,113,414**	-	184,957	1,075,995	818,097	959,859	100,000	$ 33,650,034	100,000	$ 33,750,034
Cal-Am Water OY Over-Production (AF)	*462.03*	-	-	-	-	*229.63*		*1,676.35*		
Operating Yield Overproduction Replenishment	**312,103**	-	-	-	-	164,872	20,000	1,142,753	20,000	1,162,753
Total California American	**$ 2,425,516**	**$ -**	**$ 184,957**	**$ 1,075,995**	**$ 818,097**	**$ 1,124,731**	**$ 120,000**	**$ 34,792,787**	**$ 120,000**	**$ 34,912,787**
CAW Credit Against Assessment	-	-		(49,382,196)	-			(81,527,907)		(81,527,907)
CAW Unpaid Balance	**$ (676,704)**	**$ (676,704)**	**$ (491,747)**	**$ (48,797,949)**	**$ (47,979,851)**	**$ (46,855,120)**	***$ (46,735,120)***	***$ (46,735,120)***	***$ (46,615,120)***	***$ (46,615,120)***
City of Seaside Balance Forward	**$ (2,889,325)**	**$ (3,346,548)**	**$ (3,232,420)**	**$ (3,142,500)**	**$ (3,022,249)**	**$ (2,919,806)**	**$ (2,802,831)**		**$ (2,692,831)**	
City of Seaside Municipal Production	*185.01*	*195.16*	*188.31*	*184.63*	*178.40*	*181.65*		*3,559.14*		
City of Seaside NSY Over-Production (AF)	*25.77*	*37.87*	*30.47*	*32.46*	*27.82*	*32.06*		*1,210.10*		
Exceeding Natural Safe Yield Considering Alternative Producers	69,630	102,330	87,512	93,225	79,893	92,089	100,000	$ 2,885,045	100,000	$ 2,985,045
City of Seaside OY Over-Production (AF)	*0.06*	*17.70*	*3.35*	*37.64*	*31.41*	*34.66*		*494.36*		
Operating Yield Overproduction Replenishment	38	11,959	2,409	27,026	22,550	24,886	10,000	184,929	10,000	194,929
Total Municipal	69,667	114,290	89,920	120,251	102,443	116,975	110,000	3,069,974	110,000	3,179,974
City of Seaside - Golf Courses	*311.73*	*458.44*	*439.36*	*511.90*	*490.42*	*537.00*		*4,470.85*		
City of Seaside NSY Over-Production (AF)	-	-	-	-	-	-		*75.93*		
Exceeding Natural Safe Yield - Alternative Producer	-	-	-	-	-	-	-	201,406	-	201,406
City of Seaside OY Over-Production (AF)	-	-	-	-	-	-		*75.93*		
Operating Yield Overproduction Replenishment	-	-	-	-	-	-	-	50,353	-	50,353
Total Golf Courses	-	-	-	-	-	-	-	251,759	-	251,759
Total City of Seaside*	**$ 69,667**	**$ 114,290**	**$ 89,920**	**$ 120,251**	**$ 102,443**	**$ 116,975**	**$ 110,000**	**$ 3,321,733**	**$ 110,000**	**$ 3,431,733**
City of Seaside Late Payment 5%								88,887		88,887
In-lieu Credit Against Assessment	(526,890)	(162)	-	-	-	-	-	(6,103,451)	-	(6,103,451)
City of Seaside Unpaid Balance	***$ (3,346,548)***	***$ (3,232,420)***	***$ (3,142,500)***	***$ (3,022,249)***	***$ (2,919,806)***	***$ (2,802,831)***	***$ (2,692,831)***	***$ (2,692,831)***	***$ (2,582,831)***	***$ (2,582,831)***
Total Replenishment Fund Balance	**$ (4,023,252)**	**$ (3,909,125)**	**$ (3,634,247)**	**$ (51,820,198)**	**$ (50,899,657)**	**$ (49,657,951)**	**$ (49,427,951)**	**$ (49,427,951)**	**$ (49,197,951)**	**$ (49,197,951)**
Replenishment Fund Balance Forward	**$ (5,991,546)**	**$ (4,023,252)**	**$ (3,909,125)**	**$ (3,634,247)**	**$ (51,820,198)**	**$ (50,899,657)**	**$ (49,657,951)**		**$ (49,427,951)**	
Total Replenishment Assessments	2,495,183	114,290	274,877	1,196,246	920,540	1,241,707	230,000	38,203,408	230,000	**38,433,408**
Total Paid and/or Credited	(526,890)	(162)	-	(49,382,196)	-	-	-	(87,631,358)	-	**(87,631,358)**
Grand Total Fund Balance	**$ (4,023,252)**	**$ (3,909,125)**	**$ (3,634,247)**	**$ (51,820,198)**	**$ (50,899,657)**	**$ (49,657,951)**	**$ (49,427,951)**	**(49,427,951)**	**$ (49,197,951)**	**$ (49,197,951)**

D-R-A-F-T MINUTES
Seaside Groundwater Basin Watermaster
Budget and Finance Committee Meeting
Via Zoom Teleconference
August 16, 2021

Attendees: BFC Members
California American Water (CAW) – Chris Cook
City of Sand City – Mayor Mary Ann Carbone
Coastal Subarea Landowners – Paul Bruno

Absent: City of Seaside – Victor Damiani, Chair (Technical difficulties)

Watermaster
Administrative Officer (AO) – Laura Paxton
Technical Program Manager (TPM) – Robert Jaques

Others:
Director George Riley, Monterey Peninsula Water Management District (MPWMD)
Aiko Yamakawa, CAW

AO Paxton, acting as meeting facilitator, called the meeting to order at 11:00 a.m.

1. **Consider recommendation to the Watermaster Board of Directors to approve Fiscal Year 2022 Annual Budgets:**

   A. Administrative Fund

   AO Paxton reviewed the item transmittal. There were no questions. Director Bruno appreciated legal costs being kept at a minimum this year.

   Moved by Director Cook, seconded by Mayor Carbone and unanimously carried to recommend the Watermaster Board approve the proposed Fiscal Year 2022 Administrative Fund Budget.

   B. Monitoring and Management Fund – Operations

   C. Monitoring and Management Fund – Capital

   TPM Jaques reviewed the item transmittal. Director Cook requested that presentations be made by surrounding groundwater sustainability agency representatives to inform the Watermaster Board of developments. Director Cook noted the exponential increase in the MPWMD costs for data collection. TPM Jaques noted that apparently MPWMD was not charging for all of its Watermaster service costs; upon examination during the process of developing a new master agreement with Watermaster, MPWMD did a cost true-up that resulted in the $21,490 estimate for Item 1.2.b.2 of the 2022 budget. Monterey County Water Resources Agency had been approached to propose to Watermaster its costs for providing the current MPWMD services however due to staffing shortages and the complexity of rights of entry onto MPWMD sites, the County declined to move forward with a proposal leaving MPWMD as continuing service provider to Watermaster in 2022.

   With regard to the 2022 Capital Budget, Director Cook felt details were lacking on such a significant budgeted item as the Watermaster one-third share ($66,667) of the estimated $200,000 cost to install a replacement well in the area of well FO-09 shallow that is to be destroyed. Mr. Jaques noted that the cost share amount was budgeted for 2022 as a placeholder until more information is received from MPWMD in its bid process, after which the Watermaster board could consider funding commitment. Director Cook inquired as to the ultimate ownership of the new well (unknown definitively at this time). MPWMD has discussed in committee any participation in a cost share arrangement with regard to the new well with no decision yet relayed to Watermaster.

   Moved by Director Cook, seconded by Director Bruno and unanimously carried to recommend the Watermaster Board approve the proposed Fiscal Year 2022 Monitoring and Management Program (M&MP) Operations and Capital Budgets.

D. Replenishment Fund – The report was received as informational with no action required. Director Riley questioned the approach to the Replenishment Fund—the giving of credits to standard producers for efforts to create a water supply when this negates any accumulation of fund balance to buy water, and does not result in an actual water supply source to replenish the Basin to protective water levels. He felt Watermaster is burdened to present a Replenishment Fund that more accurate depicts water supply funding. He questioned why credits remain in the fund for projects that are no longer viable. Director Bruno responded that the replenishment fund calculations are an exercise to move repayment of overdraft forward. Protective water levels, understandably crucial, are the secondary aim of the Replenishment Fund. The first aim is for the Replenishment Fund to track the amount CAW is required to pay back to the Basin, with water, its overproduction since adjudication inception, regardless of credits. CAW is not responsible under the Decision for bringing groundwater in the Basin to protective levels—this requiring community and agency-wide involvement and commitment.

2. **Replenishment Assessment Unit Costs for Natural Safe Yield and Operating Yield Overproduction for Water Year 2022 (October 1, 2021 – September 30, 2022)**
   AO Paxton reviewed the item transmittal. Committee members were satisfied using the updated $2,808 per acre-foot Pure Water Monterey Project cost for the Regional Urban Water Augmentation Project (RUWAP) cost, and not later adding operations, maintenance and financing RUWAP costs to be determined according to Marina Coast Water District by a study conducted this fall.

   Director Riley was under the impression that the Aquifer Storage and Recovery Expansion was not a viable project. Director Cook felt it was the most credible, comparatively cost-effective approach to an increased water source due to current extraction during Carmel River high flows being nowhere near the 29 acre-feet per day allowed. More infrastructure is needed to meet that extraction allowance however the comparative cost to other endeavors makes it a reasonable pursuit.

   Moved by Director Bruno, seconded by Director Cook and unanimously carried to recommend the Watermaster Board approve the proposed Replenishment Assessment Unit Cost of $3,260 per acre-foot and $815 per acre-foot for Natural Safe Yield and Operating Yield Overproduction, respectively, for Water Year 2022.

3. **Consider Approving 2021 Budget Transfers**
   TPM Jaques reviewed the item transmittal, detailing the need for budget transfers if the replenishment water modeling update work in Task I.3.a.3 of the 2022 M&MP Fund – Operations Budget is decided by the Watermaster Board to be performed in 2021 instead.

   Moved by Mayor Carbone, seconded by Director Bruno and unanimously carried to recommend the Watermaster Board approve the proposed budget transfers to cover costs for Montgomery & Associates to perform Flow Direction/Flow Velocity Modeling and update Replenishment Water Modeling.

The meeting ended at 11:59 a.m.

SEASIDE GROUNDWATER BASIN WATERMASTER

TO: Board of Directors

FROM: Robert S. Jaques, Technical Program Manager

DATE: September 1, 2021

SUBJECT: Consider Approving the following Professional Service Contracts for Fiscal Year 2022: RFSs No. 2022-01 and 2022-02 with Montgomery & Associates, RFSs No. 2022-01 and 2022-02 with Martin Feeney, RFS No. 2022-01 with Todd Groundwater, and SOW 2022-01 with MPWMD.

- -

RECOMMENDATIONS:

It is recommended that the Board approve the attached RFSs:

1. Two Contracts with Montgomery & Associates, Inc.—1) $21,940 for providing ongoing and as-requested general hydrogeologic consulting services during the year and 2) $26,290 to prepare the Seawater Intrusion Analysis Report (SIAR) for 2022
2. Two Contracts with Martin Feeney—1) $20,565 to perform induction logging of the Sentinel Wells in 2022 and 2) $4,000 to provide on-call/as-requested hydrogeologic consulting services
3. One Contract with Todd Groundwater—for $4,000 to provide on-call/as-needed hydrogeologic consulting services
4. One Contract with MPWMD—for $68,876 to perform monitoring and other work on the Seaside Groundwater Basin Monitoring and Management Program (M&MP) for 2022

BACKGROUND:

Attached are the proposed initial contracts for each of the Watermaster's consultants that are expected to work on M&MP activities during 2022. Each of these are currently working under a master form of agreement with the Watermaster called a "Professional Services Agreement" (PSA). Actual work assignments are made through the issuance of Requests for Service (RFS) under PSA umbrella language.

In mid-2021 MPWMD requested changing from the PSA format to a new format of Master Agreement they had created. Rather than RFSs, this new Master Agreement calls for actual work assignments to be made through the issuance of "Scopes of Work" (SOW) under Master Agreement umbrella language.

DISCUSSION

The attached RFSs and the one SOW constitute the consultant's proposed initial 2022 work assignments:

- Montgomery & Associates RFS No. 2022-01 covering general hydrogeologic consulting services and assistance in preparing documents that the Watermaster will need to submit to fulfill its reporting requirements under the Sustainable Groundwater Management Act.
- Montgomery & Associates RFS No. 2022-02 covering their preparing the 2022 SIAR.
- Martin Feeney RFS No. 2022-01 covering his performing induction logging of certain of the Watermaster's monitoring wells and providing that data to MPWMD and Montgomery & Associates. This work also includes performing some maintenance on the Sentinel Wells.
- Martin Feeney RFS No. 2022-02 covering his providing general hydrogeologic consulting services.
- Todd Groundwater RFS No. 2022-01 covering general hydrogeologic consulting services.
- MPWMD SOW No. 2022-01 covering their anticipated 2022 M&MP tasks, and covering their obtaining water quality and water level data from private producers who ask the Watermaster collect this data for them. The costs for the latter work are reimbursed by the private producers, and there is no net cost to the Watermaster for performing that work.

These consultants have reviewed the cost and scope details of these proposed contracts and their input has been included in the attached versions of the contracts.

If geochemical modeling needs to be performed on Cal Am's desalination plant water in 2022, and if that indicates the need to develop mitigation measures for possible adverse impacts from introducing non-native water into the Basin, I will develop an additional RFS for Montgomery & Associates during 2022 to use the Seaside Basin Groundwater Model to provide information to MPWMD's consultant (Pueblo Water Resources) to use in performing that geochemical modeling to develop such mitigation measures. Funds for this additional RFS have been included in the M&MP Operations Budget for 2022. When and if drafted, the RFS would come to the TAC for approval before going to the Board.

These contracts are being presented to the Board for approval at today's meeting to ensure the contacts will be in effect by the start of 2022. All of these costs are included in the Budgets that the Board is asked to approve at today's meeting under a preceding agenda item.

ATTACHMENTS:

Six Proposed Consultant Contracts for FY 2022:
2 RFSs – Montgomery & Associates
2 RFSs – Martin Feeney
1 RFS – Todd Groundwater
1 SOW - MPWMD

SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: January 1, 2022

RFS NO. 2022-01
(To be filled in by WATERMASTER)

TO: Hale Barter
Montgomery & Associates
PROFESSIONAL

FROM: Robert Jaques
WATERMASTER

Services Needed and Purpose: General hydrogeologic consulting and document preparation services. See Scope of Work in Attachment 1.

Completion Date: All work of this RFS shall be completed not later than December 31, 2022, and shall be performed in accordance with the Schedule contained in Attachment 2.

Method of Compensation: Time and Materials (As defined in Section V of Agreement.)

Total Price Authorized by this RFS: $21,940.00 (Cost is authorized only when evidenced by signature below.) (See Attachment 1 for Estimated Costs).

Total Price may not be exceeded without prior written authorization by WATERMASTER in accordance with Section V. COMPENSATION.

Requested by: _____ Date: _____.
WATERMASTER Technical Program Manager

Agreed to by: _____ Date: _____.
PROFESSIONAL

ATTACHMENT 1

SCOPE OF WORK

On an ongoing and as-requested basis, PROFESSIONAL will provide general hydrogeologic consulting services to WATERMASTER on a variety of topics. These may include, but not be limited to interpretation of water level and water quality data collected by WATERMASTER, BMAP and SIRP implementation issues, and preparation of documents for WATERMASTER's use in fulfilling its Sustainable Groundwater Management Act reporting requirements.

Providing these services will likely involve attending certain of WATERMASTER's Technical Advisory Committee (TAC) meetings, most of which will be attended remotely. These TAC meetings do not include special TAC or other meetings which may be required as part of performing other work which may be authorized under other RFSs issued to PROFESSIONAL by WATERMASTER. Any such other scope and cost proposals will incorporate costs for those meetings.

The Tasks in WATERMASTER's 2022 Monitoring and Management Program (M&MP) to which this RFS No. 2022-01 pertains are:

M. 1. c & M.1. d - Preparation and Attendance of Meetings
M. 1. e - Peer Review of Documents and Reports
M.1.g – Sustainable Groundwater Management Act Documentation Preparation

ESTIMATED COSTS

Tasks M.1.c, M.1.d, and M.1.e: General Consulting Services will consist of working on these Tasks and attending some TAC and other meetings either remotely or in-person in Monterey, as requested by WATERMASTER.

$19,560 in labor, travel, and incidental costs of this RFS No. 2022-01 are allocated to performing work on these Tasks.

Task M.1.g: 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, information regarding changes in basin storage is not currently generated. PROFESSIONAL will provide an estimate of the change in basin storage under this RFS No. 2022-01.

$2,380 in labor costs of this RFS No. 2022-01 are allocated to performing work for Task M.1.g.

All work under this RFS No. 2022-01 will be billed at the following hourly rates, including all markups and other direct costs:

Derrik Williams = $265.00/hour Georgina King = $220.00/hour Staff = $155.00/hour

The total cost authorized by this RFS No. 2022-01 is $21,940.00.

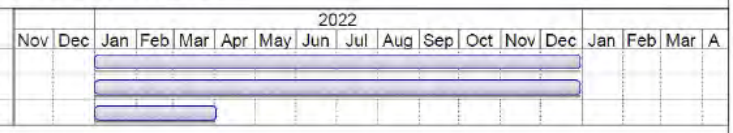
These costs are summarized in the table below.

Task	Hours			Costs		
	Derrik Williams $265/hr	Georgina King $220/hr	Staff $155/hr	Consulting Fees	Expenses	Total Costs
Prepare 2022 Change in Storage Calculation per SGMA Requirements	0	8	4	$2,380	$0	$2,380
General Consulting	24	60	0	$19,560	$0	$19,560
TOTALS	**24**	**68**	**4**	**$21,940**	**$0**	**$21,940**

ATTACHMENT 2
SCHEDULE

Montgomery & Associates RFS No. 2022-01
Work Schedule

ID	Task Name
1	**M. 1. c - Preparation and Attendance of Meetings**
2	**M. 1. e - Peer Review of Documents and Reports**
3	**M.1.g - SGMA Document Preparation**



Montgomery & Associates RFS No 2022-01 Schedule 7-19-21.mpp Page 1

SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: 1/1/2022

RFS NO. 2022-02
(To be filled in by WATERMASTER)

TO: Hale Barter
PROFESSIONAL

FROM: Robert Jaques
WATERMASTER

Services Needed and Purpose: Prepare the Seawater Intrusion Analysis Report for 2022. See Scope of Work in Attachment 1.

Completion Date: All work of this RFS shall be completed not later than December 31, 2022, and shall be performed in accordance with the Schedule contained in Attachment 2.

Method of Compensation: Time and Materials (As defined in Section V of Agreement.)

Total Price Authorized by this RFS: $ 26,290.00 (Cost is authorized only when evidenced by signature below.) (See Attachment 3 for Detailed Breakdown of Estimated Costs).

Total Price may not be exceeded without prior written authorization by WATERMASTER in accordance with Section V. COMPENSATION.

Requested by: _____ Date: _____.
WATERMASTER Technical Program Manager

Agreed to by: _____ Date: _____.
PROFESSIONAL

ATTACHMENT 1

SCOPE OF WORK

The scope consists of providing professional consulting services to WATERMASTER for preparation of the 2022 Seawater Intrusion Analysis Report (SIAR).

To promote efficiency, much of the text and graphics from the 2021 SIAR will be incorporated directly into the 2022 SIAR.

Preparing the 2022 SIAR will involve analyzing all water quality data at the end of Water Year 2022 (October 1, 2021 to September 30, 2022) and producing semi-annual (2^{nd} and 4^{th} quarters 2022) chloride concentration maps for each aquifer in the Basin. Time series graphs, trilinear graphs, and stiff diagram comparisons will be updated with new data. Second and fourth quarter groundwater elevation maps will also be produced. The annual EM logs will be analyzed to identify changes in seawater wedge locations. A determination of whether there is any evidence of seawater intrusion will be made, and recommendations will be included as warranted.

Water level and water quality data for WY 2022 will be provided to PROFESSIONAL in MS Access format. PROFESSIONAL will put this data into a report format and will include it as an attachment to the 2022 SIAR.

A Draft 2022 SIAR will be provided to WATERMASTER in electronic (not printed) form for review. WATERMASTER will provide its review comments and those of its TAC members through direct discussions with PROFESSIONAL at a TAC meeting which PROFESSIONAL will attend remotely via teleconference or Zoom. In addition to these oral comments, some TAC members may also provide recommended editorial changes electronically directly to PROFESSIONAL. These comments will be addressed in a Final 2022 SIAR. PROFESSIONAL will also present the Final version of the SIAR to the Board at a meeting which PROFESSIONAL will attend remotely via teleconference or Zoom. PROFESSIONAL will provide to WATERMASTER both a PDF and MS Word version of the final report. No printed copies of the 2022 SIAR will be required.

ATTACHMENT 2

Montgomery & Associates RFS No. 2022-02
Work Schedule

ID	Task Name
1	**I.4.c Annual Seawater Intrusion Analysis Report (SIAR)**
2	HydroMetrics Provides Draft SIAR to Watermaster
3	TAC Approves Annual Seawater Intrusion Analysis Report (SIAR)
4	Board Approves Annual Seawater Intrusion Analysis Report (SIAR)

Montgomery RFS No 2022-02 Schedule A 7-19-21.mpp Page 1

ATTACHMENT 3

DETAILED BREAKDOWN OF ESTIMATED COSTS

Note: Regardless of the use of the term "Estimated Cost" in this RFS, if the work of this RFS is to be compensated for using Lump Sum Payment method, it is understood and agreed to by PROFESSIONAL that the Total Price listed on page 1 of this RFS is binding and limiting as defined in Section V of the Agreement.

2022 Seawater Intrusion Analysis Report

Task	Hours		Costs		
	Georgina King	Staff	Consulting Fees	Expenses	Total Costs
	$220/hr	$155/hr			
Prepare 2022 SIAR, including added appendices for groundwater levels and quality	32	108	$23,780	$0	$24,430
Prepare for and Attend One TAC Meeting and One Board Meeting Online	10	2	$2,510	$0	$2,510
TOTALS	**42**	**110**	**$26,290**	**$0**	**$26,290**

SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: January 1, 2022 **RFS NO.** 2022-01
(To be filled in by WATERMASTER)

TO: Martin Feeney
Martin Feeney
PROFESSIONAL

FROM: Robert Jaques
WATERMASTER

Services Needed and Purpose:
Perform certain Tasks contained within the Watermaster's Monitoring and Management Plan for 2022 (See detailed Scope of Work in Attachment 1).

Completion Date: The work of this RFS No. 2022-01 shall be completed in accordance with the schedule described in Attachment 1.

Method of Compensation: Time and Expense Payment Method (As defined in Section V of Agreement.)

Total Price Authorized by this RFS: $ 20,565.00 (See Attachment 2 for a Breakdown of this Total Price. Cost is authorized only when evidenced by signature below.)

Total Price may not be exceeded without prior written authorization by WATERMASTER in accordance with Section V. COMPENSATION.

Authorized by: _____ Date: _____
WATERMASTER Technical Program Manager

Agreed to by: _____ Date: _____
PROFESSIONAL

ATTACHMENT 1

Detailed Scope of Work for RFS No. 2022-01

Background:
Performance of the work of RFS No. 2022-01 will require compliance with the State Department of Parks and Recreation Right of Entry Permit contained in Attachment 3. PROFESSIONAL agrees to comply with the requirements of the Right of Entry Permit in conjunction with PROFESSIONAL's performance of this work.

Scope of Work
This RFS No. 2022-01 authorizes PROFESSIONAL to perform the work described in PROFESSIONAL's Proposal for Hydrogeologic Services, dated August 2, 2021 and contained in Attachment 2, with the following clarifications and/or additions:

PROFESSIONAL will collect water level data from the wells identified as SBWM-1, SBWM-2, SBWM-3, and SBWM-4. PROFESSIONAL will also perform induction logging on each of these wells. These wells are commonly referred to as WATERMASTER's Sentinel Wells. Water level data collection and induction logging will be performed on each of these wells as described below and according to the schedule described below:

Induction Logging
Induction logging will be performed on each of the four Sentinel Wells semi-annually in March and September.

Water Level
Water levels in each of the four Sentinel Wells will be continuously measured by data loggers and will be downloaded semi-annually when induction logging is being performed.

PROFESSIONAL will transmit the digital water level data to the Monterey Peninsula Water Management District (MPWMD), Montgomery and Associates, and to the WATERMASTER promptly after the data is acquired, so that (1) MPWMD can use that data in preparing its reports to the WATERMASTER and (2) Montgomery and Associates and the WATERMASTER will be made promptly aware of the data. Digital induction data will also be provided to MPWMD, Montgomery and Associates, and to the WATERMASTER as soon as it becomes available to PROFESSIONAL. Digital induction data will also be reduced and presented graphically and provided to Montgomery and Associates for use by Montgomery and Associates in preparing reports for the WATERMATER.

ATTACHMENT 2

Martin B. Feeney
Consulting Hydrogeologist

P.G. 4634
C.E.G. 1454
C.Hg 145

August 2, 2021

Seaside Basin Watermaster
PO Box 51502
Pacific Grove CA.
93950

Attention: Bob Jaques, PE

Subject: Sentinel Well Data Collection Program 2022 – Proposal for Hydrogeologic Services

Dear Bob:

Following up on our discussions, I'm pleased to provide this proposal to assist the Seaside Basin Watermaster (Watermaster) with data collection from the Sentinel Wells for the upcoming year. Presented in this proposal is an outline of the data collection plan and an estimate of associated costs.

The data collection program for the Sentinel Wells will continue as it has been performed since the last half of 2017. The data collection program currently includes semi-annual induction logging and continuous water level data collection. The program previously included depth-specific downhole water quality sampling, however, the data proved unreliable and this portion of the program was terminated. The subcontractor for the induction logging remains unchanged.

The components of this program are as follows:

Data collection from each well:

- Semi-Annual down-loading of water level data logger.
- Semi-Annual induction logging (March and September)
- Transmittal of water level data to Monterey Peninsula Water Management District personnel.
- Processing of induction log data and presentation

The well vaults that protect the Sentinel Wells continue to need maintenance to remain functional. This could include painting of the vault covers, repairing stripped threads for the bolts that hold down the covers, and general cleaning. Costs of these services are included in this proposal.

It is understood that, as in the past, the Monterey Peninsula Water Management District (District) will share some of the data collection and analysis tasks of the overall data collection program. The District will collect water level data from the array of data loggers on the alternate quarters. Water level data from the data loggers will be collected as part of this scope of services only when induction logging is performed. Collected water level data will be transmitted to the District for compilation and processing. Induction logging data will continue to be compiled and processed by this author.

Annual costs for the data collection program are estimated at $ 20,565 inclusive of outside services. Cost is up from previous year due to an increase in the service charge and mileage for Pacific Surveys. Also the vaults are in bad shape and need maintenance. A breakdown of costs is presented in the table below.

P.O. Box 23240, Ventura, CA 93002 ♦ **Phone: 831-915-1115** ♦ e-mail mfeeney@ix.netcom.com

SENTINEL WELLS LOGGING/SAMPLING WL DATA COLLECTION PROGRAM
2022

Pacific Surveys	Unit Cost	Number	Semi-Annual Cost	# per annum	Annual Cost
Service Charge	1305	1	1305	2	$ 2,610.00
Induction Logging	0.75	5310	3982.5	2	$ 7,965.00
E-file generation/transmittal	115	1	115	2	$ 230.00
mileage	480	1	480	2	$ 960.00
					$ 11,765.00
Professional Services (hrs)					
Well Vault Maintainance	175	8	1400	1	$ 1,400.00
Supervise Logging/Download Data Loggers	175	12	2100	2	$ 4,200.00
Process Induction Data	200	4	800	2	$ 1,600.00
Transmit Water Level Data	200	2	400	2	$ 800.00
per diem	200	2	400	2	$ 800.00
					$ 8,800.00
				Total	$ 20,565.00

The opportunity to present this proposal is appreciated. Please call if you have any questions.

Sincerely,

Martin B. Feeney

ATTACHMENT 3

RIGHT OF ENTRY PERMIT	Agency: Department of Parks and Recreation Project: Fort Ord Dunes State Park – Monitoring Wells

This Right of Entry Permit (Permit) is made and entered into this 1st day of August 2020, between the State of California, acting by and through its Department of Parks and Recreation, hereinafter called State, and Seaside Groundwater Basin Watermaster hereinafter called Permittee; State and Permittee may hereinafter be referred to as a Party, or collectively the Parties.

RECITALS

- **Whereas**, the State owns, operates and maintains the State Park known as Fort Ord Dunes State Park, in the County of Monterey, State of California; and
- **Whereas**, Permittee has applied to State for permission to access Fort Ord Dunes State Park for purposes of carrying out Permittee's Monitoring Wells project (the Project); and
- **Whereas**, the State desires to accommodate Permittee's application for permission to enter Fort Ord Dunes State Park for purposes of the Project.

TERMS AND CONDITIONS

Now therefore, the State by this Permit hereby grants to the Permittee permission to enter upon State's property, conditioned upon the agreement of the Parties that this Permit does not create or vest in Permittee any interest in the real property herein described or depicted, that the Permit is revocable and non-transferable, and that the Permit is further subject to the following terms and conditions:

1. **Project Description:** By this Permit, the State hereby grants to the Permittee permission to enter onto those lands depicted and/or described on **Exhibit A** (the Property), attached hereto and herein incorporated by this reference, solely for the purpose of monitoring four (4) wells twice yearly, and as described in the completed Project Evaluation Form, **Exhibit B**, attached hereto.

2. **Permit Subject to Laws and Regulatory Agency Permits:** This Permit is expressly conditioned upon Permittee's obtaining any and all regulatory permits or approvals required by the relevant regulatory agencies for the Project and Permittee's use of the Property, and upon Permittee's compliance with all applicable municipal, state and federal laws, rules and regulations, including all State Park regulations. Permittee shall, at Permittee's sole cost and expense, comply with the Project Description, and requirements and mitigations contained in the Environmental Document.

   Prior to commencement of any work, Permittee shall obtain all such legally required permits or approvals and submit to the State full and complete copies of all permits and approvals, including documentation related to or referenced in such permits and approvals, along with the corresponding agency contact and telephone numbers, and related California Environmental Quality Act (CEQA) and/or National Environmental Policy Act (NEPA) documentation as applicable.

3. **Term of Permit:** This Permit shall only be for the period beginning on August 1, 2020, and ending on August 1, 2021, or as may be reasonably extended by written mutual agreement of the Parties.

4. **Consideration:** Fee waived.

5. **Permit Subject to Existing Claims:** This Permit is subject to existing contracts, permits, licenses, encumbrances and claims which may affect the Property.

6. **Waiver of Claims and Indemnity:** Permittee waives all claims against State, its officers, agents and/or employees, for loss, injury, death or damage caused by, arising out of, or in any way connected with the condition or use of the Property, the issuance, exercise, use or implementation of this Permit, and/or the rights herein granted. Permittee further agrees to protect, save, hold harmless, indemnify and defend State, its officers, agents and/or employees from any and all loss, damage, claims, demands, costs and liability which may be suffered or incurred by State, its officers, agents and/or employees from any cause whatsoever, arising out of, or in any way connected with this Permit, exercise by Permittee of the rights herein granted, Permittee's use of the Property and/or the Project for which this Permit is granted, except those arising out of the sole active negligence or willful misconduct of State. Permittee will further cause such indemnification

and waiver of claims in favor of State to be inserted in each contract that Permittee executes for the provision of services in connection with the Project for which this Permit is granted.

7. **Contractors:** Permittee shall incorporate the terms, conditions and requirements contained herein when contracting out all or any portion of the work permitted hereunder. Permittee shall be responsible for ensuring contractor/subcontractor compliance with the terms and conditions contained herein. Failure of Permittee's contractors to abide by State's terms and conditions shall constitute default by Permittee (see DEFAULT paragraph below) allowing State to terminate this Permit and seek all legal remedies.

8. **Insurance Requirements:** As a condition of this Permit and in connection with Permittee's indemnification and waiver of claims contained herein, Permittee shall maintain, and cause its contractors to maintain, a policy or policies of insurance as follows:

General Provisions Applying to All Policies

A. **Coverage Term –** Coverage needs to be in force for the complete term of the contract. If insurance expires during the term of the contract, a new certificate must be received by the State at least ten (10) days prior to the expiration of this insurance. Any new insurance must still comply with the original terms of the contract.

B. **Policy Cancellation or Termination & Notice of Non-Renewal** – Contractor is responsible to notify the State within five business days before the effective date of any cancellation, non-renewal, or material change that affects required insurance coverage. In the event Contractor fails to keep in effect at all times the specified insurance coverage, the State may, in addition to any other remedies it may have, terminate this Contract upon the occurrence of such event, subject to the provisions of this Contract.

C. **Deductible –** Contractor is responsible for any deductible or self-insured retention contained within their insurance program.

D. **Primary Clause –** Any required insurance contained in this contract shall be primary, and not excess or contributory, to any other insurance carried by the State.

E. **Insurance Carrier Required Rating –** All insurance companies must carry a rating acceptable to the Office of Risk and Insurance Management. If the Contractor is self-insured for a portion or all of its insurance, review of financial information including a letter of credit may be required.

F. **Endorsements –** Any required endorsements requested by the State must be physically attached to all requested certificates of insurance and not substituted by referring to such coverage on the certificate of insurance.

G. **Inadequate Insurance –** Inadequate or lack of insurance does not negate the contractor obligations under the contract.

H. **Satisfying an SIR** - All insurance required by this contract must allow the State to pay and/or act as the contractor's agent in satisfying any self-insured retention (SIR). The choice to pay and/or act as the contractor's agent in satisfying any SIR is at the State's discretion.

I. **Available Coverages/Limits** - All coverage and limits available to the contractor shall also be available and applicable to the State.

J. **Subcontractors** - In the case of Contractor utilization of subcontractors to complete the contracted scope of work, contractor shall include all subcontractors as insured's under Contractor and insurance or supply evidence of insurance to The State equal to policies, coverages and limits required of Contractor.

COMMERCIAL GENERAL LIABILITY:
Commercial General Liability Insurance covering bodily injury and property damage in a form and with coverage that are satisfactory to the State. This insurance shall include personal and advertising injury liability, products and completed operations, and liability assumed under an insured contract. Coverage shall be written on an occurrence basis in an amount of not less than $1,000,000 per occurrence. Annual aggregate limit shall not be less than $2,000,000. **The State of California, its officers, agents, and employees are to be covered as additional insureds with respect to liability arising out of work or operations.**

AUTOMOBILE LIABILITY INSURANCE:

Automobile Liability Insurance covering all owned, non-owned, and hired vehicles with a combined single limit of not less than $1,000,000 for bodily injury and property damage. **The State of California, its officers, agents, and employees are to be covered as additional insureds with respect to liability arising out of work or operations.**

WORKERS COMPENSATION AND EMPLOYERS LIABILITY:
Workers' Compensation insurance as required by the State of California, with Statutory Limits, and Employer's Liability Insurance with limit of no less than $1,000,000 per accident for bodily injury or disease. **The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of the State of California.**

9. **Reservation of Rights:** State reserves the right to use the Property in any manner, provided such use does not unreasonably interfere with Permittee's rights herein.

10. **Access Limits and Conditions:** Access to the Property shall be limited to the access designated by State.

11. **Notice of Work:** Any required notices to State shall be sent to the State authorities in charge of Fort Ord Dunes State Park named below. At least forty-eight (48) hours prior to any entry upon the Property for any of the purposes hereinabove set forth, Permittee shall provide the State contact[s] named below with written notice of Permittee's intent to enter the Property. Permittee shall also notify the State contact[s] listed below in writing at least -eight (48) hours prior to any change in the Project schedule or cessation or completion of work. Should State personnel need to contact Permittee, State shall notify Permittee's contact person listed below:

STATE:
Contact: Brent C. Marshall, District Superintendent

District: Monterey District

Address: 2211 Garden Road
Monterey, CA 93940
Telephone: 831-649-2836

PERMITTEE'S CONTACT:
Contact: Seaside Groundwater Basin Watermaster
Robert S. Jaques, email: bobj83@comcast.net
Address: PO Box 51502 Pacific Grove, CA 93950
Telephone: 831-375-0517

12. **Limits of Work:** In no event shall this Permit authorize work in excess or contrary to the terms and conditions of any regulatory agency permit or approval. Under no circumstances, whether or not authorized by any regulatory agency, other permit or any person or entity other than State, shall work exceed that which is authorized by this Permit.

13. **Public Safety:** Permittee shall erect orange plastic temporary construction fencing and appropriate signage prior to commencement of work to prevent public access to the construction zone. Permittee shall remove such fencing within two (2) days after the completion of work. Permittee shall take, and shall cause its contractors or subcontractors to take, any and all necessary and reasonable steps to protect the public from harm in connection with the Project or implementation of this Permit.

14. **Compliance with Project Requirements:**

Permittee's activities conducted under this Permit shall comply with all State and Federal environmental laws, including, but not limited to, the Endangered Species Act, CEQA, and Section 5024 of the Public Resources Code.

Any of Permittee's archaeological consultants working within the boundaries of the Property shall submit a DPR 412A permit application to the District cultural resource specialist for approval prior to commencing any archaeological or cultural investigations of the Property.

Permittee shall immediately advise State's contact person if any new site conditions are found during the course of permitted work. State will advise Permittee if any new historical resources (including archaeological sites), special status species, threatened/endangered species protocols, or other resource issues are identified within the Project site. Permittee shall abide by District Superintendent or designee's instructions to protect the resource(s) during the permitted work or risk revocation of the Permit.

Permittee shall make all excavation activities on the Property available to the State archaeologist for observation and monitoring. During excavation, the State archaeological monitor may observe and report to the State on all excavation activities. State archaeological monitor shall be empowered to stop any construction activities as necessary to protect significant cultural resources from being disturbed.

In the event that previously unknown cultural resources, including, but not limited to, dark soil containing shell, bone, flaked stone, groundstone, or deposits of historic trash are encountered during Project construction by anyone, work will be suspended at that specific location, and the Permittee's work will be redirected to other tasks, until a State archaeologist or professionally qualified designee has evaluated the find and implemented appropriate treatment measures and disposition of artifacts, as appropriate, in compliance with all applicable laws and department resource directives.

If human remains are discovered during the Project, work will be immediately suspended at that specific location and the District Superintendent or designee shall be notified by Permittee. The specific protocol, guidelines and channels of communication outlined by the California Native American Heritage Commission (NAHC), and/or contained in Health and Safety Code Section 7050.5 and Public Resources Code Sections 5097.9 et seq., will be followed. Those statutes will guide the potential Native American involvement in the event of discovery of human remains.

If resource monitoring is required to be performed by State staff, the Permittee shall provide a written work schedule to the State at least 48 hours in advance of the work. Permittee shall provide reasonable advance notice of and invite the District Superintendent or designee to any preconstruction meetings with the prime contractor or subcontractors.

15. **Restoration of Property:** Permittee shall complete the restoration, repair, and revegetation of the Property in consultation with, and to the satisfaction of, the State Environmental Scientist within one (1) year after completion of the Project or the expiration or termination of this Permit, whichever comes first. This obligation shall survive the expiration or termination of this Permit.

16. **Performance Bond:** If required by State in order to ensure that Permittee performs and completes its obligations in accordance with the terms of the Permit, Permittee shall obtain a Performance Bond in the amount of from a surety duly licensed in the State of California. Permittee shall provide State with a copy of such insurance bond.

17. **Right to Halt Work:** The State reserves the right to halt work and demand mitigation measures at any time, with or without prior notice to Permittee, in the event the State determines that any provision contained herein has been violated, or in the event that cessation of work is necessary to prevent, avoid, mitigate or remediate any threat to the health and safety of the public or state park personnel, or to the natural or cultural resources of the state park.

18. **Use Restrictions:** The use of the Property by Permittee, including its guests, invitees, employees, contractors and agents, shall be restricted to the daytime hours between sunrise and sunset on a day-by-day basis, unless otherwise approved in advance in writing by State. No person shall use or occupy the Property overnight.

    Activities on the Property shall be conducted only in a manner which will not interfere with the orderly operation of the state park. Permittee shall not engage in any disorderly conduct and shall not maintain, possess, store or allow any contraband on the Property. Contraband includes, but is not limited to: any illegal alcoholic beverages, drugs, firearms, explosives and weapons.

    Roads and trails where motorized vehicles are normally prohibited may be used for vehicle access by Permittee, its employees, agents or contractors for patrol, maintenance or repair purposes only, and only to the extent specified by State, and shall be otherwise subject to all other conditions and/or restrictions of this Permit and any applicable laws, state park regulations and state park policies.

    Permittee shall not use or allow the Property to be used, either in whole or in part, for any purpose other than as set forth in this Permit, without the prior written consent of the State.

19. **State's Right to Enter:** At all times during the term of this Permit and any extension thereof, there shall be and is hereby expressly reserved to State and to any of its agencies, contractors, agents, employees, representatives, invitees or licensees, the right at any and all times, and any and all places, to temporarily enter upon said Property to survey, inspect, or perform any other lawful State purposes.

    Permittee shall not interfere with State's right to enter.

20. **Protection of Property:** Permittee shall protect the Property, including all improvements and all natural and cultural features thereon, at all times at Permittee's sole cost and expense, and Permittee shall strictly adhere to the following restrictions:

(a) Permittee shall not place or dump garbage, trash or refuse anywhere upon or within the Property, except in self-contained trash receptacles that are maintained to State's satisfaction by Permittee.

(b) Permittee shall not commit or create, or suffer to be committed or created, any waste, hazardous condition or nuisance in, on, under, above or adjacent to the Property.

(c) Permittee shall not cut, prune or remove any vegetation upon the Property, except as identified in the Project description and herein permitted or subsequently approved in writing by the District Superintendent.

(d) Permittee shall not disturb, move or remove any rocks or boulders upon the Property, except as identified in the Project description and herein permitted or subsequently approved in writing by the District Superintendent.

(e) Permittee shall not grade or regrade, or alter in any way, the ground surface of the Property, except as herein permitted, or subsequently approved in writing by the District Superintendent.

(f) Permittee shall not bait, poison, trap, hunt, pursue, catch, kill or engage in any other activity which results in the taking, maiming or injury of wildlife upon the Property, except as identified in the Project description and herein permitted or subsequently approved in writing by the District Superintendent.

(g) Permittee shall not use, create, store, possess or dispose of hazardous substances (as defined in the California Hazardous Substances Act) on the Property except as herein permitted, or subsequently approved in writing by the District Superintendent.

(h) Permittee shall exercise due diligence to protect the Property against damage or destruction by fire, vandalism and any other causes.

21. **Default:** In the event of a default or breach by Permittee of any of the terms or conditions set forth in this Permit, State may at any time thereafter, without limiting State in the exercise of any right of remedy at law or in equity which State may have by reason of such default or breach:

(a) Maintain this Permit in full force and effect and recover the consideration, if any, and other monetary charges as they become due, without terminating Permittee's right to use of the Property, regardless of whether Permittee has abandoned the Property; or

(b) Immediately terminate this Permit upon giving written notice to Permittee, whereupon Permittee shall immediately surrender possession of the Property to State and remove all of Permittee's equipment and other personal property from the Property. In such event, State shall be entitled to recover from Permittee all damages incurred or suffered by State by reason of Permittee's default, including, but not limited to, the following:

(i) any amount necessary to compensate State for all the detriment proximately caused by Permittee's failure to perform its obligations under this Permit, including, but not limited to, compensation for the cost of restoration, repair and revegetation of the Property, which shall be done at State's sole discretion and compensation for the detriment which in the ordinary course of events would be likely to result from the default; plus

(ii) at State's election, such other amounts in addition to or in lieu of the foregoing as may be permitted from time to time by applicable law.

22. **State's Right to Cure Permittee's Default:** At any time after Permittee is in default or in material breach of this Permit, State may, but shall not be required to, cure such default or breach at Permittee's cost. If State at any time, by reason of such default or breach, pays any sum or does any act that requires the payment of any sum, the sum paid by State shall be due immediately from Permittee to State at the time the sum is paid. The sum due from Permittee to State shall bear the maximum interest allowed by California law from the date the sum was paid by State until the date on which Permittee reimburses State.

23. **Revocation of Permit:** The State shall have the absolute right to revoke this Permit for any reason upon ten (10) days written notice to Permittee. Written notice to Permittee may be accomplished by electronic or facsimile transmission, and the notice period set forth in this paragraph shall begin on the date of the electronic or facsimile transmission, or, if sent by mail, on the date of delivery. If Permittee is in breach of the Permit or owes money to the State pursuant to this Permit, any prepaid monies paid by Permittee to State shall be held and applied by the State

as an offset toward damages and/or amounts owed. Nothing stated herein shall limit the State's exercise of its legal and equitable remedies.

24. **Recovery of Legal Fees:** In any action brought to enforce or interpret any provisions of this Permit or to restrain the breach of any agreement contained herein, or for the recovery of possession of the Property, or to protect any rights given to the State against Permittee, and in any actions or proceedings under Title 11 of the United States Code, if the State shall prevail in such action on trial or appeal, the Permittee shall pay to the State such amount in attorney's fees in said action as the court shall determine to be reasonable, which shall be fixed by the court as part of the costs of said action.

25. **Voluntary Execution and Independence of Counsel:** By their respective signatures below, each Party hereto affirms that they have read and understood this Permit and have received independent counsel and advice from their attorneys with respect to the advisability of executing this Permit.

26. **Reliance on Investigations:** Permittee declares that it has made such investigation of the facts pertaining to this Permit, the Property and all the matters pertaining thereto as it deems necessary, and on that basis accepts the terms and conditions contained in this Permit. Permittee acknowledges that State has made, and makes, no representations or warranties as to the condition of the Property, and Permittee expressly agrees to accept the Property in its as-is condition for use as herein permitted.

27. **Entire Agreement:** The Parties further declare and represent that no inducement, promise or agreement not herein expressed has been made to them and this Permit contains the entire agreement of the Parties, and that the terms of this agreement are contractual and not a mere recital.

28. **Warranty of Authority:** The undersigned represents that they have the authority to, and do, bind the person or entity on whose behalf and for whom they are signing this Permit and the attendant documents provided for herein, and this Permit and said additional documents are, accordingly, binding on said person or entity.

29. **Assignment:** This Permit shall not be assigned, mortgaged, hypothecated, or transferred by Permittee, whether voluntarily or involuntarily or by operation of law, nor shall Permittee let, sublet or grant any license or permit with respect to the use and occupancy of the Property or any portion thereof, without the prior written consent of State.

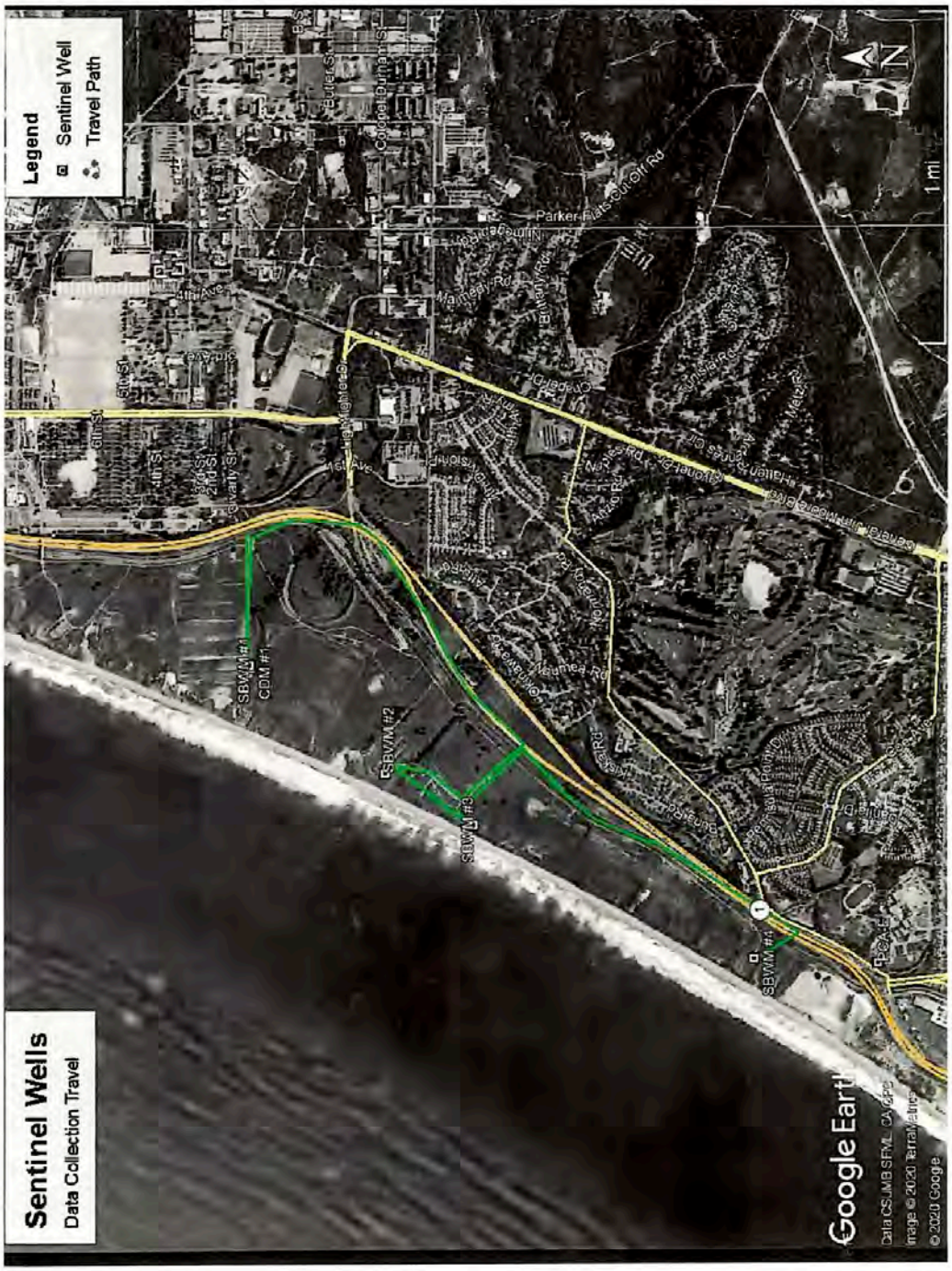
30. **Choice of Law:** This Permit will be governed and construed by the laws of the State of California.

STATE OF CALIFORNIA
Department of Parks and Recreation

By: Brent C. Marshall
Name: Brent C. Marshall
Title: District Superintendent

SEASIDE GROUNDWATER BASIN WATERMASTER

By: Robert Jaques
Name: Robert S. Jaques
Title:
Address: PO Box 51502 Pacific Grove, CA 93950
Phone: 831-375-0517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State of California - Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Project Name _____

PROJECT EVALUATION (PEF)

PROJECT CONCEPT

PROJECT TITLE		PARK UNIT NAME & NUMBER
Right of Entry Permit - Monitoring Wells		Fort Ord Dunes SP
DISTRICT NAME & NUMBER		FACILITY NUMBER
Monterey District 720		
PROJECT MANAGER & TITLE	PHONE NUMBER	EMAIL
Stephen Bachman, Sr Park & Rec Spec	831-649-2862	stephen.bachman@parks.ca.gov
DISTRICT PROJECT MANAGER & TITLE	PHONE NUMBER	EMAIL
PROJECT BID DATE	CONSTRUCTION START DATE	FUNDING SOURCE & PCA #
n/a	n/a	n/a

PROJECT DESCRIPTION

Identify the scope of the project in detail, including its purpose, location, and potential impacts. If the ground is to be disturbed, describe the depth and extent of excavation. Describe the existing site conditions, including previous development. Note if work will impact or extend beyond park property. Indicate if work will be done in conjunction with, or as part of, other projects. (Use additional pages if necessary.)

Issue Right of Entry Permit to the Seaside Groundwater Basin Watermaster for continued access to four (4) monitoring wells at Fort Ord Dunes State Park. Access is only for monitoring wells twice yearly. See attached map for wells locations.

SECTOR SUPERINTENDENT OR DESIGNEE CONCEPT APPROVAL

SECTOR SUPERINTENDENT OR DESIGNEE CONCEPT APPROVAL	TITLE	DATE
[signature]	SPS II	7/27/2020

DISTRICT SUPERINTENDENT OR DESIGNEE CONCEPT APPROVAL

DISTRICT SUPERINTENDENT OR DESIGNEE CONCEPT APPROVAL	TITLE	DATE

State of California - The Resources Agency
CALIFORNIA STATE PARKS

Project Name 0

PROJECT EVALUATION (PEF)

DOCUMENTS ATTACHED

- ☑ 7.5 minute (quad) map of project area (***Required***)
- ☑ Site Map (***Required*** - *Scale should show relationship to existing buildings, roads, landscape features, etc.)*
- ☑ Graphics *(Specify - photos, diagrams, drawings, cross-sections, etc.)*
- ☑ DPR 727 Accessibility Review & Comment Sheet *(Note: Environmental Coordinator will send PEF to the Accessibility Section for review & comment)*
- ☐ Sea-Level Rise Worksheet *(for coastal park units)*
- ☐ Other (Specify):

REGULATORY REQUIREMENTS

IS AN APPLICATION, PERMIT, OR CONSULTATION REQUIRED?

	YES	MAYBE	NO
PRC 5024 - Historical Review/Archaeological Review	☐	☐	☑
Native American Consultation	☐	☐	☑
Coastal Development Permit	☐	☐	☑
CDFW Stream Alteration Permit	☐	☐	☑
State & Federal Endangered Species Consultation	☐	☐	☑
DPR Right to Enter or Temporary Use Permits	☐	☐	☑
US Army Corps of Engineers 404 Permit	☐	☐	☑
Regional Water Quality Control Board (RWQCB) Permit	☐	☐	☑
National Pollutant Discharge Elimination System Permit	☐	☐	☑
Stormwater Management Plan	☐	☐	☑
Encroachment Permit *(Specify Agency)*:	☐	☐	☑
Other *(Specify)*:	☐	☐	☑

DEPARTMENT POLICY COMPLIANCE

	YES	NO
HAS A GENERAL PLAN BEEN APPROVED FOR THE UNIT?	☑	☐
If YES, is the project consistent with the GP?	☑	☐
If NO, what is the project justification?		
Is it a temporary facility? (No permanent resource commitment)	☐	☐
Health and Safety project?	☐	☐
Is it a Resource Management Project?	☐	☐
Is it repairing, replacing, or rehabilitating an existing facility?	☐	☐
IS THE PROJECT WITH A CLASSIFIED SUBUNIT?		
Natural Preserve	☐	☑
Cultural Preserve	☐	☑
State Wilderness	☐	☑
IS THE PROJECT CONSISTENT WITH THE DEPARTMENT'S CULTURAL RESOURCE MANAGEMENT DIRECTIVES? DOM CHAPTER 1600	☑	☐
IS THE PROJECT CONSISTENT WITH THE DEPARTMENT'S OPERATIONS MANUAL CHAPTER 0300, NATURAL RESOURCES?	☑	☐

State of California - The Resources Agency
CALIFORNIA STATE PARKS

Project Name ROE - Monitoring Wells

PROJECT EVALUATION (PEF)

RESOURCES

Explain all 'Yes' or 'Maybe' answers in the 'Evaluation and Comments' section (reference by letter and number). Attach additional pages, if necessary.

YES	MAYBE	NO	**A. EARTH** - *WILL THE PROJECT:*
☐	☐	☑	1. Create unstable soil or geologic conditions?
☐	☐	☑	2. Adversely affect topographic features?
☐	☐	☑	3. Adversely affect any unusual or significant geological features?
☐	☐	☑	4. Increase wind or water erosion?
☐	☐	☑	5. Adversely affect sand deposition or erosion of a sand beach?
☐	☐	☑	6. Expose people, property or facilities to geologic hazards or hazardous waste?
☐	☐	☑	7. Adversely affect any paleontological resource?

YES	MAYBE	NO	**B. AIR** - *WILL THE PROJECT:*
☐	☐	☑	1. Adversely affect general air quality or climatic patterns?
☐	☐	☑	2. Introduce airborne pollutants that may affect plant or animal vigor or viability?
☐	☐	☑	3. Increase levels of dust or smoke?
☐	☐	☑	4. Adversely affect visibilty?

YES	MAYBE	NO	**C. WATER** - *WILL THE PROJECT:*
☐	☐	☑	1. Change or adversely affect movement in marine or fresh waters?
☐	☐	☑	2. Change or adversely affect drainage patterns or sediment transportation rates?
☐	☐	☑	3. Adversely affect the quality or quanity of groundwater?
☐	☐	☑	4. Adversely affect the quantity or quality of surface waters?
☐	☐	☑	5. Expose people or property to flood waters?
☐	☐	☑	6. Adversely affect existing or potential aquatic habitat(s)?

YES	MAYBE	NO	**D. PLANT LIFE** - *WILL THE PROJECT:*
☐	☐	☑	1. Adversely affect any native plant community?
☐	☐	☑	2. Adversely affect any unique, rare, endangered, or protected plant species?
☐	☐	☑	3. Introduce a new species of plant to the area?
☐	☐	☑	4. Adversely affect agricultural production?
☐	☐	☑	5. Adversely affect the vigor of any tree?
☐	☐	☑	6. Encourage the growth or spread of exotic (non-native) species?
☐	☐	☑	7. Interfere with established fire management plans or practices?

YES	MAYBE	NO	**E. ANIMAL LIFE** - *WILL THE PROJECT:*
☐	☐	☑	1. Adversely affect any native or naturalized animal population?
☐	☐	☑	2. Adversely affect any unusual, rare, endangered, or protected species?
☐	☐	☑	3. Adversely affect any animal habitat?
☐	☐	☑	4. Introduce or encourage the proliferation of any non-native species?

State of California - The Resources Agency
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Project Name ROE - Monitoring Wells

PROJECT EVALUATION (PEF)

YES	MAYBE	NO	F. CULTURAL RESOURCES - *WILL THE PROJECT:*
☐	☐	☑	1. Adversely affect a prehistoric or historic archaeological site or tribal cultural resource?
☐	☐	☑	2. Adversely affect a prehistoric or historic building, structure or object?
☐	☐	☑	3. Cause an adverse physical or aesthetic effect on an eligible or contributing building, structure, object, or cultural landscape?
☐	☐	☑	4. Diminish the informational or research potential of a cultural resource?
☐	☐	☑	5. Increase the potential for vandalism or looting?
☐	☐	☑	6. Disturb any human remains?
☐	☐	☑	7. Restrict access to a sacred site or inhibit the traditional religious practice of a Native American community?

YES	MAYBE	NO	G. AESTHETIC RESOURCES - *WILL THE PROJECT:*
☐	☐	☑	1. Adversely affect a scenic vista or view?
☐	☐	☑	2. Significantly increase noise levels?
☐	☐	☑	3. Adversely affect the quality of the scenic resources in the immediate area or park-wide?
☐	☐	☑	4. Create a visually offensive site?
☐	☐	☑	5. Be incompatible with the park design established for this unit or diminish the intended sense of "a special park quality" for the visitor?

YES	MAYBE	NO	H. RECREATIONAL RESOURCES - *WILL THE PROJECT:*
☑	☐	☐	1. Be in a public use area?
☐	☐	☑	2. Have an adverse effect on the quality of the intended visitor experience?
☐	☐	☑	3. Have an adverse effect on the quality or quantity of existing or future recreational opportunities or facilities?
☐	☐	☑	4. Have an adverse effect on the accessibility of recreational facilities (e.g. ADA requirements)?

YES	MAYBE	NO	I SEA-LEVEL RISE AND EXTREME EVENTS (COASTAL UNITS ONLY):
☐		☑	1. Has this project been evaluated for potential impacts from sea-level rise, coastal storm surge, and other extreme events, using the Department's Sea-Level Rise and Extreme Events Guidance Document or an equivalent process? *Please attach the Sea-Level Worksheet or other detailed evaluation.*
☐	☐	☑	2. Based on the evaluation described above, will the project be adversely impacted by frequent flooding or permanent inundation during its expected lifetime?
☐	Non-coastal unit		

EVALUATION AND COMMENTS

PROJECT EVALUATION (PEF)

Project Title: Fort Ord Dunes SP – Well Monitoring ROE Permit

ENVIRONMENTAL SCIENTIST COMMENTS AND SIGNATURE (REQUIRED FOR ALL FINDINGS)

FINDINGS:

☐ No Impact

☒ Project Conditions necessary, see below

☐ Potential Significant Impact

EXPLANATION AND COMMENTS:

Vehicles must stay on established routes, minimize vegetation disturbance, and avoid protected species and their habitat.

SIGNATURE *Matthew Allen*	PRINTED NAME Matthew Allen
TITLE SENIOR ENVIRONMENTAL SCIENTIST	DATE 8/27/2020

PROJECT EVALUATION (PEF)

Project Title: Fort Ord Dunes SP – Well Monitoring ROE Permit

HISTORIAN COMMENTS AND SIGNATURE (REQUIRED FOR ALL FINDINGS)

FINDINGS:

☒ No PRC 5024 necessary (explain below)

☐ PRC 5024 attached, project approved as written

☐ PRC 5024 attached, conditions necessary

☐ PRC 5024 attached, mitigations and/or significant impacts

EXPLANATION AND COMMENTS:

No historical resources at the monitoring well sites. There will be no impacts to surrounding historical resources as a result of the project either.

SIGNATURE MATT BISCHOFF	PRINTED NAME MATT BISCHOFF
TITLE HISTORIAN III	DATE 7/28/20

PROJECT EVALUATION (PEF)

Project Title: Fort Ord Dunes SP – Well Monitoring ROE Permit

ARCHAEOLOGIST COMMENTS AND SIGNATURE (REQUIRED FOR ALL FINDINGS)

Findings:

☐ No PRC 5024 necessary (provide justification) ☐ PRC 5024 attached; project approved as written

☐ PRC 5024 attached, conditions necessary ☐ PRC 5024 attached; mitigations and/or potential significant impacts

Explanation/Comments: No archaeological resources are known or expected at the well sites or within path of travel to the well sites. No archaeological resources will be disturbed by well-monitoring

SIGNATURE Rae Schwaderer	PRINTED NAME RAE SCHWADERER
TITLE ASSOCIATE ARCHAEOLOGIST	DATE 8/04/2020

TRIBAL LIAISON COMMENTS AND SIGNATURE (REQUIRED FOR ALL FINDINGS)

☒ Reviewer is Designated District/Service Center/Division Tribal Liaison of Designee

☐ NAHC Listed Tribe(s) contacted (attach correspondence record for contact and findings) No tribes contacted.
- ☐ DN 2007-05 Tribal Consultation Only
- ☐ AB52 Consultation Initiated

FINDINGS:

☒ Project action does not have potential to affect "tribal cultural" resources (explain). No tribal cultural resources will be affected by this ROE permit to monitor wells.

Check more than 1 box if tribes offering differing responses, and describe all consultation below.

☐ Tribe(s) did not respond.

☐ Tribe(s) approved project as written.

☐ Tribe(s) approved project with treatment or conditions.

☐ Tribe(s) and DPR unable to reach mutual agreement on treatment or conditions.

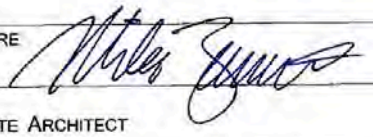
SIGNATURE Rae Schwaderer	PRINTED NAME RAE SCHWADERER
TITLE ASSOCIATE ARCHAEOLOGIST	DATE 8/04/2020

PROJECT EVALUATION (PEF)

Project Title: Fort Ord Dunes SP – Well Monitoring ROE Permit

COMMENTS:

I have no comments.

SIGNATURE 	PRINTED NAME MIKE ZUCCARO
TITLE ASSOCIATE ARCHITECT	DATE AUGUST 3, 2020

State of California - The Resources Agency
CALIFORNIA STATE PARKS

Project Name ROE - Monitoring Wells

PROJECT EVALUATION (PEF)

ENVIRONMENTAL COORDINATOR REVIEW

YES	MAYBE	NO	CUMULATIVE IMPACTS
☐	☐	☑	1. Will the project be conducted in conjunction with or at the same time as other projects at the park?
☐	☐	☑	2. Will the project be part of a series of inter-related projects?
☐	☐	☑	3. Are there any other projects that must be completed for any part of this project to become operational?
☐	☐	☑	4. Are there any other projects (including deferred maintenance) that have been completed or any probable future projects that could contribute to the cumulative impacts of this project?
☐	☐	☑	5. Are any of the projects that relate to work outside of the General Plan?

COMMENTS:

RECOMMENDATION:

- ☐ Not a project for the purposes of CEQA compliance.
- ☐ Project is covered activity under DOM 0600 (Figure F) that does not require Notice of Exemption.
- ☐ Project is covered activity under previously prepared CEQA document; SCH # _____
- ☑ Project is exempt. Notice of exemption will be prepared.
- ☐ A Negative Declaration should be prepared.
- ☐ A Mitigated Negative Declaration should be prepared.
- ☐ An EIR should be prepared.
- ☐ AB52 Consulation Initiated. See Tribal Liaison Section.

SIGNATURE Jill Poudrette
PRINTED NAME Jill Poudrette
TITLE DISTRICT ENVIRONMENTAL COORDINATOR
DATE 9/1/2020

DISTRICT SUPERINTENDENT REVIEW

I acknowledge any constraints placed on the project as a result of the specialists' comments above and recommend the project proceed.

DISTRICT SUPERINTENDENT APPROVAL SIGNATURE | TITLE | DATE

SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: January 1, 2022

RFS NO. 2022-02
(To be filled in by WATERMASTER)

TO: Martin Feeney
Martin Blair Feeney
PROFESSIONAL

FROM: Robert Jaques
WATERMASTER

Services Needed and Purpose: Consultation and other hydrogeologic services. See Scope of Work in Attachment 1.

Completion Date: All work of this RFS shall be completed not later than December 31, 2022.

Method of Compensation: Time and Materials (As defined in Section V of Agreement.)

Total Price Authorized by this RFS: $4,000.00 (Cost is authorized only when evidenced by signature below.) (See Attachment 1 for derivation of this Total Price).

Total Price may not be exceeded without prior written authorization by WATERMASTER in accordance with Section V. COMPENSATION.

Requested by: _____ Date: _____.
WATERMASTER Technical Program Manager

Agreed to by: _____ Date: _____.
PROFESSIONAL

ATTACHMENT 1

On an ongoing and as-requested basis, PROFESSIONAL will provide general hydrogeologic consulting services to WATERMASTER on a variety of topics. These may include, but not be limited to, interpretation of water level and water quality data, and seawater intrusion analysis issues.

Providing these services will likely involve attending certain of WATERMASTER's Technical Advisory Committee (TAC) and /or Board meetings, most of which will be attended telephonically or via Zoom.

Consulting services will be provided at the rate of $200/hour. Related other direct costs (such as travel costs) will be billed at actual cost. Services under this RFS No. 2022-02 will only be provided when specifically requested by WATERMASTER.

The total cost authorized by this RFS No. 2022-02 is $4,000.

SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: January 1, 2022

RFS NO. 2022-01
(To be filled in by WATERMASTER)

TO: Gus Yates
Todd Groundwater
PROFESSIONAL

FROM: Robert Jaques
WATERMASTER

Services Needed and Purpose: See Scope of Work in Attachment 1.

Completion Date: All work of this RFS shall be completed not later than December 31, 2022.

Method of Compensation: Time and Materials (As defined in Section V of Agreement.)

Total Price Authorized by this RFS: $ 4,000.00 (Cost is authorized only when evidenced by signature below.) (See Attachment 1 for Estimated Costs).

Total Price may not be exceeded without prior written authorization by WATERMASTER in accordance with Section V. COMPENSATION.

Requested by: _____ Date: _____.
WATERMASTER Technical Program Manager

Agreed to by: _____ Date: _____.
PROFESSIONAL

ATTACHMENT 1

Scope of Work

On an ongoing and as-requested basis PROFESSIONAL will provide hydrogeologic consulting services to WATERMASTER on groundwater modeling and related topics. These may include, but not be limited to, responding to questions regarding the Seaside Basin Model that HydroMetrics WRI has prepared for WATERMASTER, assisting in the interpretation of modeling results, and other related activities.

Providing these services may involve attending certain of WATERMASTER's Technical Advisory Committee (TAC) meetings, some of which may be attended telephonically or via Zoom.

Estimated Costs

Consulting services provided under this RFS No. 2022-01, including attending meetings either remotely or in-person as requested by WATERMASTER, will be billed at PROFESSIONAL's standard hourly rates for calendar year 2022, including all markups and other direct costs.

The total cost authorized by this RFS No. 2022-01 is $4,000.00.

SEASIDE BASIN WATERMASTER
SCOPE OF WORK

Note: The work described in this Scope of Work (SOW) will be performed in accordance with the terms and conditions set forth in the Master Services Agreement for Groundwater Monitoring and Database Services (Agreement) executed between the Monterey Peninsula Water Management District (DISTRICT) and the Seaside Groundwater Basin Watermaster (WATERMASTER), dated xxxx.

DATE: January 1, 2022

SOW NO. 2022-01
(To be filled in by WATERMASTER)

TO: Jonathan Lear
DISTRICT

FROM: Robert Jaques
WATERMASTER

Services Needed and Purpose:
Perform certain Tasks contained within the Watermaster's Monitoring and Management Plan for 2022 (M&MP) (See detailed Scope of Work in Attachment 1).

Schedule:
The work of this SOW No. 2022-01 shall be completed in accordance with the column titled "Schedule" in Table 1 of Attachment 1.

Method of Compensation:
Time and Material Payment Method (As defined in Section 6 of the Agreement).

Total Price Authorized by this SOW:
$ 68,876.00 (See Attachment 1 for a Breakdown of this Total Price. Cost is authorized only when evidenced by signature below.)

Total Price may not be exceeded without prior written authorization by WATERMASTER in accordance with Section 6 of the Agreement (Payment of Services).

Requested by: _____ Date:_____.
WATERMASTER

Agreed to by: _____ Date:_____.
DISTRICT

ATTACHMENT 1

Detailed Scope of Work for SOW No. 2022-01

Background:

This SOW No. 2022-01 authorizes DISTRICT to perform certain work on certain of the Tasks described in the WATERMASTER's 2022 M&MP. The Task numbers listed in the first column of Table 1 below correspond to the Task numbers in the 2021 M&MP. The Task numbers listed in the second column of Table 1 correspond to DISTRICT's task numbering system.

The wells from which water level and water quality data are to be obtained are listed below in Table 2.

The hourly rates for the personnel who will be performing the work of this SOW No. 2022-01 are listed below in Table 3.

Table 1. Scope of Work and Costs							
WATERMASTER M&MP Task No.	DISTRICT Task No.	Description	Time	Rate	Cost	Comments	Schedule
I.2.b.2	1	**Collect Monthly Water Levels**					
		Collect Monthly Water levels at 20 wells	96	136	$13,056		Ongoing
I.2.b.2	2	**Collect Quarterly Water Levels**					
		Collect Quarterly Water levels at 8 wells	32	136	$4,352		Ongoing
I.2.b.3	3	**Collect Quarterly Water Quality Samples**					
		Collect 7 Water Quality Samples Quarterly (28 total Samples)	48	136	$6,528		Ongoing
		Order bottles and COC to Labratory	4	136	$544		
I.2.b.3	4	**Collect Annual Water Quality Samples**					
		Collect 12 Water Quality Samples Annually	16	136	$2,176		Ongoing
		Order bottles and COC to Labratory	1.5	136	$204		
		RMA/Proqure Replacement pump and Deploy (replaces one pump)	8	136	$1,088	Only if necessary	
I.2.a.1	5	**Enter Water Level Data QA/QC**					
		Enter Qa/QC 272 Water Level Measurments Collected by MPWMD	20	196	$3,920		Ongoing
		Enter Qa/QC 264 Water Level Measurments Reported to Watermaster	20	196	$3,920		Ongoing
I.2.a.1	6	**Enter Water Quality Data QA/QC**					
		Enter Qa/QC 40 Water Quality Samples Collected by MPWMD	40	196	$7,840		Ongoing
		Enter Qa/QC 12 Water Quality Samples Reported to Watermaster	16	196	$3,136		Ongoing
I.2.b.7	7	**Upload Water Level Data to CASGEM**					
		Upload 536 Water Level Measurements to DWR Database	24	196	$4,704		Ongoing
I.2.b.6	8	**Provide Data Tabulation for SIAR Appendix**					
		Tabulate and Transfer Water Level and Quality Data to Watermaster Consultant	16	196	$3,136		March-22
N/A	9	**Respond to Data Requests**					
		Produce Data Requests as Necessary	10	196	$1,960	Only if necessary	
I.2.b.2	10	**Annual Data Logger Downloads and Data Transfer**					
		Download Loggers Field Work	12	136	$1,632		
		Transfer data	2	196	$392		October-22
		Exchange logger if not working RMS process (replaces one logger)	4	136	$544	Only if necessary	
		Answer questions re transferred logs	2	196	$392	Only if necessary	
		Program and Deploy New Data Logger	2	136	$272	Only if necessary	
N/A	N/A	**Administrative Staff**					
		Create Billings and Cut Checks to Water Quality Laboratory	8	63	$504		Ongoing

Table 1. Summary						
WATERMASTER M&MP Task No.	DISTRICT Task No.	Item	Quantity	Rate	Subtotal	
		Labor (Hours)	381.5		$60,300	
I.2.b.2 and I.2.b.3	1, 2, 3, 4, and 10	Estimated Fleet Support (Mileage)	850	0.56	$476	
I.2.b.3	3 and 4	Watermaster Standard Panel Laboratory Analysis (Number of Analyses)	40	155	$6,200	
I.2.b.3	3 and 4	Fuel (CO_2 Bottle) to run sample pump (Bottles)	6	25	$150	
I.2.b.3	3 and 4	Replacement Low Flow Pump	1	900	$900	Only if necessary
I.2.b.2	1, 2, and 10	Replacement Data Logger	1	850	$850	Only if necessary
		TOTAL			**$68,876**	

Table 2. Wells to be Monitored

Monthly Water Levels

1. MSC - Shallow
2. MSC - Deep
3. FO 10 (S)
4. FO 10 (D)
5. CDM MW-1
6. CDM MW-2
7. CDM MW-3
8. CDM MW-4
9. Plumas 1990 Test
10. K-Mart
11. MW-BW-08A
12. MW-BW-09
13. Sand City Public Works
14. CAW Granite Construction
15. Cypress Pacific
16. Design Center
17. DBO - Target
18. MMP - MM Production
19. PCA West (S)
20. PCA West (D)

Quarterly Water Quality Sampling

1. PCA W (S)
2. PCA W (D)
3. MSC (S)
4. MSC (D)
5. FO 09 (D)
6. FO 10 (S)

Annual Water Quality Sampling

1. PCA E (S)
2. PCA E (D)
3. Ord Terrace (S)
4. FO 10 (D)
5. CAW Del Monte Test
6. Sand City Public Works
7. Laguna Seca County Park #2
8. York School
9. Laguna Seca Golf New #12
10. Pasadera Main Gate
11. Cypress Pacific
12. MMP - MM Production

Quarterly Water Levels

1. SBWM MW-1
2. SBWM MW-2
3. SBWM MW-3
4. SBWM MW-4
5. Camp Huffman (S)
6. Camp Huffman (D)
7. Shea
8. Laguna Seca Driving Range

Water Level Data Reported to Watermaster

1. SNG
2. LSCP
3. Nicolas
4. City of Seaside

Table 3. Hourly Rates

Monterey Peninsula Water Management District

Schedule of Reimbursement Rates as of July 1, 2020

Employee	Job Title	Hourly Wage	Labor Overhead Percentage	Labor Overhead Amount	Hourly Benefits Amount	P/R Tax & W/C Ins Hourly Cost	Total Employee Cost Per Hour	Indirect Overhead Percentage	Indirect Overhead Amount	Total Calculated Hourly Rate	Rounded Billable Rate
ITM	Information Technology Mgr.	0.00	0.1731	0.00	0.00	0.00	0.00	0.4773	0.00	0.00	0.00
Bennett	Accountant	37.74	0.1731	6.53	10.27	0.75	55.29	0.4773	26.39	81.68	81.00
Prasad	Admin. Services Manager/CFO	89.40	0.1731	15.47	37.57	1.78	144.23	0.4773	68.84	213.07	213.00
Reyes	Senior Office Specialist	34.13	0.1731	5.91	19.24	0.68	59.96	0.4773	28.62	88.58	88.00
GIS Contract	GIS Contract	0.00	0.1731	0.00	0.00	0.00	0.00	0.4773	0.00	0.00	0.00
HR Contract	HR Contract	0.00	0.1731	0.00	0.00	0.00	0.00	0.4773	0.00	0.00	0.00
Mossbacher	Accounting/Office Specialist	28.08	0.1731	4.86	9.47	0.56	42.97	0.4773	20.51	63.48	63.00
Stoldt	General Manager	118.28	0.1731	20.47	47.18	2.36	188.29	0.4773	89.87	278.16	278.00
Pablo	Executive Assistant	33.37	0.1731	5.78	10.04	0.69	49.88	0.4773	23.81	73.69	73.00
Atkins	Enviromental Program Specialist	35.00	0.1731	6.06	10.04	2.39	53.49	0.4773	25.53	79.02	79.00
Christensen	Enviromental Resources Manager	68.13	0.1731	11.79	31.17	4.66	115.76	0.4773	55.25	171.01	171.00
Hampson	Interim/Temp District Eng.	78.03	0.1731	13.51	0.00	10.18	101.71	0.4773	48.55	150.26	150.00
Lumas	Resources Maintenance Specialist	32.52	0.1731	5.63	9.84	0.65	48.64	0.4773	23.22	71.86	71.00
PM	Project Manager	0.00	0.1731	0.00	0.00	0.00	0.00	0.4773	0.00	0.00	0.00
Hamilton, M	Water Resources Engineer	63.27	0.1731	10.95	12.34	4.33	90.89	0.4773	43.38	134.27	134.00
Bravo	Conservation Analyst	50.66	0.1731	8.77	25.08	1.01	85.52	0.4773	40.82	126.34	126.00
Timmer	Conservation Rep I	40.57	0.1731	7.02	10.51	0.84	58.94	0.4773	28.13	87.07	87.00
Kister	Conservation Analyst	50.66	0.1731	8.77	25.05	1.05	85.53	0.4773	40.83	126.36	126.00
Smith	Conservation Rep II	42.67	0.1731	7.39	10.69	0.85	61.60	0.4773	29.40	91.00	90.00
Jakic	Conservation Technician I	37.69	0.1731	6.52	10.41	0.78	55.41	0.4773	26.45	81.85	81.00
Locke	Water Demand Manager	69.84	0.1731	12.09	31.79	1.45	115.16	0.4773	54.97	170.12	170.00
Chaney	Associate Fisheries Biologist	48.22	0.1731	8.35	24.25	3.30	84.12	0.4773	40.15	124.27	124.00
Fish Crew Leader	Fish Crew Leader	44.00	0.1731	7.62	0.00	5.74	57.35	0.4773	27.38	84.73	84.00
Gallagher	Assistant Fisheries Biologist	16.25	0.1731	2.81	7.36	2.12	28.54	0.4773	13.62	42.17	42.00
Hamilton, C	Associate Fisheries Biologist	48.22	0.1731	8.35	24.22	3.30	84.08	0.4773	40.14	124.22	124.00
James	Hyrdography Programs Coord.	54.56	0.1731	9.44	26.50	3.73	94.23	0.4773	44.98	139.21	139.00
Lear	Water Resources Manager	79.01	0.1731	13.68	34.95	5.41	133.04	0.4773	63.51	196.55	196.00
Lindberg	Associate Hydrologist	53.23	0.1731	9.21	26.09	3.64	92.17	0.4773	43.99	136.16	136.00
HT	Hydrology Technician	0.00	0.1731	0.00	0.00	0.00	0.00	0.4773	0.00	0.00	0.00
SFB	Senior Fisheries Biologist	0.00	0.1731	0.00	0.00	0.00	0.00	0.4773	0.00	0.00	0.00
Wtr Resouces Asst.	Water Resources Assistant	14.75	0.1731	2.55	0.00	1.92	19.23	0.4773	9.18	28.40	28.00

SEASIDE GROUNDWATER BASIN WATERMASTER

TO: Watermaster Board of Directors
FROM: Laura Paxton, Administrative Officer
DATE: September 1, 2021
SUBJECT: Consider Approving the Proposed 2022 Replenishment Assessment Unit Costs for Natural Safe Yield and Operation Yield Overproduction

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RECOMMENDATION:
Recommend approval of a Replenishment Assessment Unit Cost of $3,260/AF and $815/AF for Natural Safe Yield and Operating Yield Overproduction, respectively, for Water Year 2022.

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 2021 will be used to calculate Replenishment Assessments for pumping that occurs during Water Year 2022 (October 1, 2021 through September 30, 2022).

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.

DISCUSSION:
The attached Table includes updated cost data for two of the three projects, the Pure Water Monterey Project (PWM) and a partial updated cost for the Regional Urban Water Augmentation Project (RUWAP). In the attached Table, a blended unit cost value is provided for the MPWSP based on an updated PWM unit cost. The blended unit cost for that combined project was updated from $4,817/AF to $4,948/AF. Patrick Breen of Marina Coast Water District (MCWD) advised that a RUWAP Rate Study is underway to determine project operations & maintenance and financing costs; stating the per-acre foot cost could be noted as the PWM $2,808/AF cost with the project O&M and financial costs added once determined. For purposes of the 2022 Replenishment Assess Unit Cost calculation, $2,808 was used as the RUWAP cost/AF. Monterey Peninsula Water Management District had not yet provided updated costs for Aquifer Storage and Recovery expansion.

The updated Unit Cost would therefore be $3,260/AF, calculated as: ($4,948+$2,025+$2,808)/3. These are the three **bold-faced** unit costs in the attached Table. The Operating Yield Over Production Replenishment Assessment Unit Cost is 25% of that amount, or $815. At its August 16, 2021 meeting the Budget and Finance Committee reviewed, discussed, and approved these Unit Costs.

ATTACHMENTS: Updated Unit Cost Data Table 2022; Water Year 2017; 2021; & 2014 Unit Cost Data

WATER YEAR 2022 (October 1, 2021-September 30, 2022)

ANTICIPATED UNIT COSTS OF WATER THAT 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
Groundwater Replenishment Project (Pure Water Monterey) [6]	2020	3,500	2,808	2021
Monterey Peninsula Water Supply Project (Combined Regional Desalination with Groundwater Replenishment Project)	GWRP in 2020; Regional Desalination in 2024	9,750	**$4,948[3]**	2021
Seaside Basin ASR Expansion [4]	2021	1,000	**$2,025**	2016
Regional Urban Water Augmentation Project [5]	2021	1,400-1,700	**$2,808+TBD**	2021

($4,948 + $2,025 + $2,808) / 3 =
$3,260 = 2022 Replenishment Assessment Unit Cost for NSY Overproduction
$3,260/4 = $815 Replenishment Assessment Unit Cost for OY Overproduction

FOOTNOTES:

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

(2) Base unit cost data based on PUC filing documents and provided by Dave Stoldt of MPWMD. This 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 groundwater replenishment projects, calculated as: (6,250x$6,147 + 3,500x$2,808)/9,750 = $4,948

(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 by MCWD in 2021. Patrick Breen of MCWD noted that to determine total cost per acre-foot, use the $2,808-acre foot cost from Pure Water Monterey (which would be RUWAP cost as well) and add MCWD O&M and Financing costs to be determined fall of 2021.

(6) Base unit cost effective July 1, 2021 based on information provided by Ian Crook of Cal Am.

WATER YEAR 2021 (October 1, 2020-September 30, 2021)

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]	2022	6,250	$6,147	2019
Groundwater Replenishment Project (Pure Water Monterey)[6]	2020	3,500	$2,442	2020
Monterey Peninsula Water Supply Project (Combined Regional Desalination with Groundwater Replenishment Project)	GWRP in 2020 Regional Desalination in 2022	9,750	**$4,817**[3]	2018-2020
Seaside Basin ASR Expansion [4]	2020	1,000	**$2,025**	2016
Regional Urban Water Augmentation Project [5]	2020	1,400-1,700	**$2,000**	2018

FOOTNOTES:

(1) For the Regional Desalination Project this is the total amount of water from this source which could potentially come to the CAW distribution system, based on the desalination plant having a 6.4 MGD capacity which is equivalent to 7,169 AFY. Only a portion of this amount might be available as initially unused capacity that could be used to help replenish the Seaside Basin. For the RUWAP this is the total amount of non-potable water from this source. Only a portion of this amount might be used for in-lieu replenishment of the Seaside Basin. For the ASR Expansion Project this is the additional amount of water that could potentially be provided by this project (see footnote 4). For the GWRP this is the quantity of water that is being planned at this time by CAW for inclusion in its Monterey Peninsula Water Supply Project.

(2) Base unit cost data based on PUC filing documents and provided by Dave Stoldt of MPWMD . This unit cost was confirmed in August 2020 by Tim O'Halloran of Cal Am as being the latest unit cost available for this project.

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

(6,250x$6,147 + 3,500x$2,442)/9.750 = **$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 provided by MCWD in 2016. This unit cost was confirmed in August 2020 by Patrick Breen of MCWD as being the latest unit cost available for this project.

(6) Base unit cost based on information provided by Dave Stoldt of MPWMD as reported in the Carmel Pine Cone in early August

TABLE 2

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

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

POTENTIAL SOURCE OF REPLENISHMENT WATER	POTENTIAL DATE REPLENISH-MENT WATER COULD BECOME AVAILABLE	POTENTIAL VOLUME OF WATER THAT COULD BE SUPPLIED BY THE PROJECT (AFY) [1]	BASE UNIT COST ($/AF)	BASE UNIT COST YEAR
Regional Desalination[2]	2020	6,250	$6,147	2019
Groundwater Replenishment Project (Pure Water Monterey)[2]	2018	3,500	$1,811	2018
Monterey Peninsula Water Supply Project (Combined Regional Desalination with Groundwater Replenishment Project)	GWRP in 2018 Regional Desalination in 2020	9,750	$4,591	
Seaside Basin ASR Expansion [3]	2020	1,000	$2,025	2016
Regional Urban Water Augmentation Project [4]	2018	1,400-1,700	$2,000	2018

FOOTNOTES:

(1) For the Regional Desalination Project this is the total amount of water from this source which could potentially come to the CAW distribution system, based on the desalination plant having a 6.4 MGD capacity which is equivalent to 7,169 AFY. Only a portion of this amount might be available as initially unused capacity that could be used to help replenish the Seaside Basin. For the RUWAP this is the total amount of non-potable water from this source. Only a portion of this amount might be used for in-lieu replenishment of the Seaside Basin. For the ASR Expansion Project this is the additional amount of water that could potentially be provided by this project (see footnote 3). For the GWRP this is the quantity of water that is being planned at this time by CAW for inclusion in its Monterey Peninsula Water Supply Project.

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

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

(4) Project data provided by MCWD.

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

ANTICIPATED UNIT COSTS OF REPLENISHMENT WATER FOR THE SEASIDE BASIN

POTENTIAL SOURCE OF REPLENISHMENT WATER	POTENTIAL DATE REPLENISH-MENT WATER COULD BECOME AVAILABLE	POTENTIAL VOLUME OF WATER THAT COULD BE SUPPLIED BY THE PROJECT (AFY) [1]	LEVEL OF PROJECT DEVELOP-MENT	CONTINGENCY INCLUDED IN BASE UNIT COST [2] (%)	BASE UNIT COST ($/AF)	BASE UNIT COST YEAR	ADDITIONAL CONTINGENCY ADDED TO REFLECT LEVEL OF PROJECT DEVELOPMENT [3] (%)	UNIT COST INCLUDING ADDITIONAL CONTINGENCY ($/AF)	UNIT COST INFLATED @ 3% FROM COST BASIS YEAR TO YEAR REPLENISH-MENT WATER COULD BECOME AVAILABLE ($/AF)	VOLUME-WEIGHTED AVG %
Monterey Peninsula Water Supply Project (Regional Desalination) [4]	2018	9,752	Project Report	30%	$3,507	2012	0%	$3,507	$4,188	56.53%
Seaside Basin ASR Expansion [5]	2015	1,000	Conceptual	11%	$1,800	2012	39%	$2,502	$2,734	5.80%
Regional Urban Water Augmentation Project [6]	2017	3,000	Design	5%	$2,000	2013	10%	$2,200	$2,476	17.39%
Groundwater Replenishment Project (GWRP) [7]	2017	3,500	Conceptual	50%	$3,500	2017	0%	$3,500	$3,500	20.29%
Total Quantity of Replenishment Water (AFY) the Listed Projects Could Cumulatively Potentially be Able to Produce Within the Next 10 Years [8] =										**17,252**

FOOTNOTES:

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

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

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

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

(6) Project data provided by MCWD.

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

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

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ITEM VIII.F.
9/1/21

SEASIDE GROUNDWATER BASIN WATERMASTER

TO: Board of Directors

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

DATE: September 1, 2021

SUBJECT: Discussion of Public Awareness about the need for replenishment water for the Seaside Basin

- -

RECOMMENDATIONS:
Direct Staff on actions to take regarding the need for replenishment water to protect the Seaside Basin.

BACKGROUND:
At its May 5, 2021 meeting the Board approved the TAC and Staff recommendation to start Board-level negotiations with California American Water (Cal Am), Monterey Peninsula Water Management District (MPWMD), and Monterey One Water (M1W) to establish terms and conditions under which replenishment water for the Seaside Basin could be obtained from the Desalination Project or the Pure Water Monterey Expansion Project (PWMX), respectively. As a result of that action, on May 24, 2021, letters were sent to the Board Chairs and Managers of each of those entities asking them to dialogue with Watermaster representatives on this issue.

A first meeting to initiate discussions was held on July 20, 2021.

DISCUSSION:
There was general agreement by the attendees of the initial meeting that replenishment water would benefit the Seaside Basin. However, there did not seem to be an in-depth understanding by all as to the critical need for replenishment water to protect against seawater intrusion that would threaten and possibly shut down the ASR, PWM, and PWMX water supply projects as they all rely on Basin storage to operate. The focus of MPWMD and M1W appears only to be on providing sufficient water to meet current and projected water demands. This lack of understanding is supported by the May 18, 2020 MPWMD General Manager report titled "Supply and Demand for Water on the Monterey Peninsula" presented to the MPWMD Board, focusing entirely on water supply to meet current and projected future water demands with no mention of seawater intrusion risk or the need for replenishment water to protect the Seaside Basin. Further, Cal Am is only required to repay to the Basin the amount of water it has over pumped since inception of the Adjudicated Decision, and is not responsible for replenishing any overdraft prior to the Decision that would aid in achieving protective groundwater levels.

The water issues facing the Seaside Basin are **twofold**: 1) Protecting the Basin against seawater intrusion by raising groundwater levels, and 2) Providing sufficient water from the Basin to meet current and projected future water demands. The public in general along with MPWMD and M1W Board members and staff, while informed on water supply and demand issues—the pros and cons of the Desalination Project versus the Pure Water Monterey Expansion Project—are likely unaware of the serious risk of seawater intrusion now facing the Basin.

Staff believes it would be beneficial for the Watermaster to raise awareness of the general public and board members and staff of other entities about the need for replenishment water to help build support in obtaining it.

Some actions the Board may wish to consider include:

- Posting depictions of Basin risk on the Watermaster website that other entities could link to.
- Making presentations to the boards of other entities about the need for replenishment water
- Ensuring Coastal Commission staff is aware of replenishment need
- Engaging a consultant to develop, and helping Staff to implement, a public awareness program

Moreover, significant over drafting (i.e., more pumping than can be sustained) has been identified in the Groundwater Sustainability Plans (GSPs) within the Salinas Valley Groundwater Basin, specifically the GSPs for the 180/400-Foot Subbasin and the Monterey Subbasin. Those GSPs call for obtaining supplemental sources of water to combat seawater intrusion and/or to offset pumping reductions that will need to be imposed in order for those subbasins to become sustainable. Attached are excerpts from those GSPs which identify increased use of recycled water (from the Salinas Valley Reclamation Plant and the Pure Water Monterey Advanced Water Treatment Plant) and desalinated water to accomplish this. This highlights the fact that in the near future there will be increased demand for recycled and desalinated water as these GSPs are implemented.

The amount of water that can be recycled is limited to the amount of wastewater flowing into M1W's Regional Treatment Plant. Largely because of water conservations measures in recent years, flows into that plant have remained relatively static, or have even decreased. Consequently, it is likely that there will not be enough recycled water to meet the needs of all of these subbasins. *For this reason, it is important for the Watermaster to actively seek to secure a source of water to replenish the Seaside Basin before such water sources are used by the Salinas Valley Basin and/or the Marina Coast Water District Groundwater Sustainability Agencies to carry out the management actions and projects being identified in their GSPs*.

The Salinas Valley Basin Groundwater Sustainability Agency (SVBGSA) has proposed nine preferred projects and four alternative projects in its 180/400' Aquifer Subbasin GSP. Alternative Project 1 proposes to desalinate water from extraction wells it plans to install, under Preferred Project 6, along the coastline of the lower Salinas Valley to mitigate seawater intrusion into the 180'/400' aquifers. An additional action Watermaster may wish to consider is:

- Explore possibilities for collaboration with the SVBGSA to obtain replenishment water from the Alternative Project 1 desalination plant (stand alone or in conjunction with other proposed plants) as described above.

ATTACHMENTS:

1. Excerpts from the adopted Groundwater Sustainability Plan (GSP) for the 180/400-Foot Subbasin
2. Excerpts from listing of projects being considered in the Draft GSP for the Monterey Subbasin

ATTACHMENT 1

Excerpts from the Groundwater Sustainability Plan for the 180/400-foot Subbasin of the Salinas Valley Groundwater Basin

(Highlighting added)

9.2.2 Pumping Allowances

Pumping allowances are established to enable development of the tiered pumping charge system, and calculation of over-pumping surcharges and supplemental charges.

Because the sustainable pumping allowances are designed to limit pumping to the Subbasin's sustainable yield, it is likely that in the 180/400-Foot Aquifer Subbasin, the pro-rata sustainable allowances will be less than the current groundwater use in the Subbasin.

9.4.3.4 Preferred Project 3: Modify Monterey One Water Recycled Water Plant – Winter Modifications

Monterey One Water's Regional Wastewater Treatment Plant (RTP) has a maximum capacity of 29.6 mgd. Currently, the facility is only treating 16 to18 mgd of influent wastewater. During the wet weather months, 100% of all secondary treated wastewater is discharged to the ocean, forgoing the opportunity for beneficial reuse. During the wet weather months, there is some demand for recycled water in the CSIP system; however, M1W cannot produce tertiary treated water at a rate lower than 5 mgd, which is needed to supply the growers in the winter. As a result, growers turn to the groundwater basin for their irrigation needs during these months. Modifications are required at the M1W RTP in order to efficiently treat and deliver recycled water during the wet weather months.

Under the M1W Recycled Water Plant Modifications Project, the SVRP will be improved to allow delivery of tertiary treated wastewater to the CSIP system when recycled water demand is less than 5 mgd.

The demand for water during the winter from the SVRP will also increase with the Preferred Project 4 [See below] ; increasing the potential Project Yield from 1,100 AF/yr. to an estimated 1,300 AF/yr.

9.4.3.5 Preferred Project 4: Expand Area Served by CSIP

The CSIP [Castroville Seawater Intrusion Project] expansion project involves enlarging the system's service area, thereby increasing the demand for recycled water in the spring and fall and lessening dependence on existing groundwater wells. The existing CSIP supplies may not be sufficient to meet the summertime demand of the expanded CSIP area without an increase in water supply from the SRDF or another source. If additional water supply sources are available in the summer, the expanded service area will be supplied summer irrigation water. The CSIP Optimization Project (Priority Project 2) will be required to be implemented before water has the potential to be supplied to the expanded CSIP area during the summer.

Based on the report Recommendations to Address the Expansion of Seawater Intrusion in the Salinas Valley Groundwater Basin, a working group was established that recommended beginning an annexation plan for expanding the CSIP service area concurrently with optimizing the existing CSIP system. The working group recommended expanding into areas nearest the advancing seawater intrusion front. The annexation plan would be implemented after

2020. Assuming 3,500 acres of new farmland are annexed into the system, and with an assumed unit agricultural water demand of 2.8 AF/acre (MCWRA, 2017b), the expanded area may present an additional demand of 9,900 AF/yr.

9.4.3.5.2 Expected Benefits and Evaluation of Benefits

The primary benefits from CSIP expansion include the increase in demand for recycled water and river diversion water supplies, thus reducing groundwater pumping in the Subbasin. This project will benefit other subbasins, such as the Monterey and Eastside subbasins by reducing pumping that impacts the neighboring subbasins.

9.4.3.5.5 Implementation Schedule

It is anticipated to take five years to implement. Year one for this project would not start until the CSIP Optimization Project has been implemented.

9.4.3.5.6 Estimated Cost

Capital cost for the CSIP expansion project is estimated at $73,366,000. Annual O&M costs are approximately $480,000. The estimated projected yield for the project is 9,900 AF/yr. The amortized cost of water for this project is estimated at $630/AF.

9.4.3.7 Preferred Project 6: Seawater Intrusion Pumping Barrier

Seawater intrusion will be halted using a pumping barrier along the coast. The barrier will be approximately 8.5 miles in length between Castroville and Marina. The intrusion barrier comprises 18 extraction wells; although this number may change as the project is refined.

The 18 wells would withdraw up to 30,000 AF/yr. Extracted groundwater would be conveyed in a new pipeline for ultimate discharge back into the Pacific Ocean. Alternatively, the extracted water or a portion thereof could be conveyed to a new or existing desalination facility where it can be treated for potable and/or agricultural use. [See Alternative Project 1 below] The water extracted from these wells will be brackish due to historical seawater intrusion, therefore, the extraction will serve to remove the brackish water and allow replacement for fresh water from other sources, most likely a combination of desalinated water, excess surface water from the Salinas River, and/or purified recycled water.

9.4.3.7.5 Implementation Schedule

It is anticipated to take 5 years to implement.

9.4.3.7.6 Estimated Cost

Capital cost for the Seawater Intrusion Pumping Barrier project is estimated at $102,389,000. Annual O&M costs are anticipated to be approximately $9,800,000. The amortized cost of water for this project is estimated at $590/AF. This project assumes the water will be discharged through the existing M1W outfall. If Alternative Project 1 is pursued, the upgrade to the outfall will not be required.

9.4.4.1 Alternative Project 1: Desalinate Water from the Seawater Barrier Extraction Wells

This project would treat water extracted from the seawater intrusion barrier under Preferred Project 6, and allow for local reuse. Local reuse could include providing municipal supply, providing agricultural supply, or reinjection in the 180-Foot Aquifer and 400-Foot Aquifer. The project relies upon the desalination of brackish water extracted from the 180/400-foot aquifer Subbasin to feed a treatment facility and discharge the treated water in injection wells east of the intrusion barrier. The desalination treatment could be provided as a standalone plant or supply one of three proposed desalination plants in the region. The final decision on whether to implement this alternative project, and whether to desalinate the source water with a standalone plant or one of the three planned plants will depend on which of these alternatives is the most cost effective. The following plants are in various planning and design stages in the Monterey Bay Area:

- Monterey Peninsula Water Supply Project desalination plant, 6.4 mgd (7,100 AF/yr.)

- Deep Water Desalination Plant, 22 mgd (25,000 AF/yr.)
- People's Water Supply Project desalination plant, 12 mgd (13,400 AF/yr.)

9.4.4.1.5 Implementation Schedule
It is anticipated to take eight years to implement. The schedule is highly contingent upon whether a completely new desalination plant is conceived or if an existing plant already in the planning stages is elected.

9.4.4.1.6 Estimated Cost
Estimated costs for desalination depend on the facility used to desalinate the extracted water. For comparison purposes, a high-level estimate was developed for a 13 mgd facility. Capital costs are assumed to be $182,000,000 based on a construction unit cost of $14 million/mgd for desalination plants and associated intake/outfall facilities, a unit cost consistent with other desalination plant projects evaluated by Water Reuse (Kennedy-Jenks, 2014). As a point of comparison, the 6.4-mgd Cal-Am MPWSP project has an estimated capital construction cost of $226,900 equivalent to approximately $35 million/mgd. The total capital costs with the markups and the addition of the source water pipelines from the extraction barrier well field and desalinated water pump station and pipelines to a groundwater recharge site to the east, would be $341,472,000.

Annual O&M costs are estimated at $9,890,000 for the desalination plant and distribution of desalinated water. Based on a project yield of 15,000 AF/yr. of desalinated water, the unit cost of water is $2,440/AF/yr. This is a very rough estimate and will be refined in the first three years of GSP implementation.

9.4.4.3 Alternative Project 3: Winter Potable Reuse Water Injection

This project would treat additional secondary wastewater effluent through an expanded Advanced Water Purification Facility (AWPF) at M1W's RTP and inject it into the 180/400-foot aquifer Subbasin for maintenance of groundwater elevations, improvement of water quality, and prevention of further seawater intrusion. This alternative project assumes the extra AWPF capacity planned under the Expanded Pure Water Monterey (PWM) project is built, but that CalAm does not require the additional purified recycled water. Instead, the water could be provided to MCWRA for groundwater recharge in the Salinas Valley Groundwater Basin.

If Cal-Am does not take the AWPF water, it could be available for injection into the 180/ 400-Foot Aquifer Subbasin, or other subbasins in the Salinas Valley Groundwater Basin. In particular, MCWD is currently conducting a feasibility study on injecting purified recycled water into the Monterey Subbasin. The project proposes using purified recycled water available to MCWD from the AWPF, some of which is available year-round per the district's agreement with M1W, for indirect potable reuse and prevention of further seawater intrusion.

9.4.4.3.3 Circumstances for Implementation
This project can only be implemented after the AWPF is expanded, and only if Cal-Am is not injecting the water into the Seaside Basin.

ATTACHMENT 2

Excerpts from Listing of Projects Being Considered in the Draft GSP for the Monterey Subbasin

(Highlighting added)

In the Marina-Ord Subarea: Indirect Potable Reuse in 180/400 Foot and/or Deep Aquifer Zones

Description

Project will inject purified recycled water into 180/400 Foot and/or Deep Aquifer Zones. Groundwater will be extracted with existing and/or new MCWD production wells.

Project Benefit

Project yield estimated at: 1000 AFY to 2500 AFY. Will aid in protecting MCWD Production wells from Seawater Intrusion.

In the Corral de Tierra Subarea: Pumping Controls/Allocations

Management action to enable Subbasin to pump within sustainable yield.

Sustainable Yield Estimate = 1,700 AFY
2019 pumping = 2,700 AFY
Overdraft = 1,000 AFY

SEASIDE GROUNDWATER BASIN
WATERMASTER

TO: Board of Directors

FROM: Robert S. Jaques, Technical Program Manager

DATE: August 14, 2021

SUBJECT: TAC Recommendation to the Board Regarding Preparing a Sustainable Yield Analysis

- -

RECOMMENDATIONS:
Sustainable Yield (SY) is a technically superior Basin management approach compared to the Natural Safe Yield (NSY) approach used in the Decision, and an SY analysis should be performed either now or at some point in the future.

Because of the historical over pumping from the Basin, regardless of the approach that is used for Basin management, be it NSY or SY, even reducing pumping levels to match either the NSY or SY pumping levels will not achieve protective groundwater elevations. This is because these approaches only seek to stabilize groundwater levels and do not take into account that the Basin would still be at risk of seawater intrusion at some time in the future. An additional source(s) of water (replenishment water) that can be injected into the Basin to raise groundwater levels, and to maintain them at protective water levels, will be necessary regardless of which approach is used for Basin management.

BACKGROUND:
The topic of performing a Sustainable Yield analysis of the Seaside Groundwater Basin has been discussed by the TAC and the Board at several meetings over the past few years. This topic was most recently discussed at the Board's May 5, 2021 meeting.

DISCUSSION:
At its July 14 and August 11meetings the TAC discussed the Pros and Cons of performing a Sustainable Yield analysis. Using input from those meetings and various documents from previous TAC and Board meetings I prepared the paper discussing Sustainable Yield vs. Natural Safe Yield contained in Attachment 1. In addition, Ms. Paxton researched what other adjudicated basins in California are doing regarding this issue. Her report on this is contained in Attachment 2.

The TAC felt that its recommendation to the Board should be limited solely to the technical aspects of SY vs. NSY, and that other issues associated with performing an SY analysis should be left up to the Board. Consequently, the TAC approved the Recommendation that is set forth above.

As a Watermaster staff member providing support to not only the TAC but also to the Board, I feel it is appropriate for me to provide the Board with information to supplement the TAC's recommendation. As the TAC recommendation states, neither the SY nor the NSY approaches would take into account that the Basin would still be at risk of seawater intrusion at some time in the future unless replenishment water is injected into the Basin to achieve protective groundwater levels. For this reason I feel it is important that the Board take into account the expense and complexity of changing to the SY approach, and whether pursuing making this change would be justified until a source for this replenishment water has been secured.

ATTACHMENTS:
1. Paper discussing Sustainable Yield vs. Natural Safe Yield
2. Use of Sustainable Yield vs. Safe Yield by Other Watermaster Adjudicated Basins

Attachment 1

Should the Watermaster at this time perform a Sustainable Yield analysis to be used in place of the Natural Safe Yield approach prescribed in the Adjudication Decision (Decision) for the Seaside Groundwater Basin?

Background

Natural Safe Yield Approach

The Decision uses the Natural Safe Yield (NSY) approach to establish the total quantity of water that producers may pump from the Seaside Basin, and to allocate that quantity amongst the various producers. Under the NSY approach used in the Decision, Alternative Producers have first rights to the NSY, and Standard Producers share in the amount of NSY remaining after the Alternative Producer allocations have been made. The Decision established an initial Basin-wide NSY of 3,000 AFY, and allocated 1,387 AFY of this NSY to Alternative Producers. That left 3,000 – 1,387 = 1,613 AFY to be divided among the Standard Producers. Subsequent to the date of the Decision, one of the Alternative Producers converted part of its allocation to a Standard Producer allocation, which had the effect of lowering the 1,387 AFY figure to 1,379 AFY, and increasing the 1,613 AFY figure to 1,621 AFY. The 2018 update of the Watermaster's *Basin Management Action Plan* (BMAP) found that the 3,000 AFY NSY in the Decision is too high, and that groundwater levels have been continuing to fall even with pumping at that level. The update concluded that the NSY of the Basin is only 2,370 AFY. If this lower figure replaced the 3,000 AFY in the Decision, the Standard Producers would need to reduce their collective annual pumping to 2,370 – 1,379 = 991 AFY. This means the Standard Producers would have to reduce their pumping by an additional 630 AFY.

Sustainable Yield Approach

As described in the 2018 BMAP Update, the simplified method used in the Decision to estimate NSY is now recognized as not being complete enough to take into account the complexities of inflows and outflows that are occurring in the Basin. These ultimately affect the amount of groundwater that can be sustainably pumped from the Basin without causing negative effects, which are referred to in the Decision as "Material Damage." A more complete approach to managing the Basin would be to use the Seaside Basin groundwater model to optimize the amount of pumping that can be sustained (the Sustainable Yield) at existing and/or new wells. The Sustainable Yield (SY) would take into account management targets such as stopping declining groundwater levels or meeting protective groundwater elevations.

TAC Findings and Conclusions

The TAC considers itself to be charged with providing only technical advice to the Board, and that it should not provide policy or other non-technical advice.

The TAC recognizes that SY is a more robust basin management approach than NSY, and that other basins under the Sustainable Groundwater Management Act will have to use the SY approach as they implement their Groundwater Sustainability Plans (GSPs) over a 20-year period. They will be using groundwater levels to manage their basins. In most cases this is expected to lead them to set pumping limits for each pumper in order to stabilize groundwater levels.

The SY analysis would involve making numerous assumptions and evaluations. These could include such things as alternative pumping scenarios and redistribution of pumping locations and quantities in order to stabilize groundwater levels. The analysis would determine how much can be pumped from existing wells while maintaining stable groundwater elevations. The SY for the entire Basin would be the sum of the production quantities that each well could produce and still prevent Material Damage from

occurring. However, many of the groundwater elevations would be stabilized below sea level, resulting in an ongoing threat of seawater intrusion.

The Watermaster's hydrogeologic consultants have different thoughts about whether seawater intrusion is a direct intrusion risk to the Santa Margarita aquifer. One consultant (Mr. Yates of Todd Groundwater) felt that it was unlikely that seawater intrusion would come directly (horizontally) from the Bay into the Santa Margarita aquifer, or if it does that it will be a slow process. However, he acknowledged that there is no geologic data to confirm that horizontal intrusion will not occur in that aquifer at some point in time, if groundwater levels are below protective elevations as they currently are in that aquifer. All of the consultants did agree that downward vertical migration of seawater intrusion from the Dune Sands into the Paso Robles aquifer is a concern, and that seawater intrusion reaching the Paso Robles aquifer could migrate downward into the Santa Margarita, thus posing a risk to that aquifer as well.

A lot of work (both legal and technical) would be required to change from the NSY approach to the SY approach. A February 2019 proposal from Montgomery & Associates indicates that it would cost well over $100K in technical services to perform an SY analysis, which would need to take into account the impacts on the Basin of the Pure Water Monterey project, climate change, and other issues. If that analysis led to imposing further pumping reductions (beyond those already required to reach the Decision-mandated Natural Safe Yield of 3,000 AFY or the updated NSY of 2,370 AFY) protective water levels would still not be achieved, even though groundwater levels might be stabilized. It would be necessary to provide replenishment water in order to raise groundwater levels to reach protective elevations.

Although SY is a technically superior approach compared to NSY, further pumping reductions from the Basin are likely not possible while still meeting customer water demands. This is because significant efforts have already resulted in achieving as much water conservation on the part of customers as can be reasonably expected.

The findings from checking with some of the other adjudicated basins in California as to whether they are using NSY or SY is discussed in a separate Memo from Administrative Officer Laura Paxton.

Groundwater levels in the eastern portion of the Seaside Basin, in the Laguna Seca Subarea, are heavily influenced by pumping from outside of the Seaside Basin. There is significantly more pumping just east of the Laguna Seca Subarea (within the Corral de Tierra subarea of the Monterey Subbasin and outside of the Seaside Basin boundary) than the total pumping that occurs within the Laguna Seca Subarea itself. The GSP that is currently under development for the Monterey Subbasin is expected to include pumping reductions that may help to stabilize groundwater levels in the Laguna Seca Subarea. However, that GSP will give the Monterey Subbasin up to 20 years to become sustainable, so no near-term improvement in groundwater levels within the Seaside Basin is expected to result from this GSP.

The table below summarizes the Pros and Cons of Changing to Using the Sustainable Yield Approach for Basin Management.

PROS	CONS
1. This approach would more realistically reflect the characteristics of the Basin and more accurately predict how much pumping could be sustainably supported without causing Material Damage in the Basin.	1. Performing an SY analysis would be costly. The cost proposal from Montgomery & Associates to do this work is well over $100,000. The proposal notes that modeling the long-term optimization of integrated groundwater management at a basin-wide scale is a complex process with several technical challenges that could arise and could lead to additional effort (and cost) not anticipated in the cost proposal.
	2. Changing from the NSY approach to the SY approach would first have to be approved by the Court. Documentation justifying making this change would have to be prepared and submitted to the Court. This would involve staff, consultant, and legal counsel time and expense.
	3. If the change was approved by the Court, the SY analysis would then need to be prepared and submitted to the Court for its review and approval before it could be used to replace the NSY approach used in the Decision. If the Court approved the SY analysis, then the Decision would need to be amended to reflect this. All of this would involve considerable staff, consultant, and legal counsel time and expense.
	4. If SY were used instead of NSY, a new method of allocating pumping rights to each producer would have to be developed. This could be a contentious and time-consuming undertaking.
	5. It is very likely that greater pumping reductions will be required of many of the Producers if the SY approach is used in place of the NSY approach. It may be difficult if not impossible for some Producers to make these additional pumping reductions while still supplying the water demands of their customers.
	6. Because of the historical over pumping from the Basin, regardless of the approach that is used for Basin management, be it NSY or SY, even reducing pumping levels to match either the NSY or SY pumping levels will not achieve protective groundwater elevations. The Basin would therefore still be at risk of seawater intrusion at some time in the future. An additional source(s) of water that can be injected into the Basin to raise groundwater levels, and to maintain them at protective water levels, will be necessary regardless of which approach is used for Basin management. Therefore, the expense and complexity of changing to the SY approach may not be justified until a source for this replenishment water has been secured.

Attachment 2

SEASIDE GROUNDWATER BASIN WATERMASTER

MEMORANDUM

TO: Watermaster (WM) Technical Advisory Committee (TAC)

FROM: Laura Paxton, Administrative Officer (AO)

DATE: August 11, 2021

SUBJECT: Use of Sustainable Yield vs. Safe Yield by Other Watermaster Adjudicated Basins

- -

RECOMMENDATION: None - Informational only

BACKGROUND: At its July 14, 2021 meeting, the TAC, during a discussion of the pros and cons of preparing a Sustainable Yield analysis, Georgina King of Montgomery Associates, the WM hydrogeologic consultant, suggested surveying other watermaster agencies to see if any had converted from Natural Safe Yield (NSY) to Sustainable Yield. Technical Program Manager, Robert Jaques asked the Administrative Officer to contact other watermasters in this regard.

DISCUSSION: The Department of Water Resources lists as of early this year 47 adjudicated basins in the state with 33 basin adjudications filed. After researching several of the basins on line, a trend began to appear that in general the court decisions for the adjudicated basins were either static from inception or amended decision inception, or still in litigation. Furthermore, each decision was notably distinct to the particular basin(s) and predominantly involved overlying agricultural land use. In the interest of time, an attorney known to have participated in drawing up many southern California basin adjudication decisions was queried as to what basins might be considering, or have in fact converted through the court by decision amendment, from Natural Safe Yield to Sustainable Yield. In response, it appears only the recent post-SGMA Borrego adjudication judgment uses Sustainable Yield. (The attorney noted it was argued during the drafting of SGMA with ACWA that the term "safe yield" be used for consistency with the common law term, since the common law term "undesirable result" was being used by SGMA. However, the argument was lost.)

During on-line research, it was found that most southern California watermaster decisions and/or basin management documents used the term "safe yield." The term "NSY" was not found in any of the eight sets of documents reviewed. The term "Natural Recharge" was used in some but was not the basis for pumping allocations, safe yield was.

Various definitions or components of safe and sustainable yield came to light during on-line research. The Seaside Groundwater Basin (SGWB) Decision defines Perennial Natural Safe Yield: ... *(as defined in Section III.A. and hereinafter referred to as "Natural Safe Yield") of the Seaside Basin is solely the result of natural percolation from precipitation and surface water bodies overlying the Basin.* SGMA defines safe yield generally as the maximum quantity of water which can be withdrawn annually from a groundwater supply without causing a gradual lowering of the groundwater levels resulting in the eventual depletion of the supply. California Water Code section 10721(v) definition of Sustainable Yield is: *the maximum quantity of water, calculated over a base period representative of long-term conditions in the basin and including any temporary surplus, that can be withdrawn annually from a groundwater supply without causing an undesirable result.* SGMA further relates that, … *the long-standing concept of*

*"safe yield" utilized by the courts in adjudication of groundwater rights has been **complimented** by SGMA's use of the term "Sustainable Yield."* [emphasis added]. In *Sustainable Yield in Theory and Practice: Bridging Scientific and Mainstream Vernacular (Groundwater Issue Paper, Rudestam & Langridge, 2014)* it is noted, *"In operationalizing the term "safe yield," the Seaside Basin adjudication moved the definition closer to the concept of sustainable yield by acknowledging hydrologic and social issues, including that safe yield is not a "static" amount, and needs periodic re-evaluation."*

Southern basins' management documentation gave the impression generally that watermasters used various established components of respective safe yields to manage basins sustainably. Establishment of water rights was protracted in many of the reviewed decision cases, and the rights of pumpers, especially overlying landowner rights, were firmly set in the judgements. Not surprising it appears other watermasters haven't considered converting yield methodology, or pursuing it (with likely producer litigation) through the courts. SGWB's own decision states: *No Power to Alter Allocation or Rights. Watermaster has no power to adjust any Producer's Base Water Right or the formula for determining Production Allocation, except to accommodate the intervention of a new Party pursuant to Section 1110.1.b.,* and, *The Court, through its reserved and retained jurisdiction, however, shall not have the authority to adjust any Producer's Base Water Right or Production Allocation, except to accommodate the intervention of a new Party pursuant to Section 111.0.1.b.*

FISCAL IMPACTS: Formally replacing Natural Safe Yield with Sustainable Yield that impacts producer rights and/or allocations would necessitate adjudication decision amendment most likely involving a lengthy court process and substantial litigation costs.

ATTACHMENTS: DWR list of California adjudicated basins

NAME	COMMENTS	Label	WATERMASTER	date_data_applies_to
Raymond Basin		Raymond Basin	Raymond Basin Watermaster	1944
Beaumont Basin		Beaumont Basin	Beaumont Basin Beaumont Basin	2004
Main San Gabriel Basin		Main San Gabriel Basin	Main San Gabriel Basin Watermaster	1973
Antelope Valley		Antelope Valley	Western-San Bernardino Watermaster	1999
Santa Maria Valley Management Area		Santa Maria Valley Management Area	Santa Maria Groundwater Basin Lltigation	2014
Northern Cities Management Area	2016 annual report boundary update	Northern Cities Management Area	Northern Cities Management Area Agencies	2015
Nipomo Mesa Management Area		Nipomo Mesa Management Area	Nipomo Mesa Management Area Monitoring Parties	2014
Los Osos Basin	updated boundary with 2016 Annual Report 20170413	Los Osos Basin	Los Osos Basin Management Committee	2015
Mojave Basin		Mojave Basin - Oeste Subarea	Mojave Basin Area Watermaster	1996
Mojave Basin		Mojave Basin - Este Subarea	Mojave Basin Area Watermaster	1996
Mojave Basin		Mojave Basin - Centro Subarea	Mojave Basin Area Watermaster	1996
Mojave Basin		Mojave Basin - Alto Transition Zone Subarea	Mojave Basin Area Watermaster	1996
Mojave Basin		Mojave Basin - Baja Subarea	Mojave Basin Area Watermaster	1996
Mojave Basin		Mojave Basin - Alto Subarea	Mojave Basin Area Watermaster	1996
Goleta Basin	Wright Judgement	Goleta Basin - Central	Goleta WD	1989
Goleta Basin	Wright Judgement	Goleta Basin - West	Goleta WD	1989
Goleta Basin	Wright Judgement	Goleta Basin - North	Goleta WD	1989
West Coast Basin		West Coast Basin	WRD - West Coast Basin Watermaster Administrative Body	1989
Chino Basin		Chino Basin	Chino Basin Watermaster	1978
Santa Paula Basin		Santa Paula Basin	United Water Conservation District	2010
Upper Los Angeles River Area		Upper Los Angeles River Area	Upper Los Angeles River Area Watermaster, c/o Richard C. Slade & Associates LLC*	1979
San Bernardino Basin Area		San Bernardino - San Bernardino Area	Western-San Bernardino Watermaster	1969
San Bernardino Basin Area		San Bernardino - Colton Basin Area	Western-San Bernardino Watermaster	1969
San Bernardino Basin Area		San Bernardino - Riverside Basin Area South	Western-San Bernardino Watermaster	1969
San Bernardino Basin Area		San Bernardino - Riverside Basin Area North	Western-San Bernardino Watermaster	1969
Hemet-San Jacinto Basin		Hemet-San Jacinto - San Jacinto Canyon	Hemet-San Jacinto Watermaster	2013
Hemet-San Jacinto Basin		Hemet-San Jacinto - Hemet South	Hemet-San Jacinto Watermaster	2013
Hemet-San Jacinto Basin		Hemet-San Jacinto - Upper Pressure Area	Hemet-San Jacinto Watermaster	2013
Hemet-San Jacinto Basin		Hemet-San Jacinto - Hemet North	Hemet-San Jacinto Watermaster	2013
Brite Basin	part of Tehachapi, Brite, Cummings	Brite Basin	Tehachapi-Cummings County Water District Tehachapi-Cummings County Water District	1970
Tehachapi Basin	part of Tehachapi, Brite, Cummings	Tehachapi Basin	Tehachapi-Cummings County Water District Tehachapi-Cummings County Water District	1971
Cummings Basin	part of Tehachapi, Brite, Cummings	Cummings Basin	Tehachapi-Cummings County Water District Tehachapi-Cummings County Water District	1972
Central Basin		Central Basin	WRD - Central Basin Watermaster Administrative Body	1965
Inyo County Basins		Inyo County Basins	Los Angeles Department of Water and Power	1991
Santa Margarita River Watershed		Santa Margarita River Watershed	Santa Margarita River Watershed Watermaster	1986
Puente Basin		Puente Basin	Puente Basin Watermaster c/o Walnut Valley Water District	1981
Canyon Basin	part of Six Basins	Six Basins - Canyon Basin	Six Basins Watermaster	1998
Ganesha Basin	part of Six Basins	Six Basins - Ganesha Basin	Six Basins Watermaster	1998
Live Oak Basin	part of Six Basins	Six Basins - Live Oak Basin	Six Basins Watermaster	1998
Lower Claremont Heights Basin	part of Six Basins	Six Basins - Lower Claremont Heights	Six Basins Watermaster	1998
Lytle Creek Basin	superseded by San Bernardino Area; ID added 8/3/2017; no previous Adjudication ID	Lytle Basin	Western-San Bernardino Watermaster	1969
Cucamonga Basin		Cucamonga Basin	Cucamonga Valley Water District, et.al	1958
Scott River System		Scott River System	County of Siskiyou	1980
Seaside Basin	corrected boundary updated with Annual Report 20170427	Seaside Basin	Seaside Basin Watermaster	2007

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D-R-A-F-T
MINUTES

Seaside Groundwater Basin Watermaster
Technical Advisory Committee Meeting
May 12, 2021
(Meeting Held Using Zoom Conferencing)

Attendees: TAC Members

City of Seaside – Scott Ottmar
California American Water – Tim O'Halloran
City of Monterey – Cody Hennings
Laguna Seca Property Owners – Wes Leith
MPWMD – Jon Lear
MCWRA – Tamara Voss
City of Del Rey Oaks – John Gaglioti
City of Sand City – Leon Gomez
Coastal Subarea Landowners – No Representative

Watermaster
Technical Program Manager - Robert Jaques
Administrative Officer – Laura Paxton

Consultants
Montgomery & Associates – Georgina King
Martin Feeney – Martin Feeney

Others
City of Seaside – Nisha Patel
MCWD – Patrick Breen

The meeting was convened at 1:35 p.m.

1. Public Comments

There were no public comments.

2. Administrative Matters:

A. Approve Minutes from the April 14, 2021 Meeting

Mr. Jaques reported a correction needed to be made to the minutes pertaining to item 2.C "Water Quality Sampling Results from SNG Well." The motion that was made with regard to that agenda item passed unanimously, with Mr. Gomez abstaining.

In the final paragraph under the same agenda item, Ms. Voss clarified that Monterey County Health does not have a program to help with well destruction costs.

With these corrections made, on a motion by Ms. Voss, seconded by Mr. O'Halloran, the minutes were unanimously approved.

B. Sustainable Groundwater Management Act (SGMA) Update

Mr. Jaques summarized the agenda packet materials for this item, and there was no further discussion.

3. Report on Findings and Conclusions from Video Inspection of Monitoring Well FO-9
Mr. Jaques summarized the agenda packet materials for this item.

Mr. Gaglioti said that even though the leak was not seen in the video inspection, the conclusion is that the well must be leaking. He understood MPWMD's concern about having a leaking well. He wondered if there was any way to link well destruction with installing a new replacement well.

Mr. Lear said the Watermaster Board has asked that a letter be sent to MPWMD and MCWD with regard to sharing the cost of constructing a replacement well.

Mr. Lear said that the video inspection shows a piece of PVC pipe in the shallow well. He said that Monterey County Health told him that if that piece of pipe can be retrieved, then only the shallow well would need to be destroyed. If not, the whole nested well would need to be destroyed. Mr. Feeney commented that it would probably be possible to get the PVC out, but if not there may be other approaches to address the issue. He went on to say that he was assisting MPWMD with those discussions with Monterey County Health.

Ms. Voss said it would be good to move forward expeditiously with getting a replacement well. Mr. Gaglioti agreed, noting that this well is close to the coast and the Sentinel wells are not as good for detecting seawater intrusion as those from which actual water quality samples can be taken. There was much discussion on this matter, with Mr. Feeney disagreeing, saying that similar Sentinel Wells in Carpinteria do show seawater intrusion via induction logging. Mr. Lear said he agreed that induction logging does show seawater intrusion, but it does not provide chloride concentrations.

4. Board Discussion at its May 5, 2021 Meeting Regarding Concerns about Possible Detection of Seawater Intrusion in Monitoring Wells FO-9 and FO-10 Shallow
Mr. Jaques summarized the agenda packet materials for this item and there was no other discussion.

5. Discuss 2012 Cross-Aquifer Contamination Study and Develop Recommendations
Mr. Jaques summarized the agenda packet materials for this item.

Mr. Feeney said that we could do conductivity logging rather than video inspections. For some of the wells we already know they have the potential for cross-connect contamination, for example the SNG well. Mr. Lear said that video logging would not likely show a problem, whereas conductivity logging would. Ms. Voss said MCWRA identified cross-aquifer connected wells in the Salinas Valley by examining changes in water quality over time in those wells.

Ms. King said some of the wells in the study had already been sampled and therefore there was historical data, but some had not.

Ms. Voss felt it was not worth the expense of performing video inspections for the reasons stated above. Mr. Feeney said that logging would cost about $1,000-$1,300 per well and any sample pump or other obstruction in the well would have to be removed that would block equipment from being lowered into the well, and that this would add cost. Ms. King asked if a conductivity probe could be attached to a video camera to get video information as well as conductivity information at the same time.

Mr. Feeney said that it would probably cost about $900 to perform conductivity probing of one or a few wells that were in the same area. Ms. King said she would like to look at the list of wells, it might only be necessary to do one or two wells in an area, if they are close together geographically. Mr. Feeney said that conductivity logging could be done first, and only do video inspection if cross-contamination was detected.

Ms. Voss said she would like to have more data, but there is a cost associated with, and that it would be important to decide what we would do with the information we would get from any of this additional work. Ms. King noted that we don't know the location of the front of the seawater intrusion in the Aromas Sands. Ms. Voss felt that we should look at a map showing where these wells are located to help make a decision. Mr. Gaglioti wondered if this work would help us spend money more efficiently in the future. Mr. Jaques suggested mapping the wells and seeing what water quality information we already have on them and then continue this discussion at a future TAC meeting.

Mr. Lear felt that it would be appropriate to pursue destruction of any well that was found to be cross-contaminating. Mr. Feeney said a well that is not used for over a year is, by State law, an abandoned well, and that it is a misdemeanor to have an abandoned well that is not properly maintained.

Mr. Gaglioti and Ms. Voss suggested potentially considering budgeting for this work in 2022. Mr. Feeney said the Dune Sand electrical conductivity value in FO-9 shallow was not as high as seawater. The elevated conductivity could be the result of agricultural return water, golf course irrigation water, etc., and not seawater. He went on to say that you would need to characterize the water to try to identify the source.

Following discussion it was agreed that this matter would be continued for further discussion at a future TAC meeting with more information provided.

6. Datalogger Issues with Monitoring Well PCA-West Shallow

Mr. Jaques summarized the agenda packet materials for this item

Mr. Lear said that the well can currently be manually sounded to obtain groundwater levels. He went on to say that if a new data logger were installed, it might also get tangled in the other cables and sample tubing in the well. The PCA-East deep sampling pump recently failed, and is of the same age as the sample pump in PCA-West shallow, so the PCA-West shallow sample pump might also fail in the near future. He also noted that pushing equipment down to the bottom of the well had the potential of damaging the well.

Ms. Voss noted that since the well is owned by MPWMD, they would be the ones to make a final decision on what would be done in this well. Mr. Lear said that the equipment in there (data logger and sample pump) belongs to the watermaster,. Mr. Feeney said it is tough to budget doing work to resolve the problem in this well because of the uncertainty of the problem and the difficulty having equipment access this site because of its sand dune location. He went on to say that if an effort was made to pull the blockage out, and that failed, the items in the well could be pushed to the cellar at the bottom of the well. Ms. King noted that it is very hard to retrieve things from a 2 inch diameter well like this.

Mr. Jaques asked if we could just do sounding for water level information at this time and use the sample pump for water quality, and therefore not do anything at all this time. There was much discussion about the situation and what can be done.

Mr. Lear summarized that there appeared to be three options: (1) Do nothing now and obtain water levels through monthly soundings, (2) Fix the problem by retrieving the blockage or pushing the blockage down to the bottom of the well, (3) When the pump fails, replace both the pump and the data logger.

Ms. King felt it was okay to only have monthly water level data until the pump fails, if it is not for too long a time.. Once the pump has to be replaced, then a replacement data logger should be installed.

Mr. Ottmar said he preferred to do nothing at this time, and to wait until the pump fails and then do that work. That could be budgeted for in the future. Mr. Jaques concurred with Mr. Ottmar's preference. Ms. King felt we could hold off for a couple of years on doing any work, and revisit the situation then. Mr. Lear said he also concurred with Mr. Ottmar's recommendation. He went on to say that MPWMD would consider a cost-share for doing the data logger replacement work on this well at a future date.

A motion was made by Ms. Voss, seconded by Mr. Gaglioti, to approve Mr. Ottmar's recommendation of budgeting next year to potentially have to do work on this well, but to do nothing until the pump fails for up to a couple of years. The motion passed unanimously.

7. Datalogger Issues and Contract Amendment with MPWMD

Mr. Jaques summarized the agenda packet materials for this item

Mr. Lear said that since water quality sampling in FO-9 shallow is no longer being performed, the money already included in the contract for FO-9 shallow water quality sampling could instead be used to pay for the increased frequency of water quality sampling of FO-10 shallow without having to provide any additional funds.

Ms. Voss said she concurred that the list of unbudgeted work that the Board is considering undertaking, as shown on page 47 of the agenda packet, was currently more important than performing the data logger network modifications. She also felt that performing a Sustainable Yield analysis was very important. Ms. King said she concurred.

Mr. Lear said that no data would be lost by not processing the data logger data at this time, but that it would be necessary to budget for continuing to download the data on an annual basis. He went on to say that the data loggers are downloaded annually in the fourth quarter of the Water Year. The data loggers can store up to about five years' worth of data.

Ms. King commented that her earlier Technical Memo about data loggers was based on having the financial resources budgeted to perform this work. Since there is no budget available at this time, it would be okay to defer until next year's budget to perform data logger network modifications.

There was consensus to defer the data logger work to a future budget year

8. Schedule

Mr. Jaques briefly summarized updates to the schedule.

Mr. Lear asked when the letter would be sent to MPWMD with regard to replacing monitoring well FO-9 shallow. Ms. Paxton said the letter was currently in draft form for internal review and would be going out in the immediate future.

9. Other Business

There was no other business.

The meeting adjourned at 3:12 PM.

D-R-A-F-T
MINUTES

Seaside Groundwater Basin Watermaster
Technical Advisory Committee Meeting
June 9, 2021
(Meeting Held Using Zoom Conferencing)

Attendees: TAC Members

City of Seaside – Scott Ottmar
California American Water – Tim O'Halloran
City of Monterey – Cody Hennings
Laguna Seca Property Owners – Wes Leith
MPWMD – Jon Lear
MCWRA – Tamara Voss
City of Del Rey Oaks – John Gaglioti
City of Sand City – Leon Gomez
Coastal Subarea Landowners – No Representative

Watermaster
Technical Program Manager - Robert Jaques
Administrative Officer – Laura Paxton

Consultants
Montgomery & Associates – Pascual Benito

Others
None

The meeting was convened at 1:32 p.m.

1. **Public Comments**

There were no public comments.

2. **Administrative Matters:**

A. Approve Minutes from the May 12, 2021 Meeting

On a motion by Mr. O'Halloran seconded by Mr. Gaglioti, the minutes were unanimously approved as presented.

B. Sustainable Groundwater Management Act (SGMA) Update

Mr. Jaques highlighted several items materials for this item.

Mr. Gaglioti asked whether the Watermaster should seek to have the Seaside Basin included in the seawater intrusion model being developed for the Monterey Subbasin GSP. Mr. Jaques reported that the Seaside Basin groundwater model is available to the Marina Coast Water District GSA's consultant, EKI, who is developing the seawater intrusion model. Ms. Voss said that all though she does not have expertise in modeling, she did not feel the

Watermaster needed to get further involved with this work. Mr. Lear said that the proposed seawater intrusion model is intended to focus on the movement of intruded seawater using the Salinas Valley Integrated Hydrogeologic Model and a new groundwater model being developed for the Monterey Subbasin GSP by EKI. Mr. Benito added that the Salinas Valley Integrated Hydrogeologic Model did not cover the Monterey Subbasin or the Seaside Subbasin areas very well, so EKI is developing a Monterey Subbasin model of its own. That model doesn't focus on seawater intrusion, whereas the seawater intrusion model will focus on that issue.

C. Results from March 2021 Induction Logging of Sentinel Wells

Mr. Jaques briefly summarized the agenda packet materials for this item and there was no other discussion.

3. Update on Water Quality Issues at Monitoring Wells FO-9 and FO-10

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

Mr. Gaglioti said he accepted the input from the experts, as summarized in the agenda packet. Ms. Voss said she concurred with their conclusions with regard to Well FO-9 Shallow. She was interested in understanding what is causing the conductivity and induction logging results to differ from the water quality samples and the original E-log from construction of Well FO-10. Mr. Jaques reported that he had forwarded Mr. Feeney's report on the induction logging and conductivity profiling of these wells to Marina Coast Water District, and they said they would investigate Well FO-10 Shallow as they develop the GSP.

Mr. Gaglioti if there had been any progress on developing a cost-sharing agreement to install a replacement monitoring well for FO-9 Shallow. Mr. Jaques reported that a letter had been sent from the watermaster to MPWMD and MCWD seeking a cost sharing agreement for this work. MCWD said they were receptive to cost-sharing for a replacement well. MPWMD is currently processing this internally. Ms. Voss suggested tabling this issue for now, but providing an update on the replacement well next year. Mr. Gaglioti said he concurred with this approach.

A motion was made by Mr. Gaglioti, seconded by Ms. Voss to accept the conclusions from the experts as presented in the agenda packet and to get an update in a year regarding construction of a replacement well for FO-9 Shallow. The motion passed unanimously.

4. Proposed Scopes and Costs for Board Consideration in Response to Concerns about Possible Detection of Seawater Intrusion in Monitoring Wells FO-9 and FO-10 Shallow

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

Mr. Ottmar asked if performing this work was covered in the current year's budget. Mr. Jaques said that this work could be funded under Task I.3.a.3 of the approved Monitoring and Management Program budget for 2021, titled "Evaluate Replenishment Scenarios and Develop Answers to Basin Management Questions."

A motion was made by a Ms. Voss, seconded by Mr. Gaglioti, to approve RFS No. 2021-01 Amendment No. 1 for Montgomery and Associates to develop flow direction and flow velocity maps. The motion passed unanimously.

5. Continued Discussion of 2012 Cross-Aquifer Contamination Study and Development of Recommendations

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

Ms. Voss said that doing the proposed conductivity profiling could potentially provide useful information at modest cost and suggested doing it in the current year. Mr. Lear asked if this was being proposed as just a one-time event or whether it would be something that would be repeated on a periodic basis. Mr. Jaques said he envisioned it as a one-time event, unless findings from the first event indicated it would be beneficial to perform repeat profiling in the future. Ms. Voss said that doing it as a one-time event would provide a baseline for possible future comparisons.

Mr. Lear said it would be necessary to see if the wells that are proposed for profiling have equipment in them which would have to be removed and if so, that would add to the cost of the work. Mr. Jaques said he did not know which wells were the ones shown on Figure 6 and asked Mr. Lear if he could provide the names and identification of those wells. Mr. Lear said that he would provide that information. Mr. Ottmar thought that two of the wells might be the Coe Avenue and the Reservoir Well which are used for the golf courses. Mr. Lear said that two of them may be Seaside municipal production wells.

Ms. Voss noted that getting the identification of the wells be the first step to assess the feasibility of doing this work. Mr. Lear said he would send the information Mr. Jaques who will investigate and report back to the TAC at a future meeting.

6. Information Regarding AEM Surveys

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

Mr. Lear reported that he is on a technical advisory committee for Santa Cruz County's Mid-Basin GSP. They are doing AEM offshore surveys. The surveys have to be repeated on a regular basis in order to detect changes which could indicate movement of seawater intruded water.

Mr. Gaglioti and Ms. Voss felt they would need to have a better understanding of what data would be acquired by this process, what it would cost, and how it might be beneficial the Watermaster.

Ms. Voss went on to report that the DWR AEM survey of the inland portions of the Salinas Valley Basin will start in July, but that work won't get to the coastal area until a later time.

Mr. Jaques offered to get more information from Rosemary Knight and provide it to the TAC for further discussion at a future meeting.

7. Schedule

Mr. Jaques reported that consistent with the determination that seawater intrusion is not occurring in monitoring Well FO-9 Shallow, he had closed out the task pertaining to implementation of the Seawater Intrusion Response Plan. There was no other discussion.

8. Other Business

There was no other business.

9. The meeting adjourned at 2:36 PM 5

D-R-A-F-T
MINUTES

Seaside Groundwater Basin Watermaster
Technical Advisory Committee Meeting
July 14, 2021
(Meeting Held Using Zoom Conferencing)

Attendees: TAC Members

City of Seaside – Scott Ottmar
California American Water – Tim O'Halloran
City of Monterey – Cody Hennings (joined at 1:49 p.m.)
Laguna Seca Property Owners – Wes Leith
MPWMD – Jon Lear
MCWRA – Tamara Voss
City of Del Rey Oaks – John Gaglioti
City of Sand City – Leon Gomez
Coastal Subarea Landowners – No Representative

Watermaster
Technical Program Manager - Robert Jaques
Administrative Officer – Laura Paxton

Consultants
Montgomery & Associates – Georgina King

Others
MCWD – Ramleh Scherzinger, Patrick Breen

The meeting was convened at 1:34 p.m.

1. Public Comments
There were no public comments.

2. Administrative Matters:

A. Approve Minutes from the June 9, 2021 Meeting
On a motion by Ms. Voss, seconded by Mr. Gaglioti, the minutes were unanimously approved as presented.

B. Sustainable Groundwater Management Act (SGMA) Update
Mr. Jaques highlighted several of the topics covered under this item.

Mr. Gaglioti asked if were more than 16 deep aquifer wells. Ms. Voss responded that MCWRA estimates there are approximately 40 wells in the deep aquifer at this time.

3. Update on Water Quality Issues at Monitoring Wells FO-9
Mr. Jaques summarized the agenda packet materials for this item.

Mr. Lear said he concurred with Mr. Jaques' summary. He went on to say that if the small diameter PVC in well FO-9 shallow can be removed, then destruction can proceed following internal review by

MPWMD of the well destruction documents prepared by Mr. Feeney. He said it would probably be a few months before the bid process to perform that work would be completed. He said discussions within MPWMD about sharing the cost of constructing a replacement well will first go to the Water Supply Committee which will have its next meeting in August.

4. Continued Discussion of 2012 Cross-Aquifer Contamination Study and Development of Recommendations

Mr. Jaques summarized the agenda packet materials for this item

Mr. Lear explained that this study had been a database search of three databases. He went on to say that Figure 6 shows the wells that MPWMD attempted to inspect. However, only one of the five wells shown in that Figure were found.

Following brief discussion there was TAC consensus that no action should be pursued with regard to conducting conductivity profiling of these wells.

5. Discuss Pros/Cons of Preparing a Sustainable Yield Analysis

Mr. Jaques summarized the agenda packet materials for this item. He reported that Mr. Yates of Todd Groundwater had been asked to join the meeting today to contribute to this discussion. However Mr. Yates was apparently unable to join.

Mr. Gaglioti said he concurred with Mr. Jaques' recommendations, but that this topic should be presented to the Board for its consideration. He noted that a lot of work would be required to change from the Natural Safe Yield approach to the Sustainable Yield approach.

Ms. King said that the 3,000 acre-feet per year Natural Safe Yield in the Decision is too high, and that groundwater levels have been continuing to fall even with pumping at that level. In performing a Sustainable Yield analysis it would necessary to take into account Pure Water Monterey project affects, climate change, and other issues.

Mr. Gaglioti questioned how we should go about lowering the Natural Safe Yield. Ms. Voss felt the TAC is a technical body and that political and policy issues rested with the Board.

Mr. Gaglioti recommended staying with Natural Safe Yield approach for the time being. Ms. Voss felt the TAC should make a recommendation to the Board from a technical standpoint with regard to using either Natural Safe Yield or Sustainable Yield in the future.

Ms. King said that many agencies are now using groundwater levels to manage their basins meaning that they would set pumping limits for each pumper in order to stabilize groundwater levels.

Ms. Voss felt that the Watermaster could go to great effort and expense and still not reach protective levels water levels, even though groundwater levels might be stabilized. She pointed out that it would still be necessary to get replenishment water in order to raise groundwater levels.

Referring to the comment responses contained in the agenda packet, Ms. King noted that consultants have different thoughts about whether seawater intrusion is a direct intrusion risk to the Santa Margarita aquifer. She felt that a Marine Electromagnetic Survey in Monterey Bay [as discussed later under agenda item 8] could help investigate this issue. Ms. Voss pointed out that there is still a concern about vertical migration as well, not just horizontal migration of seawater.

Ms. King wondered what other adjudicated basins might be doing with regard to the Natural Safe Yield versus Sustainable Yield approach. Mr. Jaques said that Ms. Paxton could contact other adjudicated basins and inquire.

Mr. Ottmar did not feel that further pumping reductions are possible, but agreed that Sustainable Yield is a technically superior approach compared to Natural Safe Yield.

Mr. Lear suggested recommending to the Board that the TAC recognizes that Sustainable Yield is a more robust basin management approach than Natural Safe Yield, and that other basins under SGMA will have to use the Sustainable Yield approach as they implement their Groundwater Sustainability Plans over a 20-year period.

Mr. Jaques recommended that he be given the opportunity to attempt to capture the points made in today's TAC discussion in the form of a proposed recommendation to the Board, and to bring that back to the TAC at its August meeting for final review and approval before sending anything to the Board regarding Sustainable Yield. There was consensus to support this recommendation.

6. Discuss Background and Scope of Work for Replenishment Modeling

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

One question that Ms. King asked the TAC to provide direction on was over how long a time period the simulation to reaching protective water levels should be, and at what year the simulation should start. She noted that it would be necessary to extend the existing model beyond 2041 if a simulation period that extended beyond that date was selected, since that is where the model currently ends. She noted, however, that the model may have been extended in conjunction with work on the Pure Water Monterey Project.

Mr. Lear pointed out that SGMA requires sustainability to be achieved within 20 years after approval of Groundwater Sustainability Plans. Mr. Gaglioti, Mr. O'Halloran, and Ms. Voss said they concurred with using a 20-year simulation period to achieve protective water levels.

Mr. Jaques also asked for TAC input on whether to evaluate the Cal Am Desalination Plant and Pure Water Monterey Expansion Project scenarios.

Mr. Lear said there would be six ASR wells into which only desalinated water, not Pure Water Monterey Advance Treated Water, could be injected. Under the Pure Water Monterey Expansion Project there would be either five or six injection wells where Advance Treated Water could be injected. If more Advance Treated Water injection wells were to be needed, they would probably need to be located further inland or to the north in order to avoid travel time problems to nearby production wells.

Using this information, Mr. Jaques and Ms. King will draft a scope of work for a contract for the replenishment modeling update and bring it to the TAC at its next meeting.

7. Initial Discussion Regarding Scope of Work for Monitoring and Management Program (M&MP) for FY 2022

Mr. Jaques summarized the agenda packet materials for this item. He said that he was including replenishment remodeling in the 2022 Monitoring and Management Program, even though it is included in the 2021 Monitoring and Management Program. He said he was doing this in case the Board decided to defer doing that work until 2022.

Mr. Lear and Ms. Voss said they concurred with reducing the monitoring frequency of the Camp Huffman well to once every five years.

No other revisions were recommended. Mr. Jaques will proceed to develop the final draft of the 2022 Monitoring and Management Program for presentation to the TAC at its next meeting.

8. Update on Marine Electromagnetic Surveying in Monterey Bay

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

Ms. Voss asked whether this work would be looking for the freshwater/seawater interface in the offshore area. Ms. King said that the Soquel Creek Water District did some airborne electromagnetic on-shore survey work, but could not get data from the offshore area due to the limitations of the technology. The marine electromagnetic technology can apparently look for this interface in the offshore area. Ms. Voss will see if MCWRA has any reports that might be of use to Rosemary Knight in developing her work. She also noted that the Department of Water Resources airborne electromagnetic survey work will not cover the coastal areas, at least not initially.

9. Schedule

Mr. Jaques highlighted certain items in this agenda item. There was no other discussion.

10. Other Business

There was no other business.

The meeting adjourned at 3:52 PM.

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SEASIDE GROUNDWATER BASIN WATERMASTER **ITEM X.B.**

Reported Quarterly and Annual Water Production From the Seaside Groundwater Basin
For All Producers Included in the Seaside Basin Adjudication -- Water Year 2021
(All Values in Acre-Feet [AF])

	Type	Oct	Nov	Dec	Oct-Dec 20	Jan	Feb	Mar	Jan-Mar 21	Apr	May	Jun	Apr-Jun 21	Jul	Aug	Sep	Jul-Sep 21	Reported Total	Yield Allocation	from WY 2020	for WY 2021
Coastal Subareas																					
CAW - Coastal Subareas	SPA	233.22	194.47	258.49	**686.18**	116.54	18.91	22.63	**158.09**	33.67	28.35	35.19	**97.21**	0.00	0.00	0.00	**0.00**	**941.47**	1,466.02	5.48	1,471.50
Luzern		62.71	59.24	23.86	**145.81**	0.03	0.00	39.07	**39.10**	2.17	48.97	39.92	**91.06**				**0.00**	**275.97**			
Ord Grove		122.95	117.17	121.44	**361.56**	118.00	27.62	52.71	**198.32**	114.80	119.77	114.86	**349.43**				**0.00**	**909.31**			
Paralta		108.31	101.89	64.52	**274.73**	0.00	7.56	95.55	**103.11**	144.08	85.74	68.98	**298.80**				**0.00**	**676.64**			
Playa		32.31	27.38	8.13	**67.83**	0.00	0.00	0.00	**0.00**	0.00	0.02	0.00	**0.02**				**0.00**	**67.85**			
Plumas		18.83	23.76	7.88	**50.47**	0.00	15.30	30.12	**45.42**	29.16	29.06	27.44	**85.66**				**0.00**	**181.55**			
Santa Margarita #1		188.11	165.03	132.65	**485.79**	44.62	0.00	0.00	**44.62**	0.00	0.00	0.00	**0.00**				**0.00**	**530.41**			
Santa Margarita #3		0.00	0.00	0.00	**0.00**	103.89	0.00	0.00	**103.89**	132.83	184.69	208.02	**525.54**				**0.00**	**629.43**			
ASR Recovery		0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	**0.00**								
PWM Recovery		(300.00)	(300.00)	(100.00)	**(700.00)**	(150.00)	(31.57)	(194.81)	**(376.38)**	(389.38)	(439.91)	(424.02)	**(1,253.31)**								
City of Seaside (Municipal)	SPA	13.48	13.93	13.37	**40.79**	12.26	13.94	13.18	**39.38**	14.79	15.95	17.09	**47.83**				**0.00**	**127.99**	120.28	0.00	120.28
Granite Rock Company	SPA	- -	- -	- -	**0.00**	- -	- -	- -	**0.00**	- -	- -	- -	**0.00**				**0.00**	**0.00**	11.35	235.87	247.21
DBO Development No. 30	SPA	- -	- -	- -	**0.00**	- -	- -	- -	**0.00**	- -	- -	- -	**0.00**				**0.00**	**0.00**	20.59	426.81	447.40
Calabrese (Cypress Pacific Inv.)	SPA	- -	- -	- -	**0.00**	- -	- -	- -	**0.00**	- -	- -	- -	**0.00**				**0.00**	**0.00**	2.76	13.32	16.08
City of Seaside (Golf Courses)	APA	46.99	14.60	14.94	**76.54**	8.62	6.31	43.73	**58.66**	47.99	76.12	77.18	**201.28**				**0.00**	**336.47**	540.00		540.00
Sand City	APA	0.15	0.14	0.06	**0.35**	0.06	0.05	0.06	**0.17**	0.08	0.12	0.13	**0.34**				**0.00**	**0.85**	9.00		9.00
SNG (Security National Guaranty)	APA	0.00	0.00	0.02	**0.02**	0.00	0.04	0.05	**0.09**	0.01	0.01	0.00	**0.02**				**0.00**	**0.13**	149.00		149.00
Calabrese (Cypress Pacific Inv.)	APA	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	**0.00**				**0.00**	**0.00**	6.00		6.00
Mission Memorial (Alderwoods)	APA	3.17	3.07	3.91	**10.15**	2.70	1.64	3.41	**7.76**	3.37	4.16	5.43	**12.96**				**0.00**	**30.87**	31.00		31.00
Coastal Subareas Totals					**814.02**				**264.14**				**359.62**				**0.00**	**1,437.79**	**2,356.00**	**681.48**	**3,037.47**
Laguna Seca Subarea																					
CAW - Laguna Seca Subarea	SPA	34.97	25.48	13.11	**73.56**	8.38	6.53	8.55	**23.46**	12.21	12.26	13.90	**38.37**	0.00	0.00	0.00	**0.00**	**135.39**	0.00		0.00
Ryan Ranch Unit		5.02	3.56	0.99	9.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**				0.00	9.57			
Hidden Hills Unit		13.86	10.44	9.10	33.39	8.38	6.53	8.55	23.46	12.21	12.26	13.90	**38.37**				0.00	95.22			
Bishop Unit 3		8.20	5.84	1.51	15.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**				0.00	15.55			
Bishop Unit 1		7.89	5.64	1.52	15.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**				0.00	15.05			
The Club at Pasadera	APA	15.90	6.30	2.00	**24.20**	3.30	2.00	4.00	**9.30**	19.00	30.00	18.00	**67.00**				**0.00**	**100.50**	251.00		251.00
Laguna Seca Golf Resort (Bishop)	APA	18.28	1.54	0.00	**19.82**	7.39	1.34	3.26	**11.98**	18.09	25.19	36.93	**80.21**				**0.00**	**112.01**	320.00		320.00
York School	APA	1.07	1.63	0.93	**3.63**	0.65	0.25	0.13	**1.04**	2.49	2.52	2.86	**7.86**				**0.00**	**12.53**	32.00		32.00
Laguna Seca County Park	APA	1.70	0.24	31.03	**32.98**	0.84	0.65	0.99	**2.48**	1.81	1.29	3.12	**6.22**				**0.00**	**41.67**	41.00		41.00
Laguna Seca Subarea Totals					**154.19**				**48.25**				**199.66**				**0.00**	**402.10**	**644.00**	**0.00**	**644.00**
Total Production by WM Producers					**968.21**				**312.40**				**559.28**				**0.00**	**1,839.88**	**3,000.00**	**681.48**	**3,681.47**
									Annual Production from APA Producers									635.03	1,379.00		
									Annual Production from SPA Producers									1,204.86	2,302.47		

																			Previous Balance	*Total*
CAW / MPWMD ASR Injection and Recovery (Carmel River Basin source water)																				
Injection	0.00	0.00	0.00	**0.00**	43.56	22.50	0.00	**66.06**	0.00	0.00	0.00	**0.00**				**0.00**	**66.06**		
(Recovery)	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	**0.00**				**0.00**	**0.00**		
Net ASR	0.00	0.00	0.00	**0.00**	43.56	22.50	0.00	**66.06**	0.00	0.00	0.00	**0.00**				**0.00**	**66.06**	**735.49**	**801.55**
Pure Water Monterey (PWM) Injection and Cal-Am Recovery																			
Injection Operating Reserve	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	**0.00**				**0.00**	**0.00**	**1,201.69**	**1,201.69**
Injection Drought Reserve	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	**0.00**				**0.00**	**0.00**	**0.00**	**0.00**
Delivery to Basin	190.12	222.99	173.77	**586.88**	297.05	266.37	313.71	**877.13**	308.57	320.44	292.61	**921.62**				**0.00**	**2,385.63**	**0.00**	**2,385.63**
CAW	(300.00)	(300.00)	(100.00)	**(700.00)**	(150.00)	(31.58)	(194.81)	**(376.39)**	(389.38)	(439.91)	(424.02)	**(1253.31)**				**0.00**	**(2,329.70)**	**0.00**	**(2,329.70)**

Notes:
1. The Water Year (WY) begins October 1 and ends September 30 of the following calendar year. For example, WY 2021 begins on October 1, 2020, and ends on September 30, 2021.
2. "Type" refers to water right as described in Seaside Basin Adjudication decision as amended, signed February 9, 2007 (Monterey County Superior Court Case No. M66343).
3. Values shown in the table are based on reports to the Watermaster received by April 15, 2021.
4. All values are rounded to the nearest hundredth of an acre-foot. Where required, reported data were converted to acre-feet utilizing the relationships: 325,851 gallons = 43,560 cubic feet = 1 acre-foot.
5. "Base Operating Yield Allocation" values are based on Seaside Basin Adjudication decision. These values are consistent with the *Watermaster Producer Allocations Water Year 2021* (see Item VIII.B. in 12/2/2020 Board packet).
6. Any minor discrepancies in totals are attributable to rounding.
7. APA = Alternative Producer Allocation; SPA = Standard Producer Allocation; CAW = California American Water.
8. It should be noted that CAW/MPWMD ASR "Injection" and "Recovery" amounts are not expected to "balance" within each Water Year. This is due to the injection recovery "rules" that are part of SWRCB water rights permits and/or separate agreements with state and federal resources agencies that are associated with the water rights permits.

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Seaside Groundwater Basin Watermaster
P.O. Box 51502, Pacific Grove, CA 93950
watermasterseaside@sbcglobal.net
(831) 595-0996

May 24, 2021

Mary Ann Carbone, Board Chair
Monterey One Water
5 Harris Court, Building D
Monterey, CA 93940

Alvin Edwards, Board Chair
Monterey Peninsula Water Management District
5 Harris Court, Building G
Monterey, CA 93940

Rich Svindland, President
California American Water Company
511 Forest Lodge Road, Suite 100
Pacific Grove, CA 93950

Re: Replenishment Supplies to Address Seawater Intrusion Risk in the Seaside Groundwater Basin

Dear Ms. Carbone, Mr. Edwards and Mr. Svindland:

I am writing today to explore opportunities to secure replenishment water to raise protective water levels in the Basin from California American Water Company's ("Cal-Am") proposed Desalination Project and Monterey One Water's ("M1W") Pure Water Monterey ("PWM") Expansion Project. This issue is a very hot topic for our Board given that there was detected evidence of potential seawater intrusion in the Seaside Basin. On May 5, 2021, the Watermaster Board approved a resolution to commence negotiations with Cal-Am and MlW to establish terms and conditions under which replenishment water could be provided to the Basin by either or both of your respective projects.

As I explained in my August 12, 2020 letter to the California Coastal Commission about Cal-Am's Desalination Project, analysis of water elevations in several key coastal wells has revealed that higher groundwater elevations are required in both the Paso Robles (shallow) and Santa Margarita (deep) aquifers to reduce the risk of seawater intrusion in the Seaside Basin. To achieve these protective water levels (PWL), the Watermaster previously found that approximately 1,000 acre feet per year ("afy") of additional replenishment water would be required over a 25-year period. However, the annual amount of water needed to achieve PWL may actually be higher, as this finding was based on groundwater modeling conducted in 2013. This 2013 modeling needs to be updated to account for changes in ASR injection quantities, injection of water through the Pure Water Monterey Project that is now operating, changes in groundwater levels, and other factors, to provide a more accurate indication of current replenishment water needs. The Watermaster is evaluating the additional information that may be needed to confirm anticipated replenishment water needs above the 1,000 afy previously identified.

Memo regarding Replenishment Supply Meeting

On Tuesday, July 20, 2021, Chairman Paul Bruno met with MPWMD General Manager Dave Stoldt, Monterey One Water General Manager Paul Sciuto, and Cal Am Operations Manager Chris Cook. Watermaster Technical Program Manager Robert Jaques was also present. Administrative Officer Laura Paxton participated by phone.

1) There was a discussion about the needs of the basin. The Watermaster's technical consultants have concluded that replenishment of 1,000 afy over a 25-year period is required to achieve protective water levels. This amount is in addition to the 700 afy that Cal Am is obligated to provide to offset overproduction. This is to begin upon their completion of a water supply project.

Chair comments to the Board – The Watermaster has the obligation to protect the basin against seawater intrusion. We must use scientific data to ensure that the basin viability as potable water supply is maintained. Failure to carry out our duties could result in sanctions and or fines, pumping moratoriums, or creation of special master to take over the basin. The analysis that 1,000 afy was needed was performed in 2013. The Watermaster will be updating the basin model within the next 6 months. The replenishment amount will likely need to be increased.

2) There was discussion about supply. Dave Stoldt distributed a memo stating that the additional 1,000 afy for replenishment could be covered by the expansion of Pure Water Monterey based upon the MPWMD's supply and demand numbers, including a projection of annual ASR supplies of 1,300 afy. Paul Bruno disputed ASR reliability based upon historic performance. Chris Cook noted that the MPWMD's numbers conflict with Cal Am's 2020 Urban Water Management Plan. Chris Cook also stated that at least as long as the CDO moratorium is in place, any unused water injected into the basin from the PWM project would not be excess water available to dedicate to maintaining protective water levels. Until supplies over the long term prove sufficient to meet demand without restrictions, Cal Am must be able to extract this water if needed by its customers.

Chair Comments to the Board – Significant concerns remain about the ability of Pure Water Monterey to supply replenishment to the basin. The 10-year average production for ASR is 653.33 afy and 1,300 afy has been met or exceeded only twice in the past 10 years. Water from the PWM would be needed to make up any ASR shortfall. PWM is also a new source whose capacity and reliability has not yet been proven and must be assessed of the next few years.

3) There was a discussion about financing. Dave Stoldt stated that financing of future replenishment water could likely be done through the MPWMD as a finance resource management agency.

Chair comments to the Board – The discussion about financing was productive. The agencies should continue to explore all water supply and financing options.

4) Each participant agreed to meet again. We will try to arrange another meeting in roughly a month

Moreover, the September 2019 Monterey Peninsula, Carmel Bay, and South Monterey Bay Integrated Regional Water Management Plan Update, which was prepared on behalf of the Regional Water Management Group (including MlW), shows that sea level rise attributable to climate change may increase the risk of seawater intrusion. Taken together, the risk of seawater intrusion underscores the Watermaster's need to take proactive measures now to protect the Seaside Basin.

As I indicated in my letter to the Commission, the Watermaster has concluded that Cal-Am's Desalination Plant, once completed, could, in only a few years, supply all of the additional water needed to allow the Watermaster to raise groundwater levels to PWLs in the Seaside Basin. When water from this project becomes available, the Watermaster remains interested in securing a portion of its supplies for the Seaside Basin, either through direct or in lieu replenishment.

The Watermaster also understands that the PWM Phase 1 and Expansion Projects, once completed and fully operational, potentially could be able to produce 3,500 afy and 2,250 afy, respectively, under projected operating conditions. However, it is also the Watermaster's understanding that this water has been fully committed to meet existing regional water demands of the Monterey Peninsula and has no duty to provide water to replenish the Basin. Moreover, the Watermaster's calculations indicate that any temporary excess from the combined PWM Projects would be exhausted before the needed amount of replenishment water would be provided. If this is indeed the case, neither the PWM Phase 1 nor the Expansion Project could provide long-term replenishment water to the Seaside Basin that would serve to raise PWL permanently, as is necessary to sustain PWL in the Seaside Basin.

We are all well aware of the shift from reliance on the Carmel River to the Seaside Basin to supply the Monterey Peninsula's potable water needs. Seaside Basin native water, PWM Phase 1 and PWM Expansion, and ASR all require a healthy Seaside Basin. All of our eggs are in this one basket. Given this, it is critical that steps be taken to protect the Basin from the threat of seawater intrusion in order to ensure the continuing availability of the community's water supplies. If replenishment water is not secured, there will be no way of achieving PWL short of drastically reducing pumping from the Basin and waiting for natural recharge to begin to raise groundwater levels. That process would take many years.

To resolve these issues and to protect the Seaside Basin, the Watermaster is seeking to engage with both Cal-Am and MlW to explore potential opportunities to purchase replenishment water to satisfy the Seaside Basin's needs. Please let me know if you are available for a meeting or telephone conference to begin a conversation on these important issues.

Sincerely,

Paul B. Bruno, Chairman

Cc: Paul Scuito, General Manager, M1W
David Stoldt, General Manager, MPWMD
Chris Cook, Operations Manager, Cal Am Monterey District

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On July 13th I spoke on the phone with Ed Ghandour about the high chloride levels found in the most recent sampling (March 2021) of his well on the Monterey Bay Shores Resort property in Sand City.

He told me that in 2018 the well was video-inspected and it was found that many of the perforations in the 12" diameter steel casing (which was installed approximately 60 years ago) were plugged with iron scale (rust). However, the well was not cleaned to correct this problem. It was then used for a short period of time by Granite Rock when they were doing earthwork on the site and needed the water for compaction and other construction related things. Granite Rock found that the water contained some sand and that was hampering their use of it, so the pump company inserted an 8" diameter PVC casing inside the existing older 12" diameter steel casing in hopes that that would help mitigate this problem. The output increased substantially as a result, even though the casing was not brushed or cleaned. Work on the site came to a stop when the lender stopped financing the further development. Since then the well has not been pumped for water supply purposes.

After the high chloride level was detected in the 2021 sampling of this well, the well drilling records, video inspection and other data were analyzed, then it was step-tested in June 2021 to see how the water level responded during pumping and if any changes in chloride level occurred. There was significant drawdown in the water level during this testing, and it was concluded that potentially the well pump was getting essentially most of its water from the very upper levels of the casing, not from the perforated section in the Paso Robles aquifer, due to the plugged perforations.

The well drilling contractor felt that the leakage in the upper part of the steel casing could be repaired by sealing it, or thru the use of repair sleeves, and that the perforations would be unplugged by cleaning, thereby restoring the well to proper operation.

Unfortunately, litigation in progress on the site development clouded the title to the site and led to the Court directing the parties to not perform any further work at the site, including doing any work on the well, until the litigation was settled and title cleared. The Court trial on this is scheduled for September 2021 and is expected to last approximately 6 weeks. Mr. Ghandour is hopeful that the Court's ruling on this litigation will result in clear title to the site reverting to SNG, and that he will then be able to proceed with the repair work on the well.

If I misunderstood anything, please edit this to correct that and send it back to me so I can forward it to the Board.

Thanks very much.

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Seaside Basin Watermaster
P.O. Box 51502, Pacific Grove, CA 93950
(831) 595-0996

May 13, 2021

Ms. Jan Shriner, President, Board of Directors
Marina Coast Water District & MCWD Groundwater Sustainability Agency
11 Reservation Road
Marina, CA 93933-2099

Subject: Importance of maintaining a Paso Robles shallow aquifer monitoring well at the FO-09 site and seeking three-party funding of a replacement well at that location.

Dear Ms. Shriner:

The Seaside Groundwater Basin Watermaster (WM) seeks a three-party arrangement between Monterey Peninsula Water Management District (MPWMD), Marina Coast Water District, and WM to fund replacement of monitoring well FO-09 Shallow that MPWMD intends to destroy with a new shallow monitoring well in the same general location.

According to draft Chapter 7 of the Monterey Subbasin Groundwater Sustainability Plan, "…additional wells are needed in the identified areas of the Marina-Ord Area to augment the seawater intrusion monitoring network as discussed in Section 7.5.2" which states, "Additional seawater intrusion monitoring wells may be appropriate at the following locations: Within the 400-Foot Aquifer to address lack of coverage near the central coastline between wells MWD-09 and MPWMD#FO-10S…"

Although the location of FO-09S is not between MW-09 and MPWMD FO-10S, it is closer to the coast within the large network monitoring data gap between the Seaside Groundwater Basin and the Monterey Subbasin. Once FO-09S is destroyed there will be no source of water level or water quality data obtainable for the Paso Robles aquifer in that area. The data obtained from the recent induction logging of FO-09S indicates that the dune sand deposits overlying the Paso Robles aquifer may have already been seawater intruded this far inland. If so, that means there is risk of intrusion into the Paso Robles aquifer throughout this area, either by openings (gaps) in the clay layer that separates the dune sands from the Paso Robles, or through other wells that might have leaks. A properly operating shallow monitoring well at the location of FO-09 could provide an early alert to such an occurrence.

Well FO-09S belongs to MPWMD and is in its monitoring network – WM also seeks that agency's participation in a cost share arrangement.

In view of the potential seawater intrusion from dunes sands to the Paso Robles aquifer in an area bounding the Monterey Subbasin, Watermaster requests that MCWD participate in a cost-share arrangement to install a new shallow monitoring well to replace FO-09S that is to be destroyed.

Thank you for Marina Coast Water District's consideration of cooperating in the proposed endeavor.

Sincerely,

Paul Bruno
Chair, Watermaster Board of Directors

Cc: Remleh Scherzinger, General Manager
Patrick Breen, Water Resources Manager

From: **Patrick Breen** pbreen@mcwd.org
Subject: RE: Importance of a monitoring well to replace MPWMD FO-09 Shallow (S)
Date: May 13, 2021 at 2:05 PM
To: Laura Paxton watermasterseaside@sbcglobal.net, bobj83@comcast.net
Cc: Remleh Scherzinger RScherzinger@mcwd.org

PB

Good Afternoon,
The Marina Coast Water District has received the letter regarding participation in an arrangement to fund a replacement of monitoring well F0- 09 Shallow.
The District will participate in a mutually beneficial cost share arrangement for this replacement.
Please contact me with any further information and/or when an arrangement will be considered.
Thank you,

Patrick J. Breen
Water Resources Manager

Marina Coast Water District
Providing high quality water, wastewater and recycled water services to the District's expanding communities through management, conservation and development of future resources at reasonable costs.

11 Reservation Road
Marina, CA 93933
(831) 883-5951 off
(831) 233-9718 mob
(831) 883-5995 fax
Visit us at: www.mcwd.org

From: Laura Paxton <watermasterseaside@sbcglobal.net>
Sent: Thursday, May 13, 2021 12:13 PM
To: Jan Shriner <DirectorShriner@mcwd.org>
Cc: Paula Riso <priso@mcwd.org>; Patrick Breen <pbreen@mcwd.org>
Subject: Importance of a monitoring well to replace MPWMD FO-09 Shallow (S)

President Shriner,

Please see attached correspondence from Chair Bruno of the Seaside Groundwater Basin Watermaster regarding the importance of installing a monitoring well to replace MPWMD FO-09 Shallow (S) and seeking cost share.

Sincerely,

Laura Paxton
Administrative Officer
Seaside Groundwater Basin Watermaster
PO Box 51502
Pacific Grove, CA 93950
(831) 641-0113
watermasterseaside@sbcglobal.net
www.seasidebasinwatermaster.org

Seaside Basin Watermaster
P.O. Box 51502, Pacific Grove, CA 93950
(831) 595-0996

May 13, 2021

Alvin Edwards, Chair
Monterey Peninsula Water Management District
5 Harris Court, Building G
Monterey, CA 93940

Subject: Importance of maintaining a Paso Robles shallow aquifer monitoring well at the FO-09 site and seeking three-party funding of a replacement well at that location.

Dear Mr. Edwards:

The Seaside Groundwater Basin Watermaster (WM) seeks a three-party arrangement between MPWMD, Marina Coast Water District, and WM to fund replacement of monitoring well FO-09 Shallow that MPWMD intends to destroy with a new shallow monitoring well in the same general location.

Once FO-09S is destroyed there will be no source of water level or water quality data obtainable for the Paso Robles aquifer in that area of the Seaside Basin. The data obtained from the recent induction logging of FO-09S indicates that the dune sand deposits overlying the Paso Robles aquifer may have already been seawater intruded this far inland. If so, this means that there is a risk for intrusion into the Paso Robles aquifer to occur throughout this area, either by openings (gaps) in the clay layer that separates the dune sands from the Paso Robles, or through other wells that might have leaks. A properly operating shallow monitoring well at the location of FO-09 could provide an early alert to such an occurrence.

MPWMD asserts that FO-09 is not needed for its monitoring purposes. However, Table 2 in the contract between the Watermaster and MPWMD to perform monitoring work lists the wells to be monitored, and identifies which wells are part of which party's monitoring network. Table 2, and Footnote 1 in that table, shows FO-09 Shallow to be a well that is in MPWMD's Monitoring Well Network, and is a well that MPWMD monitors monthly for water level as part of its own monitoring program. That information was provided by MPWMD when Table 2 was created some years ago, and that assignment of monitoring responsibilities has not changed over the years.

Marina Coast Water District may be including FO-09S in official monitoring plans for its developing GSP so most likely will want it replaced – WM also seeks that agency's participation in a cost share arrangement.

In view of the potential seawater intrusion from dunes sands to the Paso Robles aquifer occuring in the FO-09S well, the Watermaster agrees that MPWMD should have the well destroyed using proper procedures. At the same time, Watermaster requests that MPWMD participate in a cost-share arrangement to install a new shallow monitoring well to replace the destroyed well. Mr. Stoldt has mentioned there could be cost savings to MPWMD by having the FO-09S well destroyed at the same time a new monitoring well at that location is constructed.

Thank you for MPWMD's consideration of cooperating in the proposed endeavor.

Sincerely,

Paul Bruno
Chair, Watermaster Board of Directors

cc: Mr. David Stoldt, General Manager

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LAFCO *of Monterey County*

LOCAL AGENCY FORMATION COMMISSION OF MONTEREY COUNTY

132 W. Gabilan Street, #102
Salinas, CA 93901

P. O. Box 1369
Salinas, CA 93902

Voice: 831-754-5838

www.monterey.lafco.ca.gov

MEMORANDUM

DATE: August 3, 2021

TO: Affected Local Agencies

FROM: Kate McKenna, AICP, Executive Officer

SUBJECT: **Transmittal of LAFCO's Certificate of Filing for Monterey Peninsula Water Management District's (MPWMD) Application, LAFCO File No. 21-01**

You are receiving this information as a local public agency or school district whose territory overlaps with or is otherwise affected by MPWMD's application to the Local Agency Formation Commission of Monterey County (LAFCO).

I am writing to transmit a certificate (Attachment 1) confirming that the MPWMD application is complete and is proceeding to a LAFCO public hearing on **October 25** at **4:00 p.m**. The application consists of two components: (1) activation of the District's latent powers to provide potable water production and distribution services for retail customers throughout the District (in accordance with a 2018 voter-approved initiative, and for the purpose of proceeding with acquisition of Cal-Am's Monterey Water System through negotiation or a condemnation proceeding), and (2) approval of a Sphere of Influence amendment and annexation of approximately 58 affected parcels that are currently outside the District's jurisdictional boundary, in the Yankee Point and Hidden Hills areas.

I am also attaching information about a property tax impact analysis prepared by a consultant for MPWMD. Attachment 2 quantifies the revenue estimated to be lost by local taxing entities due to a potential shift in assets of the Monterey Water System from taxable status under Cal-Am ownership to tax-exempt status under MPWMD governmental ownership. Approximately half of the affected local agencies identified in this application would be impacted by the potential change in ownership. A MPWMD cover letter for Attachment 2 summarizes the impacts and proposes mitigations for the most affected agencies. Exhibit A of the cover letter summarizes the projected revenue losses for each taxing agency. Additional information about the property tax analysis is available on the LAFCO website or here: https://www.co.monterey.ca.us/home/showpublisheddocument/104208/637631541300177457.

The LAFCO website contains other information of interest, including the scope of work for a LAFCO independent financial review of the MPWMD application. That study is underway and the scope of work is available here: https://www.co.monterey.ca.us/home/showpublisheddocument/104114/637629075739530000. LAFCO staff are also preparing an updated Municipal Services Review and Sphere of Influence study for MPWMD, and will post that when it is available for public review.

Thank you for your review of this information. We welcome your questions or comments and will continue to keep you informed about the LAFCO process. I can be reached directly by cell phone at (831)682-0157 or by email at mckennak@monterey.lafco.ca.gov.

Attachments: 1. Certificate of Filing, dated July 30, 2021
2. MPWMD letter and property tax analysis, dated July 12, 2021

KATE McKENNA, AICP
Executive Officer

LOCAL AGENCY FORMATION COMMISSION
P.O. Box 1369
Salinas, CA 93902
Telephone (831) 754-5838

132 W. Gabilan Street, Suite 102
Salinas, CA 93901
www.monterey.lafco.ca.gov

CERTIFICATE OF FILING

I, KATE McKENNA, Executive Officer of the Local Agency Formation Commission of Monterey County, do certify that:

1. The application referenced and described below has been submitted to me and has been found to be in the form prescribed by the Commission.
2. The application contains the information and data requested and required by this Commission and applicable provisions of State law and has been accepted for filing on July 30, 2021.

Application Title:	MPWMD 2021 Sphere of Influence, Annexation, and Latent Power Activation
LAFCO File No.:	21-01
Applicant:	Monterey Peninsula Water Management District Attn.: David Stoldt, General Manager 5 Harris Court, Building G, Monterey, CA 93940
Location:	Yankee Point Proposed SOI/Annexation area (38 parcels): APNs 243-131-003 to 243-131-008; 243-131-010; 243-131-011; 243-132-001 to 243-132-008; 243-132-011 to 243-132-016; 243-141-001 to 243-141-015; and 243-141-017 which are located west of Highway 1 and adjacent to Yankee Point Drive and Yankee Point Way in unincorporated Monterey County. Hidden Hills Proposed SOI/Annexation area (20 parcels): APNs 416-051-001; 416-051-005; 416-051-006; 416-051-013 to 416-051-022; 416-051-025; 416-051-026; 416-053-001 to 416-053-004; and 416-361-043 which are located east of Laureles Grade and Hidden Hills Road in unincorporated Monterey County. The proposed activation of latent powers is to provide water production and distribution services for retail customers throughout MPWMD's jurisdiction.
Date of Hearing:	October 25, 2021

Affected Agencies:

- County of Monterey
- County Service Areas (CSAs) #1, 17, 19, 23, 25, 30, 33, 34, 47, 50, 51, 52, 55, 56, 57, 62, 66, 67, 74, 100
- Monterey County Water Resources Agency
- City of Carmel-by-the-Sea
- City of Del Rey Oaks
- City of Monterey
- City of Pacific Grove
- City of Sand City
- City of Seaside
- City of Marina
- Monterey Peninsula Airport District

- Pebble Beach Community Services District
- Santa Lucia Community Services District
- Ocean View Plaza Community Services District
- Cachagua Fire Protection District
- Cypress Fire Protection District
- Carmel Highlands Fire Protection District
- Monterey County Regional Fire Protection District
- Moss Landing Harbor District
- Salinas Valley Memorial Healthcare System
- Northern Salinas Valley Mosquito Abatement District
- Carmel Valley Recreation and Park District
- Monterey Peninsula Regional Park District
- Monterey County Resource Conservation District
- Carmel Area Wastewater District
- Monterey Regional County Sanitation District (Monterey One Water)
- Seaside County Sanitation District
- Monterey Regional Waste Management District
- Marina Coast Water District
- North County Fire Protection District
- Castroville Cemetery District
- North County Recreation and Park District
- Monterey Bay Unified Air Pollution Control District
- Salinas Valley Basin Groundwater Sustainability Agency
- Seaside Groundwater Basin Watermaster
- Pacific Grove Unified School District
- Carmel Unified School District
- Monterey County Office of Education
- Washington Union School District
- North Monterey County Unified School District
- Hartnell Community College District
- Monterey Peninsula Unified School District
- Monterey Peninsula College District
- Salinas Union Highschool District
- King City Joint Union High School District

This Certificate of Filing is issued pursuant to Section 56658 of the California Government Code. All time requirements for processing and consideration of this application specified by State law and the rules and regulations of this Commission shall become effective on the date of issuance of this Certificate.

Kate McKenna, AICP
Executive Officer

July 30, 2021
Date

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SUMMARY OF PURE WATER MONTEREY, SALINAS VALLEY GROUNDWATER SUSTAINABILITY, AND MARINA COAST WATER DISTRICT GROUNDWATER SUSTAINABILITY ZOOM MEETINGS IN AUGUST 2021

Note: This is a synopsis of information from these meetings that may be of interest to the Seaside Basin Watermaster

SVBGSA Seawater Intrusion Work Group Meeting August 2, 2021:

Topics discussed included:

- An Update on the status of GSPs was provided. The Monterey Subbasin GSP is expected to go through the Advisory Committee in August and to the SVBGSA and MCWDGSA Boards of Directors for approval in September 2021.
- A status report on the Deep Aquifer study is expected to be provided to the SVBGSA Board of Directors within the next few months. At that same time they will be asked to approve an RFQ to start the process of selecting a consultant to conduct the study. A funding agreement will also be presented to the Board.
- The DWR AEM survey of the Salinas Valley Basin is in progress and the results are projected to become available about 9 months after the field work is completed.

Update on input from the SWIG TAC's activities:

- The SWIG TAC ranked seawater intrusion mitigation project types in the following order: 1. In-lieu Recharge 2. Extraction Barrier 3. Injection Barrier 4. Physical Barrier
- The TAC was asked to put aside any political or economic considerations, and instead focus their technical expertise on projects. However, one member of the TAC pointed out that in other projects in the state, technical recommendations divorced from economic considerations become recommendations that cannot be implemented. The TAC recommendations should not be viewed as technical recommendations, but rather recommendations that combine the TAC members' views of what might be technically feasible, politically acceptable, and easy to implement. The one exception is that respondents who selected 'injection barrier' as their preferred Project focused on fast results and SWI mitigation success. From a technical perspective, it is likely that in lieu recharge will need to be combined with other projects or management actions to achieve sustainability.
- The TAC recommended:
    - Expanding the SWI monitoring program to include more Deep Aquifers wells and,
    - Pursuing both more in-lieu recharge efforts as well as an extraction barrier to begin mitigating seawater intrusion in the impacted aquifers.

  These recommendations focus on existing data gaps in the SWI monitoring program that currently leave beneficial users of the Deep Aquifers concerned about potential future

impacts, and the more feasible mitigation projects accounting for economic costs. Montgomery and Associates agrees that these are important considerations. However, the TAC recommendations should not be viewed as technical opinions on how to reach sustainability.

The next SWIG meeting will either be in one or two months.

SVBGSA Monterey Subbasin GSP Committee Meeting August 25, 2021:

There was significant discussion of issues affecting the Seaside Basin at this meeting. Topics discussed included:

- Drafts of chapters 2, 6, and 10 will come out in early September and will be on the September 8 Monterey Subbasin GSP Committee agenda for discussion. Almost immediately after that meeting, the full draft GSP will be made available for review.
- There will be a 45-day comment period after the SVBGSA Board gets it at their mid - September meeting. Revisions based on comments received from GSP Committee members and others can still be made during that comment period.
- There is then a 90-date notification period for the cities to provide input and this is what is largely driving the tight time schedule for completion of the GSP.
- The average decline in groundwater levels in the Corral de Tierra subarea since 2000 is approximately 27 feet.
- There is no clear correlation between groundwater levels or pumping rates at arsenic concentrations in water coming out of Wells. The maximum contaminant limit for arsenic is 10 mcg/L. Cal am added arsenic treatment to some of its wells in the corral de Tierra subarea.
- During the discussion topic pertaining to groundwater levels sustainable management criteria, four options were presented to the committee for consideration as follows:
    - Option 1 - Raise 2015 minimum thresholds and 2008 measurable objectives by 5 feet each.
    - Option 2 - Set minimum thresholds to 2008 levels, and set measurable objectives to 2004/2005 levels, or at least 5 feet higher than the 2008 levels (whichever is greater).
    - Option 3 - Keep the established minimum thresholds and measurable objectives, but add a management action to collect additional data on the relationship between groundwater levels, arsenic, pumping, and mitigation efforts as they are implemented.
    - Option 4 – Keep the established minimum thresholds and measurable objectives and make no changes.

  During that discussion I recommended that Option 2 be selected, because this would provide the greatest degree of benefit to the Laguna Seca Subarea of the Seaside Subbasin. Subsequently a motion was made to select Option 2, and the motion passed on a 5-4 split vote, with Committee members Jaques, Brennan, Bean, Hardgrave, and Kreeger voting for the motion and Committee members Breen, Coppernoll, Stefani, and Storms voting against it. The dissenters commented that they were mainly concerned about the cost and difficulty of trying to achieve the higher Measurable Objective and Minimum Threshold groundwater levels.

Mr. Breen explained that he was only concerned about setting groundwater levels too high such that they could not be achieved, and then the whole Monterey Subbasin would be in noncompliance with the GSP. Vera Nelson of EKI, however, said that changes in the Measurable Objective and Minimum Threshold levels for the Corral de Tierra subarea would not affect the Measurable Objective and Minimum Threshold for the Marina-Ord area.

Ms. Hardgrave commented that she felt Option 2 provided more rationale for developing regional solutions to water issues, and that regional solutions would be more affordable on a unit-cost basis. Mr. Jaques and Mr. Bunn commented supporting Ms. Hardgrave's comments. Mr. Bunn went on to say that he felt that the North County growers would be more supportive of regional projects than they would be of smaller projects that only benefited certain subbasins.

- Comments were received on draft Chapter 9. My comments included:
    - Many of the projects and management actions do not have estimated costs or estimated unit-costs provided for them. Without those costs, it will be impossible for an operating budget for the GSP to be developed, or for fees for water-use related charges developed. It would be appropriate to do a "reality check" on projects in terms of getting a sense of how financially feasible they may be. Something like a cost-benefit ratio for example. Without sufficient estimated costs and benefits for each project, time and effort will be wasted evaluating projects that have such high cost-to-benefit ratios that they should be dropped out of the project list early-on. A priority ranking of projects should be done by the GSP Committee.
    - The GSP should make it clear to the reader that pumping reductions will be required, not that they "may" be required. This is because data clearly shows that in order to achieve sustainability, a much greater reduction in overpumping will be necessary than can be achieved by the handful of small potential water savings projects.
    - Thought needs to be given to the limitation on the volume of recycled water that M1W's Salinas Valley Reclamation Plant or its Pure Water Monterey AWT Plant can produce. There appears to be a risk that the amount of recycled water that can be produced may becoming over-subscribed.
    - It would be good to have a legal review made of the issue of imposing a requirement for de minimis extractors to file annual extraction reports, to see if such reporting could be required and not be in conflict with SGMA.
- A "Coordination Program" will be developed during GSP implementation between land-use jurisdictions and the Groundwater Sustainability Agencies, so land-use jurisdictions will consider the GSPs when adopting and revising land-use policies.

Pure Water Monterey Water Quality and Operations Committee Meeting August 25, 2021:

Topics discussed at this meeting which are of interest to the watermaster included:

- Through June 30 of 2021, during Fiscal Year 20/21 2,474 acre-feet of water has injected by the Pure Water Monterey Project.

- Currently 95% of the water being injected goes into the Santa Margarita aquifer the other 5% goes into the Paso Robles aquifer.
- Deep injection wells 3 and 4 are expected to be commissioned in December 2021.
- The Pure Water Monterey expansion Project is expected to start construction in September 2022 and be completed by the end of 2023.
- An update was presented on tracer studies being performed to monitor the movement of injected water from the Pure Water Monterey Project:
    - An intrinsic tracer study using specific conductance as the tracer has been completed.
    - Travel time to the nearest extraction well had been estimated using the groundwater model to be 10.8 months.
    - Based on the intrinsic tracer study results, it was found that the travel time was only six months to reach ASR 1 or 2.
    - Multiple treatment processes are required to meet recycled water regulatory requirements in terms of log reductions of pathogens. Underground retention time can also provide some log reduction credit.
    - An extrinsic tracer study with dye is expected to start being conducted in early September, and completed by late November 2021. That study is expected to increase the log reduction value credits for the project.
    - The minimum required subsurface retention time before injected water reaches the nearest extraction well is two months. Based on the intrinsic tracer study the Paralta drinking water well is several months away in terms of travel time.
- During the discussion of water quality, it was pointed out by Division of Drinking Water representatives that both primary and secondary maximum contaminant levels (MCLs) are enforceable for drinking water systems. Jack Wang of Cal Am expressed concern that they may be in violation of one or two of the secondary MCLs. Cal Am will be talking with the Division of Drinking Water for clarification.
- Additional ASR wells are being enrolled to have them permitted for diversion of more water when the Carmel River flows are at a high enough level.
- The next meeting will be on September 22.