

**SEASIDE GROUNDWATER BASIN WATERMASTER
REGULAR MEETING OF THE BOARD OF DIRECTORS**

**Wednesday, February 3, 2021 – 2:00pm
Draft Agenda**

IN KEEPING WITH GOVERNOR NEWSOM’S EXECUTIVE ORDERS N-29-20 AND N-35-20, THE WATERMASTER REGULAR BOARD MEETING WILL NOT BE HELD IN PERSON. YOU MAY ATTEND AND PARTICIPATE IN THE MEETING BY JOINING FROM A PC, MAC, IPAD, IPHONE OR ANDROID DEVICE (NOTE: ZOOM APP MAY NEED TO BE DOWNLOADED FOR SAFARI OR OTHER BROWSERS PRIOR TO LINKING) AT THIS WEB ADDRESS:

<https://us02web.zoom.us/j/84067227501?pwd=eExCZllwdzRLRmYyclBPOE54RHZwUT09>

**If joining the meeting by phone, dial either of these numbers: +1 408 638 0968 US (San Jose) or +1 669 900 6833 US (San Jose)
If problems are encountered joining the meeting via the link above, try using the following information in your Zoom screen:**

Meeting ID: 840 6722 7501 Password: 247782

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 – 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. Schedule of Watermaster Board Member Representative and Alternate appointments for 2021 (informational only – no action required)..... 3

IV. ELECTION AND APPOINTMENT OF OFFICERS FOR CALENDAR YEARS 2020 AND 2021

- A. Chairperson - (Must be member of the Board of Directors) – Currently Director Bruno
- B. Vice Chairperson - (Must be member of the Board of Directors) – Currently Council Member Albert
- C. Secretary - (Need not be a member of the Board of Directors) – Currently Admin. Officer Paxton
- D. Treasurer - (Need not be a member of the Board of Directors) – Currently Council Member Gaglioti

V. 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.

VI. 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).

VII. MINUTES - Approve Minutes of Regular Board meeting held December 2, 2020 5

VIII. CONSENT CALENDAR

A. Consider Approving Summary of Payments made November 2020 through December 2020 totaling \$47,838.35 11

IX. ORAL PRESENTATION – None

X. NEW BUSINESS – None

XI. OLD BUSINESS

A. Update on Water Quality Issues and Background Information About the Watermaster’s Seawater Intrusion Response Plan (SIRP)..... 15

B. Discuss Potential Installation of a New Monitoring Well Between Monitoring Well FO-9 and the Pumping Depression in the Northern Coastal Subarea, and Other Alternatives 17

C. Direct Staff regarding obtaining additional water to recharge the Basin in order to raise groundwater levels 19

XII. INFORMATIONAL REPORTS (No Action Required)

A. Watermaster report of production of the Seaside first quarter Water Year 2021 (October 1, 2020 – December 31, 2020)..... 21

XIII. DIRECTOR’S REPORTS

XIV. STAFF COMMENTS

XV. NEXT REGULAR MEETING DATE

A. Consider canceling the Wednesday, March 3, 2021 meeting and set the next regular meeting date for April 7, 2021- 2:00 P.M.

XVI. 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 January 28, 2021 per the Ralph M. Brown Act, Government Code Section 54954.2(a).

**SEASIDE GROUNDWATER BASIN WATERMASTER
Board Member and Alternate Appointments
Calendar Years 2021-2022**

**ITEM III.
February 3, 2021**

MEMBER PARTY	MEMBER	ALTERNATE
California American Water	Director Christopher Cook	Tim O'Halloran
City of Del Rey Oaks	Council Member John Gaglioti	Council Member Scott Donaldson
City of Monterey	Council Member Dan Albert	Mayor Clyde Roberson
City of Sand City	Mayor Mary Ann Carbone	City Manager Aaron Blair
City of Seaside	Mayor Ian Oglesby	Council Member Jon Wizard
County of Monterey (MCWRA)	Supervisor Mary Adams	Supervisor Wendy Askew
MPWMD	Director George Riley	Director Alvin Edwards
Coastal Sub Area Landowner	Director Paul Bruno	N/A
Laguna Seca Sub Area Landowner	Director Wesley Leith	N/A

**SEASIDE GROUNDWATER BASIN WATERMASTER (Watermaster)
REGULAR MEETING MINUTES**

Via Zoom Teleconference
December 2, 2020

I. CALL TO ORDER – The meeting was called to order at 2:04 p.m.

II. ROLL CALL

City of Seaside – Mayor Ian Oglesby
Coastal Subarea Landowner – Director Paul Bruno – Chair
Laguna Seca Subarea Landowner – Director Wesley Leith
City of Sand City – Mayor Mary Ann Carbone
City of Del Rey Oaks – Council Member John Gaglioti
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: None

Others Present

Robert Jaques, Watermaster Technical Program Manager (TPM)
Laura Paxton, Watermaster Administrative Officer (AO)
Georgina King, Senior Hydrogeologist, Montgomery & Associates
Sarah Hardgrave, Policy Analyst, Office of Supervisor Adams
David Stoldt, General Manager, MPWMD
Alvin Edwards, MPWMD
Jonathan Lear, Water Resources Manager, MPWMD
Maureen Hamilton, Water Resources Engineer, MPWMD
Tim O’Halloran, Engineering Manager, CAW
Catherine Stedman, CAW
Aiko Yamakawa, Attorney, CAW
Ken Rutherford, Resident, Del Rey Oaks

III. PUBLIC COMMUNICATIONS: None

IV. REVIEW OF AGENDA: AO Paxton noted that the title of item VIII.A. of the posted agenda was inadvertently shortened and should include “...and Increasing the Monitoring Frequency of Monitoring Wells FO-9 and FO-10.”

Vice Chair Albert presided while Chair Bruno dealt with technical difficulties.

It was moved by Director Riley and seconded by Supervisor Adams to approve the agenda with the noted change. Council Member Albert – Aye; Mayor Carbone – Aye; Supervisor Adams – Aye; Director Riley – Aye; Director Leith – Aye; Mayor Oglesby. Motion carried.

V. APPROVAL OF MINUTES

Director Riley called out the TPM report regarding the discussion of projected impacts to groundwater levels resulting from the Monterey Peninsula Water Supply Project or the Pure Water Monterey Expansion Project as reported under item D in the minutes. Director Riley noted, and TPM Jaques concurred, that pay back of 700 acre-feet (AF) over 25 years to the Basin would be in jeopardy if the CAW desalination plant *or the Pure Water Monterey Expansion Project* was not built.

It was moved by Supervisor Adams and seconded by Council Member Albert to approve the minutes of the Regular Board meeting held September 2, 2020 with the addition of “or the Pure Water Monterey Expansion Project” to the TPM report and the minutes. 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 the Board and TAC schedule of meetings for 2021
Chair Bruno stated he would be absent for the March 3, 2021 meeting if held.
- B. Consider Approving Summary of Payments made August 2020 through October 2020 totaling **\$33,315.50**
- C. Consider Approving Fiscal Year 2020 Financial Reports through October 31, 2020
- D. Receive Report on Virus Removal in Pure Water Monterey Advanced Water Treatment Plant

It was moved by Supervisor Adams and seconded by Mayor Carbone to approve the consent calendar as presented. 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.

ORAL PRESENTATION: Georgina King, Montgomery & Associates presented the 2020 Seawater Intrusion Analysis Report (SIAR). In Water Year 2020 for the first time, what may be a precursor to seawater intrusion was detected in two monitoring wells experiencing increasing chloride concentrations. One of these is north of and outside of the Seaside Basin (monitoring well FO-10 Shallow), and the other is just inside the northern boundary of the Seaside Basin in the Northern Coastal Subarea (monitoring well FO-9 Shallow). Sampling was repeated at FO-10 and again results showed an increase in chloride concentrations of 48 mg/L, to 90 mg/L. This is the largest increase in the Basin to date. Chloride concentration trends were stable for the other monitoring wells. Since the Sentinel Wells have not detected an increase in salinity, the impact to the FO-9 Shallow and FO10-Shallow monitoring wells may be coming from the north out of the Monterey Subbasin where there is already seawater intrusion, rather than directly inland from the coastline of the Seaside Basin. Groundwater levels remain below protective elevations in all deep target monitoring wells.

Supervisor Adams inquired whether seawater intrusion would jeopardize the Pure Water Monterey or Aquifer Storage and Recovery Projects. Mr. Lear responded that the increased chloride concentrations have been detected in the shallow aquifer and the projects draw from the deep aquifer so it is not likely that the projects would be impacted.

Director Riley inquired whether the rate of seawater intrusion could be calculated, and what intrusion level would trigger an alert. Ms. King stated that the alert system is now activated beginning with the data being analyzed in the SIAR. Determining the rate of seawater intrusion can be calculated by collecting further data and performing further analysis. Seawater intrusion can occur very quickly. Response would be to follow the directives of the Seawater Intrusion Response Plan (SIRP 2/2009) with reduced pumping and/or recharging with supplemental water supply, and increased sampling schedules. The SIRP established chloride threshold values of 67 mg/L for FO-9 and 94 mg/L for FO-10 as trigger points; FO-10 sampled at 90 mg/L.

Director Cook inquired of how much is known of the flow gradient of the potential intrusion precursor. Ms. King would need to analyze more data to further discern flow direction. The only known well between FO-9/10 and the production wells is the Bayonet Blackhorse Golf Course (Coe) well. Production, level and quality is reported for this well. TPM Jaques has asked Marina Coast Water District MCWD to collaborate with Watermaster during development of its GSA to install or monitor existing wells in Fort Ord to the benefit of MCWD data collection and for Watermaster to better understand the Basin. Installation of the Watermaster sentinel well 10 years ago cost approximately \$250,000.

Director Cook anticipated that the ASR 3 and PWM projects and Ryan Ranch/Bishop intertie would help redistribute production from the Coastal Wells. He requested a quarterly update on well condition be provided to the board. Mr. Lear noted that when the City of Seaside golf courses ceased irrigating with MCWD water and began production from its wells, a lowering of groundwater levels and an increase in chloride were detected. City of Seaside is arranging to again use MCWD supply for irrigation and produce the stored groundwater from its municipal wells; Mayor Oglesby would provide more information on timing.

TPM Jaques responded to Council Member Albert, stating that there is no Watermaster jurisdiction over the area east of the Laguna Seca Subarea (LSSA). Any leverage is through TPM involvement with the Monterey Subbasin Coral de Tierra area under the Salinas Valley Basin Groundwater Sustainability Agency (SVBGSA). TPM Jaques and Ms. King have advised the agency of declining LSSA groundwater levels due to pumping in their area. It is hopeful that sustainable management criteria being developed for the SVBGSA Monterey Subbasin plan such as reduced pumping, use of recycled water, etc. will help to alleviate the LSSA problem, else a challenge would need to be made to the Department of Water Resources that oversees sustainability agencies. Supervisor Adams advised the board that Sarah Hardgrave on her staff is overseeing the subcommittee of the SVBGSA looking at the area east of LSSA if anyone has questions.

VII. NEW BUSINESS:

- A.** Consider Approving the Seawater Intrusion Analysis Report for 2020 and Increasing the Monitoring Frequency of Monitoring Wells FO-9 and FO-10. The Executive Summary is included in the Board agenda packet. The complete SIAR is posted on the Watermaster website at <http://www.seasidebasinwatermaster.org>. Director Cook requested the City of Seaside timeline for the MCWD irrigation water / production redirection program be included in the motion of approval of the report. Mayor Oglesby asked that it not be included in the motion to which Director Cook concurred.

It was moved by Director Cook and seconded by Mayor Carbone to approve the 2020 Seawater Intrusion Analysis Report; increasing the monitoring frequency of monitoring wells FO-9 and FO-10; approving a budget transfer from the Monitoring and Management Program contingency line item not to exceed \$4,000 to cover the costs of additional monitoring; directing the TAC to give quarterly or more frequent updates to the board on increased monitoring results; and directing staff to obtain a quote for installation of a shallow monitoring well between FO-10 and the -28 groundwater depression as described in the report. 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.

- B.** Discussion/Consider Adopting for Water Year 2021 a Declaration regarding the Unavailability of Artificial Replenishment Water (Water Year 2021 Production Allocations and Basin Storage Allocations attached)

Moved by Director Riley and seconded by Mayor Oglesby to adopt for Water Year 2021 a Declaration of Unavailability of Artificial Replenishment Water. 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

- C.** Discussion/Consider Approving the Watermaster Annual Report for Water Year 2020. The body of the Draft 2020 Annual Report is included in the Board agenda packet. The complete draft version is posted on the Watermaster website at <http://www.seasidebasinwatermaster.org>. The report will be filed with the court by January 15, 2021. Watermaster obligations and perpetuity were discussed. Chair Bruno and Director Riley thanked staff and TAC for the report.

Moved by Director Riley and seconded by Council Member Albert to approve the Watermaster 2020 Annual Report to the Court with minor edits as described by staff. 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

- D.** Consider Approving the Professional Service Contract with Baker Manock & Jensen PC Attorneys at Law to provide legal services to Watermaster. AO Paxton gave item highlights. The term of the contract is that either party can terminate at any time.

Moved by Council Member Albert and seconded by Mayor Carbone to approve the Professional Service Contract with Request for Service 20-01 with Baker Manock & Jensen PC Attorneys at Law to provide Watermaster legal services. 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.

Director Gaglioti joined the meeting at 3:36 pm

- IX. OLD BUSINESS:** Direct Staff regarding obtaining additional water to recharge the Basin in order to raise groundwater levels. Mr. Jaques reviewed the item transmittal. Director Riley felt protection of the Basin against seawater intrusion by procuring water to be injected (“banked”) and not transacted is an expensive process with no known financing method. Director Gaglioti felt financing was the least challenging of all Basin issues and finding water resources to support the population of the Peninsula the greatest. He stated there is a crisis in this 44,000-acre-foot (AF) over-drafted Basin, with up to 1,500AF/year needed to meet adjudication requirements of protective groundwater elevations, and even more to make the Basin whole.

David Stoldt made clear the Pure Water Monterey (PWM) Expansion Project sizing, like the Monterey Peninsula Water Supply Project desalination plant, also assumed Basin recharge of 700AF/year for 25 years (in MPWMD opinion any new project brought on line would need to meet the 700AF/year/25 years set-aside). This would result in 20,000AF being recharged to the Basin by the PWM expansion after 29 years, plus 17,500AF after 25 years by CAW in-lieu recharge, totaling 37,500AF achieved by the 30th year of recharge.

Director Riley emphasized Watermaster’s responsibility for finding funds to procure alternative water supplies. He asked the board at some point to rethink the calculations in the Replenishment Assessment Fund. Supervisor Adams expressed support of a more affordable regional alternative that by all indications would be desalination. Director Bruno surmised there will be State funding to protect endangered basins in like manner as funding for protection of endangered species. Director Cook pointed out that with inflation, the longer a supplemental supply is forestalled the more it will cost down the road. Moreover, although the requirements of the CDO would be met by an operational water supply project, protective groundwater levels and other supply challenges would still need to be addressed.

Council Member Albert stated that finding supplemental water supply is not within the authority of Watermaster but is for other jurisdictions to address. He asked for clarification on what staff is asking for direction on, whether it was for the board to make a recommendation to other jurisdictions on how to proceed. Mr. Jaques recommended the board direct him to pursue the bulleted items in his report to get a sense of what projects may have extra production capacity to generate supplemental supply, and whether the cost would be incremental or full unit.

Mr. Stoldt stated that paying incremental costs for production of desalinated water leaves the fixed financing and labor costs to the original CAW rate payers; he urged Watermaster to carefully consider paying full unit cost. Regarding Watermaster managing the Basin more forcefully – water injected and extracted – he reminded that the adjudication granted the District the authority to store water in the Basin for the benefit of the District separate from a Watermaster Storage and Recovery Agreement. The District has heretofore chosen to work with Watermaster’s agreement however has the right to store and recover water without an agreement.

Supervisor Adams felt additional board discussion was needed in a broader sense of long-term water supply, one step at a time, first with consensus on what it is the board is working toward putting forth. Mayor Oglesby noted the Court gave Watermaster the authority to develop a plan of injection and extraction that would prevent seawater intrusion, and the plan is what needs to be put forth. Director Cook felt the subject boils down to two key items: the need for the board to come to agreement on what the actual Natural Safe Yield (NSY) of the Basin is, and what the actual water supply needs are forecasted into the future. Council Member Albert stated the board needs to first establish what constitutes a healthy basin – completely full, just full enough to avoid seawater intrusion, etc. Council Member Gaglioti felt there *was* consensus that the Basin is not healthy and that preventive and protective measures should be taken. He inquired whether Watermaster has the authority to institute a production curtailment to protect the basin or whether that would require further legal proceeding. Mr. Jaques responded that Watermaster could reduce the NSY of the Basin and continue to ramp down production to achieve the lower figure. He suggested directing counsel to draft a legal opinion on what Watermaster can impose to protect the Basin.

Supervisor Adams requested Mr. Jaques work collaboratively with GSAs on mutual regional solutions to address seawater intrusion in the Marina and Ord Community, the 180/400 Foot Aquifer Subbasin, as well as to prevent intrusion in the Seaside Basin.

The board directed staff to research all of the bulleted items in the transmittal provided and report back at a subsequent board meeting. Mayor Oglesby supported researching all of the items if it culminated in a plan. Chair Bruno responded that the research would provide information on what proposed supplemental water supply projects are realistic for including in the development of a plan; Mayor Oglesby was satisfied.

X. INFORMATIONAL REPORTS:

- A. Technical Advisory Committee (TAC) minutes from August 12, 2020 meeting and November 18, 2020 meeting (draft version)
- B. Budget and Finance Committee draft minutes from November 5, 2020 meeting
- C. Watermaster report of production of the Seaside Basin through Water Year 2020 (October 1, 2019 – September 30, 2020)
- D. Replenishment Fund Assessment calculations and 2020 Standard Producer Assessments

XI. DIRECTOR'S REPORTS: None

XII. STAFF COMMENTS: AO Paxton introduced new legal counsel, Christopher Campbell, Baker Manock & Jensen. Staff currently had no significant agenda items to present at the January 6, 2021 board meeting and the board concurred that the meeting be canceled.

XIII. NEXT MEETING DATE: The next meeting of the Watermaster board is scheduled for Wednesday, February 3, 2021.

XIV. There being no further business, Chair Bruno adjourned the meeting at 4:25 p.m.

SEASIDE GROUNDWATER BASIN WATERMASTER

**ITEM VIII.A.
2/3/21**

TO: Board of Directors
 FROM: Laura Paxton, AO
 DATE: February 3, 2021
 SUBJECT: Summary of Payments made from November through December 2020

RECOMMENDATIONS:

Consider approving payment of bills submitted and authorized to be paid November - December 2020

Summary of Payments Made November 2020

Paxton Associates (Administrative Officer (AO))

October 26, 2020 through November 25, 2020	58.5	\$	5,850.00
--	------	----	-----------------

responded to telephone inquiries, e-mail, and other correspondence as needed regarding the Seaside Basin. Prepare agenda and packet for Budget/Finance Committee meeting; attend 11/5 meeting, prepare minutes. Receive instruction on WM website maintenance. Post production and finalize 2020WY production report. Prepare Replenishment Assessments & distribute. Prepare 2021 Notice of No Replenishment Water Available. Prepare new Declaration of Basin Total Useable Storage Space. Coordinate reporting data w/consultants for 2020 SIAR. Schedule & interview legal candidate. Provide information for 2020 Annual Report and arrange filing. Draft agenda and prepare reports for 12/2/20 board meeting. Prepare contracts for new legal counsel. 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)

November 1, 2020 through November 30, 2020	38		5,700.00
--	----	--	-----------------

Responded to emails, telephone inquiries, and other correspondence on a variety of Watermaster issues. Prepare for/attend 11/5/20 Budget/Finance Committee meeting. Prepare for/attend SVBGSA Advisory/TAC meetings & webinar 11/6, 11/19 & 11/23. Prep/attend MCWDGSA stakeholder meeting 11/17. PWM WQ & Ops Committee meeting 11/18. Prepare TAC 11/18 meeting agenda packet; attend TAC meeting; prepare minutes. Prepare 12/2 board meeting transmittals. Research why "Total Usable Storage" is so much higher in the 2019 BMAP than in the 2009. Interview with legal counsel candidate. Telecon with G. King re: Monterey Subbasin WQ issues and MCWDGSA. Prepare summary memos re: PWM and GSA meetings. Prepare 2020 Annual Report to Court.

Montgomery & Associates (Technical Consultant)

November 1, 2020 - November 30, 2020			
RFS 2020-01 General Hydrogeologic Consulting	1.0	200	200.00
Review well log and screen depth for SNG, PCA-W, and PCA-E wells; correspond with J. Lear on available data for SNG; and prepare email to B. Jaques on opinion that SNG well is sampled.			
RFS 2020-02 Seawater Intrusion Analysis Report	100.5	Various	15,325.00
			15,525.00

Compile water quality, level and production data; prepare hydrographs, chemographs, piper and stiff diagrams, groundwater elevation contours, and maps for report; prepare chemograph and piper appendices; add water quality and level data to the database; generate water quality and level data reports from database for appendix; prepare SIAR; senior review of SIAR; email TAC draft of SIAR to B. Jaques; prepare SIAR presentation to TAC; prepare for and present at November TAC meeting; prepare Board version of SIAR taking into account TAC and B. Jaques feedback; email to B. Jaques for Board

Martin B. Feeney, PG, CHg - Consulting Hydrogeologist	7.0	175		1,225.00
March 15, 2020 through November 4, 2020 RFS 2020-01		Reimbursements		8,068.35
Hydrogeologic consulting: Semi-Annual water level collection, induction logging. Repair and surface vaults (clean vaults, insert heli-coils to repair stripped threads, paint covers, new stainless steel bolts). Data processing and reporting.				9,293.35
Total for November 2020				\$ 36,368.35

Summary of Payments Made December 2020

Christopher Campbell, Baker Manock & Jensen PC (WM Legal Coun	0.1	200	\$	20.00
December 1, 2020 through December 31, 2020	3.6	300		1080.00
		Telephone/postage		16.70
Review correspondence re: appellate rulings. Review 12/2 board meeting agenda & attend partially. Email correspondence from CAW legal counsel. Issues briefing w/WM AO (no charge). Review 2020 Annual Report. Review of adjudication (no charge). Prepare legal opinion of WM responsibilities per Jaques request.				1,100.00

Paxton Associates (Administrative Officer (AO))

November 26, 2020 through December 25, 2020	40.0			4,000.00
responded to telephone inquiries, e-mail, and other correspondence as needed regarding the Seaside Basin. Review 2020 Annual Report and arrange filing. Continue preparing reports for 12/2/20 board meeting. Finalize contracts for new legal counsel; legal briefing with staff. Prepare & distribute Admin & Ops Funds assessment invoicing. Prep for/attend 12/2 board meeting; prepare minutes; review MPWMD Supply/Demand report to understand Stoldt comments for minutes. Provide Replenishment Assessment Fund information to Director Riley. Solicit 2021-2022 board appointments. Cancel 1/6/21 board meeting. 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				

Robert Jaques (Technical Program Manager)

December 1, 2020 through December 31, 2020	29.0			4,350.00
Responded to emails, telephone inquiries, and other correspondence on a variety of Watermaster issues. Prepare for/attend 12/2 board meeting; review MPWMD Supply/Demand report; follow up on board actions. Prep for/attend PWM WQ & Ops Committee meeting 12/17. Finalize 2020 Annual Report & SIAR to web. Prepare and send to MPWMD the Amendment to their RFS WQ monitoring of FO-10 well. Legal counsel briefing. Research PWM unit costs for water. Begin issues paper re: recharge water to Basin. Prepare summary memos re: PWM and GSA meetings.				

Montgomery & Associates (Technical Consultant)	1.0	220	220.00
December 1, 2020 through December 31, 2020	7.0	200	1,400.00
RFS 2020-01 General Hydrogeologic Consulting			
Review and share results regarding FO-10 shallow confirmation sample; email J. Lear regarding dataloggers; review potential datalogger sites; research background information regarding dedicated monitor well dataloggers for possible redeployment; calls with J. Lear and B. Jaques on history of dataloggers in Seaside Basin; prepare technical memorandum on dataloggers; and discuss datalogger technical memorandum with B. Jaques.			
RFS 2020-02 Seawater Intrusion Analysis Report	2.0	200	400.00
Prepare for and present results of SIAR at December Board meeting.			2,020.00
Total for December 2020			\$ 11,470.00
Grand Total November - December 2020			\$ 47,838.35

SEASIDE GROUNDWATER BASIN
WATERMASTER

TO: Board of Directors

FROM: Robert S. Jaques, Technical Program Manager

DATE: February 3, 2021

SUBJECT: Update on Water Quality Issues and Background Information About the Watermaster's Seawater Intrusion Response Plan (SIRP)

RECOMMENDATIONS:

It is recommended that the Board have staff reevaluate monitoring well FO-09 Shallow after more data has been obtained, in order to determine if the Contingency Plan actions in the SIRP should be implemented.

BACKGROUND:

At its December 2, 2020 meeting, under the Agenda Item pertaining to approval of the 2020 Seawater Intrusion Analysis Report (SIAR), information was provided to the Board regarding the detection of what may be a precursor to seawater intrusion in two monitoring wells experiencing increasing chloride concentrations. One of these is north of and outside of the Seaside Basin (monitoring well FO-10 Shallow), and the other is just inside the northern boundary of the Seaside Basin in the Northern Coastal Subarea (monitoring well FO-9 Shallow).

DISCUSSION:

Subsequent to the December 2 Board meeting the laboratory results from the January 5, 2021 resampling of FO-9 Shallow were received. Its chloride concentration was 92.2 mg/L, which is up from 90.4 mg/L from the last sample that was collected on September 28, 2020. The January sample data is included in the plot on the attached chart. The last 4 samples have shown increased chloride levels above each of the preceding samples.

Due to these increasing chloride levels, at its December 2 meeting the Board approved increasing the monitoring frequency of these two wells and installing a sampling pump in FO-10 Shallow. Previously, monitoring well FO-9 Shallow was being monitored twice per year and monitoring well FO-10 Shallow was being monitored once per year. As a result of the Board's action, both wells will now be monitored on a quarterly basis.

In 2009 the Watermaster adopted a *Seawater Intrusion Response Plan* (SIRP), dated February 2009. This document is posted on the Watermaster's website at this link:

The SIRP is the Watermaster's contingency plan for responding to seawater intrusion in the Seaside Groundwater Basin, if and when it occurs. The SIRP was developed as part of the Watermaster's implementation of the Seaside Groundwater Basin Monitoring and Management Program in 2006. This document was produced in accordance with requirements contained in the Adjudication Decision under which the Watermaster was created.

The SIRP details the indicators of seawater intrusion, and contains a list of recommended actions to be taken if seawater intrusion is observed. “Trigger” levels were established to determine when response measures should be taken, if seawater intrusion were to be detected in the Basin.

The attached excerpt from the SIRP describes the Contingency Plan Triggers. Also in that attachment is an evaluation of those triggers as currently applied to monitoring well FO-9 Shallow.

The SIRP calls for a series of actions to be taken if the Contingency Plan Triggers are met. As discussed in the second attachment, it appears that it is too early to determine if all of the triggers have been met in monitoring well FO-09 Shallow.

ATTACHMENTS:

1. Plot showing chloride levels in monitoring well FO-9 Shallow
2. Contingency Plan Trigger excerpt from the SIRP and evaluation of monitoring well FO-9 Shallow
3. Figure C-9 of Appendix C from the 2020 Seawater Intrusion Analysis Report (SIAR)

**SEASIDE GROUNDWATER BASIN
WATERMASTER**

TO: Board of Directors

FROM: Robert S. Jaques, Technical Program Manager

DATE: February 3, 2021

SUBJECT: Discuss Potential Installation of a New Monitoring Well Between Monitoring Well FO-9 and the Pumping Depression in the Northern Coastal Subarea, and Other Alternatives

RECOMMENDATIONS:

It is recommended that the Board provide direction to staff on:

- (1) Whether to solicit a scope of work and cost proposal to design and install a new monitoring well in the northern part of the Northern Coastal Subarea of the Seaside Basin.
- (2) Whether to solicit a scope of work and cost proposal from Montgomery & Associates to evaluate the movement of groundwater flowing southerly from the Monterey Subbasin toward the Seaside Basin.

BACKGROUND:

At its December 2, 2020 meeting, under the Agenda Item pertaining to approval of the 2020 Seawater Intrusion Analysis Report (SIAR), the Board directed staff to obtain a quote for installation of a shallow monitoring well in the area between the groundwater depression that exists to the southwest of the Bayonet/Blackhorse golf courses, and existing monitoring well FO-9, which is located to the north in the Northern Coastal Subarea of the Seaside Basin. The purpose of the new monitoring well would be to be able to obtain water quality data from this part of the Basin where there currently are no monitoring or production wells, and thus no ability to obtain water quality data. The additional data from a new monitoring well in this location might provide useful information about the potential movement of seawater intruded water which may be coming toward the Basin from the north.

DISCUSSION:

I contacted Martin Feeney, the Watermaster's hydrogeologic consultant who has managed the installation of all of the Watermaster's Sentinel Wells, and requested a cost estimate to install a new monitoring well into the shallow (Paso Robles) aquifer. He spoke with colleagues who had recently finished installing a similar monitoring well in Santa Cruz. Based on cost information from that project, he estimates the drilling contractor's cost to install a monitoring well would be approximately \$280/ ft. It is estimated that a well into the shallow (Paso Robles) aquifer would need to be between 650 and 900 feet deep, meaning the drilling contractor's cost would be between \$180,000 and \$250,000. It is estimated that the cost to design, provide geologic support, and manage the well installation work would be about \$35,000. So the estimated total installed cost would likely be in the range of \$200,000 to \$300,000.

As an alternative means of estimating the movement of groundwater coming toward the Basin from the north, I asked Montgomery & Associates (Georgina King) if the Watermaster's groundwater model could be used for that purpose. Her response notes are attached.

Installing a new monitoring well will be quite costly and will only provide data from the location where the well is installed. However, a new well would be useful in seeing how water quality in its location is changing over time. Using the groundwater model, or manually estimating groundwater flow patterns using available groundwater level data, would provide information on how groundwater is moving in a larger area, but would only be as accurate as the Model or the manual plotting can predict. The model is currently not capable of predicting changes in water quality, only the movement of groundwater. A supplemental software would need to be added to the model to predict water quality changes.

I will be meeting (via Zoom) with our hydrogeologic consultants before the February 3rd Board meeting to discuss the topics covered in this Agenda transmittal. At the February 3rd meeting I will provide an oral update on the outcome of that meeting.

ATTACHMENTS:

Information from Montgomery & Associates about using the Groundwater Model to estimate groundwater movement

**SEASIDE GROUNDWATER BASIN
WATERMASTER**

TO: Board of Directors

FROM: Robert S. Jaques, Technical Program Manager

DATE: February 3, 2021

SUBJECT: Direct Staff Regarding Obtaining Additional Water to Recharge the Basin to Raise Groundwater Levels

RECOMMENDATIONS:

It is recommended that the Board direct staff on what additional information it would like staff to prepare, and any actions it would like staff to take, to assist the Board in developing a plan to obtain recharge water for the Basin.

BACKGROUND:

At its December 2, 2020 meeting the Board discussed the topic of replenishment water for the Basin. Following considerable discussion of this topic the Board directed staff to research the items that were discussed in the agenda transmittal for this item, and to report back at a subsequent board meeting.

Several specific suggestions were made by Board members, including:

- Developing a plan for injection and extraction of water that would recharge the Basin to prevent seawater intrusion
- Providing information on what proposed supplemental water supply projects are realistic for including in the development of such a plan
- Working collaboratively with Groundwater Sustainability Agencies on mutual regional solutions to address seawater intrusion in the Marina and Ord Community, the 180/400 Foot Aquifer Subbasin, as well as to prevent intrusion in the Seaside Basin
- Having further Board discussion on the broader issue of long-term water supply, one step at a time, first with consensus on what it is the Board is working toward
- Establishing what constitutes a healthy Basin in terms of groundwater levels (fullness of the Basin)

DISCUSSION:

On January 15, 2021 I met (via Zoom) with representatives of the Monterey Peninsula Water Management District (Dave Stoldt), M1W (Mike McCullough), Cal Am (Chris Cook, Ian Crooks, Tim O'Halloran) to discuss the topic of recharging the Basin to achieve groundwater levels that would be protective against seawater intrusion. We discussed several topics, including:

- Recharge water would not be sold to users, it would be left in the Basin to benefit all users of the Basin and to help ensure the long-term beneficial use of the Basin. Similar to other water management and water resource protection activities that are already being performed and paid for by users, does Cal Am, MPWMD, or M1W have any way of recouping such costs from their rate payers?

M1W and Cal Am felt they did not have that ability, but MPWMD felt doing so would be within their mission. Mr. Stoldt felt it would be a complicated matter to determine who should pay for the recharge water. He cautioned that his Board would first need to be in agreement that purchasing water to

recharge the Basin would be an appropriate cost for which landowners within its jurisdictional area should pay.

- The Watermaster has already explored with the State their various grant and loan programs to see if there is any funding available through them to purchase water to recharge the Basin. The State responded that they do not have any funding programs to pay for the purchase of recharge water. Did the representatives have any suggestions on sources of money to pay the cost of producing the recharge water?

No one was aware of any State or Federal funding programs that could help with the cost to purchase recharge water.

Following considerable discussion, there was consensus that the Watermaster Board should initially discuss and come to agreement on the broader issues pertaining to obtaining water to recharge the Basin, before getting into details about costs, which projects would be best to provide the water, etc. The broader issues would include what the Watermaster's authorities and obligations are under the Adjudication Decision, how much water is coming into the Basin, how much is going out, how much would be needed to protect the Basin against seawater intrusion, and potential sources of recharge water.

Following the collective input from these representatives, and from the Watermaster Board's discussion at its December 2 meeting, I prepared the attached issue paper titled "*Information on Issues Associated with Obtaining Additional Water to Recharge the Basin in Order to Raise Groundwater Levels.*" This issue paper is intended to provide information for the Board's use in its ongoing discussion of the topic of recharging the Basin to protect it against seawater intrusion.

ATTACHMENTS:

Information on Issues Associated with Obtaining Additional Water to Recharge the Basin in Order to Raise Groundwater Levels

SEASIDE GROUNDWATER BASIN WATERMASTER
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	533.22	494.47	358.49	1,386.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,386.18	1,466.02	5.48	1,471.50
	Luzern	62.71	59.24	23.86	145.81				0.00				0.00				0.00	145.81			
	Ord Grove	122.95	117.17	121.44	361.56				0.00				0.00				0.00	361.56			
	Paralta	108.31	101.89	64.52	274.73				0.00				0.00				0.00	274.73			
	Playa	32.31	27.38	8.13	67.83				0.00				0.00				0.00	67.83			
	Plumas	18.83	23.76	7.88	50.47				0.00				0.00				0.00	50.47			
	Santa Margarita	188.11	165.03	132.65	485.79				0.00				0.00				0.00	485.79			
	ASR Recovery	0.00							0.00				0.00				0.00				
City of Seaside (Municipal)	SPA	13.48	13.93	13.37	40.79				0.00				0.00				0.00	40.79	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				0.00				0.00				0.00	76.54	540.00		540.00
Sand City	APA	0.15	0.14	0.06	0.35				0.00				0.00				0.00	0.35	9.00		9.00
SNG (Security National Guaranty)	APA	NOT REPORTED			0.00				0.00				0.00				0.00	0.00	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	6.00		6.00
Mission Memorial (Alderwoods)	APA	3.17	3.07	3.91	10.15				0.00				0.00				0.00	10.15	31.00		31.00
Coastal Subareas Totals					1,514.01				0.00				0.00				0.00	1,514.01	2,356.00	681.48	3,037.47
Laguna Seca Subarea																					
CAW - Laguna Seca Subarea	SPA	34.97	25.48	13.11	73.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	73.56	0.00		0.00
	Ryan Ranch Unit	5.02	3.56	0.99	9.57				0.00				0.00				0.00	9.57			
	Hidden Hills Unit	13.86	10.44	9.10	33.39				0.00				0.00				0.00	33.39			
	Bishop Unit 3	8.20	5.84	1.51	15.55				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	15.05			
The Club at Pasadera	APA	15.90	6.30	2.00	24.20				0.00				0.00				0.00	24.20	251.00		251.00
Laguna Seca Golf Resort (Bishop)	APA	18.28	1.54	0.00	19.82				0.00				0.00				0.00	19.82	320.00		320.00
York School	APA	1.07	1.63	0.93	3.63				0.00				0.00				0.00	3.63	32.00		32.00
Laguna Seca County Park	APA	1.70	0.24	0.10	2.05				0.00				0.00				0.00	2.05	41.00		41.00
Laguna Seca Subarea Totals					123.26				0.00				0.00				0.00	123.26	644.00	0.00	644.00
Total Production by WM Producers					1,637.27				0.00				0.00				0.00	1,637.27	3,000.00	681.48	3,681.47
																		Annual Production from APA Producers	136.74	1,379.00	
																		Annual Production from SPA Producers	1,500.53	2,302.47	

																		Previous Balance	Total	
CAW / MPWMD ASR (Carmel River Basin source water)																				
Injection	0.00	0.00	0.00	0.00	0.00				0.00				0.00				0.00	0.00		
(Recovery)	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	0.00				0.00				0.00				0.00	0.00	735.49	735.49
Pure Water Monterey (PWM) Injection and Cal-Am Recovery																				
Injection Operating Reserve	1053.27	(109.88)	(77.01)	73.77	940.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	940.15	0.0	940.15
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	0.00	0.00	0.0	0.00
Ops Reserve to/(from) Storage	109.88	77.01	(73.77)	113.12	113.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	113.12	0.0	113.12
Storage	190.12	222.99	173.77	586.88	586.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	586.88	0.0	586.88
Storage + to/(from) Ops Reserve	300.00	300.00	100.00	700.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	700.00	0.0	700.00
(Recovery)	(300.00)	(300.00)	(100.00)	(700.00)	(700.00)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(700.00)	0.0	(700.00)

- Notes:
- 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.
 - "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).
 - Values shown in the table are based on reports to the Watermaster received by January 15, 2021.
 - 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.
 - "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).
 - Any minor discrepancies in totals are attributable to rounding.
 - APA = Alternative Producer Allocation; SPA = Standard Producer Allocation; CAW = California American Water.
 - 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.