

SEASIDE GROUNDWATER BASIN WATERMASTER

Wednesday, January 2, 2019 – 2:00pm

**Monterey One Water Board Room, 5 Harris Court, Building “D”
Ryan Ranch, Monterey, California**

Watermaster Board

- Coastal Subarea Landowner – Director Paul Bruno
- City of Seaside – To be appointed
- California American Water – Director Christopher Cook
- City of Sand City – Mayor Mary Ann Carbone
- Monterey Peninsula Water Management District – Director Jeanne Byrne
- Laguna Seca Subarea Landowner – Director Bob Costa
- City of Monterey – Councilmember Dan Albert
- City of Del Rey Oaks – To be appointed
- Monterey County/Monterey County Water Resources Agency – Supervisor Mary Adams, District 5

I. CALL TO ORDER

II. ROLL CALL

III. ELECTION AND APPOINTMENT OF CERTAIN OFFICERS

- A. Vice Chairperson—(Must be member of the Board of Directors)
- B. Election of Treasurer / Budget and Finance Committee Chair —(Need not be a member of the Board)3

IV. PUBLIC COMMUNICATIONS

Oral communications is 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 would use the microphone and state their names. Oral communications are now open.

V. REVIEW OF AGENDA

If there are any items that arose after the 72-hour posting deadline, a vote may be taken to add the item to the agenda pursuant to the requirements of Government Code Section 54954.2(b). (A 2/3-majority vote is required).

VI. MINUTES - Approve Minutes of Regular Board meeting held October 3, 2018.....5

VII. CONSENT CALENDAR

- A. Consider Approving the Board and TAC schedule of meetings for 2019.....9
- B. Consider approval of Summary for Payments made during September - November 2018 totaling **\$115,033.12** 11
- C. Consider Approving Fiscal Year 2018 Financial Reports through November 31, 2018..... 15
- D. Consider Approving the Seawater Intrusion Analysis Report (SIAR for 2018). The Executive Summary is included in the Board agenda packet. The complete SIAR is posted on the Watermaster website at <http://www.seasidebasinwatermaster.org> 19
- E. Consider Approving the following Professional Service Contracts for Fiscal Year 2019:.....27

1. Two Contracts with Montgomery & Associates, Inc. — one for \$13,000 for providing ongoing and as-requested general hydrogeologic consulting services during the year and the second for \$21,100 to prepare the Seawater Intrusion Analysis Report (SIAR) for 2019.....29
2. Two Contracts with MPWMD—one for \$50,024 and the second one for \$3,915, both pertaining to monitoring and other work on the Seaside Groundwater Basin Monitoring and Management Program (M&MP) for 2019.....37
3. Two Contracts with Martin Feeney—one for \$4,000 to provide on-call/as-requested hydrogeologic consulting services and one for \$17,540.56 to perform induction logging of the Sentinel Wells for 201951
4. One Contract with Todd Groundwater—for \$4,000 to provide on-call/as-needed hydrogeologic consulting services.....57
5. One Contract with Brownstein Hyatt Farber Schreck, LLP (Russ McGlothlin, Esq.)—for \$25,000 to provide legal services to attend if necessary a status conference hearing; assist with filing the Watermaster Annual Report to Court by January 15, 2019 as may be needed; and provide miscellaneous legal consultation as may be required by Watermaster59

VIII. ORAL PRESENTATION - None Scheduled

IX. NEW BUSINESS

- A. Discussion/Consider Adopting for Water Year 2019 a Declaration regarding the Unavailability of Artificial Replenishment Water (Water Year 2019 Production Allocations and Basin Storage Allocations attached)63
- B. Discussion/Consider Approving Agreement with Cal Am and MPWMD for Storage and Recovery of Water from the Pure Water Monterey Project67
- C. Discussion/Consider Approving the Watermaster Annual Report for Water Year 2018. Attached is the body of the Draft 2018 Annual Report, reflecting input from the TAC and California American legal counsel. The complete Draft version is posted on the Watermaster website at <http://www.seasidebasinwatermaster.org>95

X. OLD BUSINESS - None

XI. INFORMATIONAL REPORTS (No Action Required)

- A. Technical Advisory Committee (TAC) minutes from meeting held November 21, 2018 and draft minutes from the meeting held December 12, 2018..... 121
- B. Watermaster report of production of the Seaside Basin through Water Year 2018 (October 1, 2017 – September 30, 2018)..... 139
- C. Replenishment Fund Assessment calculations and 2018 Standard Producer Assessments 141
- D. Correspondence regarding SNG partial conversion of Alternative to Standard Production 143

XII. DIRECTOR’S REPORTS

XIII. STAFF COMMENTS – No judge yet appointed to the Watermaster case

XIV. NEXT REGULAR MEETING DATE – Wednesday, February 6, 2019 - 2:00 P.M.

XV. 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 December 21, 2018 per the Ralph M. Brown Act, Government Code Section 54954.2(a).

SEASIDE GROUNDWATER BASIN
WATERMASTER

TO: Board of Directors
FROM: Laura Dadiw, Administrative Officer
DATE: January 2, 2019
SUBJECT: Confirmation of Watermaster Board Chair and Vice Chair and Election of Treasurer / Budget and Finance Committee Chair

RECOMMENDATIONS: Consider electing Kimberly Drabner, City of Seaside Finance Director as Treasurer to the Watermaster Board and appointing her as Chair of the Budget and Finance Committee

Election of 2019 Watermaster Board officers will be conducted at the regular board meeting following submission by all parties of their board representative appointments.

BACKGROUND:

Each year the Watermaster board elects its officers, as was done at the February 7, 2018 regular board meeting. A motion was made to elect Mayor Rubio as Chairperson; Director Bruno as Vice Chair; Watermaster Administrative Officer Laura Dadiw as Secretary; and Daphne Hodgson, City of Seaside, as Treasurer – *contingent upon Mayor Rubio's acceptance to continue as board chair, otherwise:*

Director Bruno would serve as Chair; Director Costa as Vice Chair; Watermaster Administrator Laura Dadiw as Secretary; and Daphne Hodgson, City of Seaside, as Treasurer.

DISCUSSION:

Historically, the City of Seaside Finance Director has served as Watermaster Treasurer and Chair of the Budget and Finance Committee. Daphne Hodgson retired from the City of Seaside in 2018. Kimberly Drabner is now the Finance Director for the City of Seaside and has expressed her willingness to serve as Watermaster Treasurer and Budget and Finance Committee Chair.

FISCAL IMPACTS:

None

ATTACHMENTS:

None

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

Monterey One Water Board Room, 5 Harris Court, Building “D”
Ryan Ranch, Monterey, California
October 3, 2018

I. CALL TO ORDER – Chair Rubio called the meeting to order at 2:00 p.m.

II. ROLL CALL

City of Seaside – Mayor Ralph Rubio – Chair
Coastal Subarea Landowner – Director Paul Bruno - Vice Chair
City of Del Rey Oaks – Mayor Jerry Edelen
City of Sand City – Mayor Mary Ann Carbone
California American Water (CAW) –Nina Miller (Alternate)
Laguna Seca Subarea Landowner – Director Bob Costa
City of Monterey – Council Member Dan Albert
Monterey Peninsula Water Management District (MPWMD) – Director Jeanne Byrne
Monterey County/Monterey County Water Resources Agency – Supervisor Mary Adams

Absent: None

Others Present

Watermaster Technical Program Manager – Robert Jaques
Watermaster Administrative Officer – Laura Dadiw
Lori Girard, CAW Legal Counsel
Bob Holden, Monterey One Water (MIW)
Edwin Lin, Todd Groundwater
Maureen Hamilton, MPWMD
Jonathan Lear, MPWMD
Don Freeman, City of Seaside City Attorney

Notice of Appointment of California American Water Member – Christopher Cook (alternate
Nina Miller attending)

III. PUBLIC COMMUNICATIONS: None

IV. REVIEW OF AGENDA: There were no requested changes to the agenda.

V. APPROVAL OF MINUTES

It was moved by Council Member Albert, seconded by Mayor Edelen and unanimously carried to approve as presented the minutes of the Regular Board meeting held August 1, 2018.

VI. CONSENT CALENDAR

- A.** Consider approving Summary of Payments July – August 2018 totaling \$19,704.70
- B.** Consider Approving Fiscal Year 2018 Financial Reports through August 31, 2018

Moved by Mayor Edelen, seconded by Council Member Albert and unanimously carried to approve the consent calendar as presented.

VII. ORAL PRESENTATION: None Scheduled

VIII. NEW BUSINESS:

A. COMMITTEE REPORTS

1. BUDGET & FINANCE / TECHNICAL ADVISORY COMMITTEE

- a. 2019 Annual Budgets January 1, 2019 through December 31, 2019

Moved by Director Bruno, seconded by Supervisor Adams and unanimously carried to approve the 2019 Administrative Fund Budget as presented.

Moved by Director Bruno, seconded by Mayor Edelen and unanimously carried to approve, as presented, the 2019 Monitoring and Management Work Plan; Operations Fund Budget; and Capital Fund Budget (unfunded).

- b. Replenishment Assessment Unit Cost for Water Year October 1, 2018 through September 30, 2019

Moved by Mayor Carbone, seconded by Council Member Albert and unanimously carried to approve the Water Year October 1, 2018 through September 30, 2019 Replenishment Assessment Unit Cost of \$2,872 for Natural Safe Yield Overproduction and \$718 (25% of \$2,872) for Operating Yield Overproduction.

- c. Increase in Watermaster Technical Program Manager Robert Jaques Hourly Rate

Moved by Council Member Albert, seconded by Director Byrne and unanimously carried to approve an increase in the Watermaster Technical Program Manager hourly rate to \$150/hour effective October 1, 2018.

Director Costa directed the Budget and Finance Committee establish a mechanism to routinely increase rates over time.

- d. Amendment No. 1 to Brownstein, Hyatt, Farber, Schreck (BHFS) (Russ McGlothlin) RFS No. 2018-01.

Moved by Council Member Albert, seconded by Supervisor Adams and unanimously carried to approve Amendment No. 1 to Brownstein, Hyatt, Farber, Schreck RFS No. 2018-01 raising the total authorized cost of the RFS by \$17,000 to \$24,000.

Ms. Girard, CAW legal counsel requested Watermaster staff contact her regarding legal issues that arise prior to engaging Mr. McGlothlin.

2. TECHNICAL ADVISORY COMMITTEE

- a. Application for Storage and Recovery of Pure Water Monterey Project Water
*(full application is available for viewing at
<http://seasidebasinwatermaster.org/Other/2018.08.16%20SEASIDE%20Notice%20of%20Lodging.pdf>)*

Moved by Director Byrne, seconded by Mayor Carbone and carried, with Director Bruno recusing himself, to approve the application submitted by California American Water and co-applicant Monterey Peninsula Water Management District to store Non-native water in, and subsequently recover that stored water from, the Seaside Groundwater Basin.

IX. OLD BUSINESS: None

X. INFORMATIONAL REPORTS:

- A. Watermaster report of production of the Seaside Basin Water Year 2018 (October 1, 2017 – September 30, 2018) thru June 30, 2018
- B. Notice of Lodging of Correspondence Received Re: Pure Water Monterey Project *(is available for viewing at <http://seasidebasinwatermaster.org/Other/2018.08.16%20SEASIDE%20Notice%20of%20Lodging.pdf>)*

XI. DIRECTOR'S REPORTS: Mayor Edelen requested Watermaster prepare a proclamation or plaque for past board director Eric Sabolsice who represented CAW honorably for many years.

XII. STAFF COMMENTS: Ms. Dadiw advised that there has been no notice from Superior Court of a new judicial assignment to the Watermaster case.

XIII. NEXT MEETING DATE: The next meeting of the Watermaster board will be held Wednesday, November 7, 2018 at the Monterey One Water board room at 5 Harris Court, Building "D" on Ryan Ranch in Monterey at 2:00 p.m.

XIV. There being no further business, Chair Rubio adjourned the meeting at 2:26 p.m.

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**SEASIDE GROUNDWATER BASIN
WATERMASTER**

**2019
SCHEDULE OF REGULAR MEETINGS**

	<u>BOARD</u>	<u>TAC</u>
JANUARY	2	9
FEBRUARY	6	13
MARCH	6	13
APRIL	3	NONE
MAY	1	8
JUNE	5	12
JULY	3	10
AUGUST	7	14
SEPTEMBER	4	11
OCTOBER	2	NONE
NOVEMBER	6	20
DECEMBER	4	11

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SEASIDE GROUNDWATER BASIN WATERMASTER

TO: Board of Directors
 FROM: Laura Dadiw, AO
 DATE: January 2, 2019
 SUBJECT: Summary of Payments made during the months of September - November 2018

RECOMMENDATIONS:

Consider approving payment of bills submitted and authorized to be paid September-November 2018.

Summary of Payments Made September 2018

Dadiw Associates (Administrative Officer (AO))

August 26, 2018 through September 25, 2018	20	\$ 2,000.00
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Responded to telephone inquiries, e-mail, and other correspondence as needed regarding the Seaside Basin. Prepared invoices for reimb from MPWMD for modeling. Prepared agenda and packet materials for October board meeting and completed minutes of August board meeting; routinely picked up mail from PO Box; reconciled accounts to the City of Seaside Watermaster accounts; prepared financial reports; processed invoices

Brownstein, Hyatt, Farber, Schreck (Russ McGlothlin, Esq.)

August 2018-RFS 2018-01 Miscellaneous legal consultation Moore PRA request matter; Notice of Lodging	7.7	3,240.00
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Montgomery & Associates (Technical Consultant)

July - August 2018-RFS 2018-03 Update Basin Management Action Plan	73	10,529.85
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Monterey Peninsula Water Management District

January - June 2018		
RFS 2018-01 Tasks within the Monitoring and Mangement Plan	128.0	12,808.00
Direct Costs-WQ sample equipment, lab, induction logging, retrofit, etc.		2,820.00
		\$ 15,628.00
January - June 2018		
RFS 2018-02 Water level and quality data from specific wells (pass through cost)	18.0	1,116.00

Total for September 2018	\$ 32,513.85
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Summary of Payments Made October 2018

Dadiw Associates (Administrative Officer (AO))

September 26, 2018 through October 25, 2018	49	\$ 4,900.00
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Responded to telephone inquiries, e-mail, and other correspondence as needed regarding the Seaside Basin. Gathered and posted water production and water level data; followed up w/Mission Memorial on non-payment of collection fees. Prepared agenda and packet for October board meeting; prepare for/attend assistance meeting w/Supervisor Adams; 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.

Brownstein, Hyatt, Farber, Schreck (Russ McGlothlin, Esq.)

September 2018-RFS 2018-01 Miscellaneous legal consultation		
Moore PRA records request matter & associated letters & filings	0.6	270.00
Postage and filing fees		3.60
		\$ 273.60

Robert Jaques (Technical Program Manager)

September 4, 2018 through October 30, 2018	4.5 @ \$100	450.00
	48.5 @ \$150	7,275.00
		7,725.00

Responded to emails, telephone inquiries, and other correspondence on a variety of Watermaster issues; prepared TAC agenda packet. Prepared for and attended October board meeting. Began preparation of 2018 Annual Report to Court.

Montgomery & Associates (Technical Consultant)

September 2018-RFS 2018-03 Update Basin Management Action Plan	14.5	2,565.00
October 2018-RFS 2018-02 Seawater Intrusion Analysis Report	40	4,952.50
October 2018-RFS 2018-03 Update Basin Management Action Plan	110	20,117.50

Total for October 2018	\$ 40,533.60
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Summary of Payments Made November 2018

Dadiw Associates (Administrative Officer (AO))

October 26, 2018 through November 25, 2018	39.5	\$ 3,950.00
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Responded to telephone inquiries, e-mail, and other correspondence as needed regarding the Seaside Basin. CAW revised water production data; followed up w/Mission Memorial on non-payment of collection fees. Cancelled December board meeting. Cap on carryover issue w/DBO & Graniterock. Production data to tech consultant. Review storage agmt. Calculate production/overproduction. 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.

Brownstein, Hyatt, Farber, Schreck (Russ McGlothlin, Esq.)
 October 2018-RFS 2018-01 Miscellaneous legal consultation
 Moore PRA records request matter & associated letters & filings 0.5 225.00
 Postage and filing fees 6.00 \$ 231.00

Robert Jaques (Technical Program Manager)
 October 31, 2018 through November 30, 2018 45.5 6,825.00
 Responded to emails, telephone inquiries, and other correspondence on a variety of
 Watermaster issues; prepared TAC agenda packet and attended TAC meeting on
 November and prepared minutes. Prepared for and attended SVBGSA meeting.
 Preparation of 2018 Annual Report to Court. Storage agreement preparation;
 coordinate BMAP update; Review 2018 SIAR.

Montgomery & Associates (Technical Consultant)
 November 2018-RFS 2018-03 Update Basin Management Action
 Plan 55.5 10,920.00
 November 2018-RFS 2018-02 Seawater Intrusion Analysis Report 62.5 11,325.00

Martin B. Feeney (Consulting Hydrogeologist)
 June 6, 2018 through September 19, 2018
 Consulting (office & field) 18.00 3,090.00
 Induction Logging & 10% markup 5,644.67 8,734.67

Total for November 2018 \$ 41,985.67

Grand Total September - November 2018 \$ 115,033.12

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Seaside Groundwater Basin Watermaster
Budget vs. Actual Administrative Fund
 Fiscal Year (January 1 - December 31, 2018)
 Balance through November 30, 2018

	<u>2018 Adopted Revised Budget</u>	<u>Contract Amount</u>	<u>Year to Date Revenue / Expenses</u>
Available Balances & Assessments			
Dedicated Reserve	-		-
FY (Rollover)	42,000.00		32,782.94
Admin Assessments	40,000.00		40,000.00
Available	<u>82,000.00</u>		<u>72,782.94</u>
Expenses			
Contract Staff	40,000.00	40,000.00	34,300.00
Legal Advisor	24,000.00	24,000.00	19,380.00
Filing fees and postage			232.42
Total Expenses	<u>64,000.00</u>	<u>64,000.00</u>	<u>53,912.42</u>
Total Available	18,000.00		
Dedicated Reserve	<u>18,000.00</u>		<u>18,000.00</u>
Net Available	<u><u>-</u></u>		<u><u>870.52</u></u>

Seaside Groundwater Basin Watermaster
Budget vs. Actual Monitoring & Management - Operations Fund
 Fiscal Year (January 1 - December 31, 2018)
 Balance through November 30, 2018

	<u>2018 Adopted Budget</u>	<u>Contract Encumbrance</u>	<u>Year to Date Revenue/Expenses</u>
Available Balances & Assessments			
Operations Fund Assessment	\$ 192,288.00	\$ -	\$ 192,288.00
Pass Through 2018	-	3,915.00	1,957.50
Cost Share Reimbursement	77,185.00	77,185.00	27,178.75
FY 2017 Rollover	100,000.00	-	218,732.19
Total Available	\$ 369,473.00	\$ 81,100.00	\$ 440,156.44
Appropriations & Expenses			
GENERAL			
Technical Project Manager	\$ 50,000.00	\$ 50,000.00	\$ 41,300.00
Contingency @ 10% (not including TPM)	29,043.00	-	-
Total General	\$ 79,043.00	\$ 50,000.00	\$ 41,300.00
CONSULTANTS (Montgomery; Todd Groundwater; Web Site Database)			
Program Administration	\$ 16,900.00	\$ 7,400.00	\$ 1,218.75
Production/Lvl/Qlty Monitoring	2,400.00	-	-
Groundwater Modeling RFS 2018-03	54,370.00	54,370.00	27,686.10
Geochemical Modeling	50,000.00	-	-
Basin Management Action Plan 2018-04	65,260.00	45,260.00	44,077.50
Seawater Intrusion Analysis Report 2018-02	20,890.00	20,890.00	16,277.50
Total Consultants	\$ 209,820.00	\$ 127,920.00	\$ 89,259.85
MPWMD			
Production/Lvl/Qlty Monitoring	\$ 48,832.00	48,832.00	15,628.00
Pass Through 2018	-	3,915.00	1,116.00
Basin Management	-	-	-
Seawater Intrusion	1,192.00	1,192.00	-
Direct Costs	-	-	-
Total MPWMD	\$ 50,024.00	\$ 53,939.00	\$ 16,744.00
CONTRACTOR (Martin Feeney)			
Production/Lvl/Qlty Monitoring	\$ 30,586.00	\$ 30,585.56	\$ 18,969.34
Total Appropriations & Expenses	\$ 369,473.00	\$ 262,444.56	\$ 166,273.19
Total Available	-		273,883.25

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November 28, 2018

Seaside Groundwater Basin 2018 Seawater Intrusion Analysis Report

SEASIDE GROUNDWATER BASIN WATERMASTER
MONTEREY COUNTY, CALIFORNIA

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Appendix B. Chloride and Sodium/Chloride Molar Ratio Graphs

1 EXECUTIVE SUMMARY

This report fulfills part of the annual reporting requirements contained in the Seaside Groundwater Basin Adjudication (California American Water v. City of Seaside, Monterey County Superior Court, Case Number M66343). The annual report addresses the potential for, and extent of, seawater intrusion in the Seaside Groundwater Basin.

Seawater intrusion may occur in basic hydrogeologic conditions as a wedge beneath fresh groundwater, or in more complex hydrogeology with various intrusion interfaces among the different aquifers. Continued pumping in excess of recharge and fresh water inflows, coastal groundwater levels well below sea level, and ongoing seawater intrusion in the nearby Salinas Valley all suggest that seawater intrusion could occur in the Seaside Groundwater Basin.

Seawater intrusion is typically identified through regular chemical analyses of groundwater which can identify geochemical changes in response to seawater intrusion. No single analysis definitively identifies seawater intrusion, however by looking at various analyses we can ascertain when fresh groundwater mixes with seawater. At low chloride concentrations, it is often difficult to identify incipient seawater intrusion. This is due to the natural variation in fresh water chemistry at chloride concentrations below 1,000 milligrams per liter (mg/L). Mixing trends between groundwater and seawater are more easily defined when chloride concentrations exceed 1,000 mg/L. Common geochemical indicators of seawater intrusion are cation and anion ratios, chloride trends, sodium/chloride ratios, and electric induction logging.

Based on an evaluation of geochemical indicators for Water Year 2018 and prior, no seawater intrusion has historically been or is currently observed in existing monitoring and production wells in the Seaside Groundwater Basin.

Data which indicate that seawater intrusion is not occurring are described in the bulleted items below:

- All groundwater samples for Water Year 2018 from depth-discreet monitoring wells plot generally in a single cluster on Piper diagrams, with no water chemistry changes towards seawater.
- Groundwater quality plot on Piper diagrams in some of the production wells is different than the water quality in the monitoring wells. This may be a result of mixed water quality from both shallow and deep zones in which these wells are

perforated. None of the production wells' groundwater qualities are indicative of seawater intrusion.

- None of the Stiff diagrams for monitoring and production wells show the characteristic chloride spike that typically indicates seawater intrusion in Stiff diagrams.
- Overall, chloride concentration trends were stable for most monitoring wells, with no increases greater than 10 mg/L.
- Sodium/chloride molar ratios in the monitoring wells remained constant or increased over the past year.
- Maps of chloride concentrations for the shallow aquifer do not show chlorides increasing towards the coast. The deep aquifer maps show that higher chloride concentrations are limited to coastal monitoring wells PCA-West Deep and MSC Deep, but these are not indicative of seawater intrusion.
- Induction logging data at the coastal Sentinel Wells do not show large changes over time that are indicative of seawater intrusion.

The following groundwater level and production data suggest that conditions in the basin continue to provide a potential for seawater intrusion:

- All deep groundwater in the Northern Coastal subarea is below sea level. The 2nd quarter (winter/spring) deep aquifer coastal groundwater levels are more than 12 feet below sea level and the 4th quarter (summer/fall) levels are more than 25 feet below sea level. These are similar to the historic low levels observed in Water Year 2016 at the end of the recent drought.
- Groundwater levels remain below protective elevations in all deep target monitoring wells (MSC deep, PCA-W, and sentinel well SBWM-3). Currently, only one of the three shallow wells' groundwater levels are above protective elevations: CDM-MW4. Since 1997, PCA-W shallow groundwater levels has been above protective elevations but has just fallen below its protective elevation this fall; probably due to increased shallow aquifer production that started in 2015. As observed historically, MSC shallow groundwater levels remains below protective elevations.

Due to its distance from the coast, seawater intrusion is not an issue of concern in the Laguna Seca subarea. However, groundwater levels in the eastern Laguna Seca subarea have historically declined at rates of 0.6 feet per year in the shallow aquifers, and up to

four feet per year in the deep aquifers. These declines have occurred since 2001, despite triennial reductions in allowable pumping. The cause of the declines is due in part to the Natural Safe Yield of the subarea being too high and in part due to the influence of wells to the east of the Seaside Basin. Since 2014, however, the rate of decline is less and now appears close to stabilizing.

Native groundwater production in the Seaside Groundwater Basin for Water Year 2018 was 3,363.4 acre-feet, which is 314 acre-feet more than Water Year 2017. This amount is 3.4 acre-feet more than the Decision-ordered Operating Yield of 3,360 acre-feet per year that is required between October 1, 2017 and September 30, 2020.

Based on the findings of this report, there are no specific recommendations that relate to the collection of groundwater data from existing wells used in the seawater intrusion analysis, other than to continue analyzing and reporting on groundwater quality, groundwater levels, and production each year. However, as projects that recharge and recover water into the Basin are implemented, groundwater levels and thus groundwater flow directions will change, and possibly groundwater quality too. It is important that data from new monitoring wells are reported to the Watermaster and taken into consideration in future SIARs.

SEASIDE GROUNDWATER BASIN
WATERMASTER

TO: Board of Directors

FROM: Robert S. Jaques, Technical Program Manager

DATE: January 2, 2019

SUBJECT: Consider Approving the Following Professional Services Contracts for Fiscal Year 2019:

- 1) Two Contracts with Montgomery & Associates (formerly HydroMetrics) — one for \$13,000 for providing on-call/as-requested hydrogeologic consulting services and for providing assistance in preparing documents that the Watermaster will need to submit to fulfill its reporting requirements under the Sustainable Groundwater Management Act, and the second for \$21,100.00 to prepare the Seawater Intrusion Analysis Report (SIAR) for 2019.
- 2) Two Contracts with MPWMD—one for \$50,024 and the second one for \$3,915, both pertaining to monitoring and other work on the Seaside Groundwater Basin Management and Monitoring Program (M&MP).
- 3) Two Contracts with Martin Feeney - one for \$4,000 to provide on-call/as-requested hydrogeologic consulting services and one for \$17,540.56 to perform induction logging of the Sentinel Wells.
- 4) One Contract with Todd Groundwater – for \$4,000 to provide on-call/as-requested hydrogeologic consulting services.
- 5) One Contract with Brownstein Hyatt Farber Schreck, LLP (Russ McGlothlin, Esq.)—for \$25,000 to provide legal services to attend, if necessary, a status conference hearing; assist with filing the Watermaster Annual Report to Court by January 15, 2019 as may be needed; and provide miscellaneous legal consultation as may be required by Watermaster.

RECOMMENDATIONS:

It is recommended that the Board approve the attached RFSs No. 2019-01 and 2019-02 with Montgomery & Associates, RFSs No. 2019-01 and 2019-02 with MPWMD, RFSs No. 2019-01 and 2019-02 with Martin Feeney, RFS No. 2019-01 with Todd Groundwater, and RFS No. 2019-01 with Brownstein Hyatt Farber Schreck, LLP.

BACKGROUND:

Attached are the proposed initial contracts for each of the Watermaster’s consultants that are expected to work on M&MP activities during 2019, and the proposed initial contract with legal counsel for 2019. Each of these firms is 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 the umbrella language of the PSA. The TAC reviewed and discussed the Montgomery & Associates, MPWMD, Martin Feeney, and Todd Groundwater items at its November 21, 2018 meeting and recommends that the Board approve each of them.

The agreement with Brownstein Hyatt Farber Schreck, LLP was developed by Ms. Dadiw. I have reviewed it and recommend its approval.

DISCUSSION

The attached RFSs constitute the proposed initial 2019 work assignments for each of these consultants as follows:

- Montgomery & Associates RFS No. 2019-01 covering their providing general hydrogeologic consulting services and for providing 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. 2019-02 covering their preparing the 2019 SIAR.
- MPWMD RFS No. 2019-01 covering their anticipated 2019 M&MP tasks.
- MPWMD RFS No. 2019-02 covering their obtaining water quality and water level data from private producers who ask the Watermaster collect this data for them. The costs for this work are reimbursed by the private producers, and there is no net cost to the Watermaster for work performed under this RFS.
- Martin Feeney RFS No. 2019-01 covering his performing induction logging of certain of the Watermaster's monitoring wells and providing that data as well as water level data to MPWMD for their use in preparing the 2019 Water Quality and Water Level Report. The differences from 2019 compared to 2018 are the result of discontinuing water quality sampling in the Sentinel Wells, as discussed in the 2017 Annual Report and as provided for in the approved 2019 M&MP.
- Martin Feeney RFS No. 2019-02 covering his providing general hydrogeologic consulting services.
- Todd Groundwater RFS No. 2019-01 covering their providing general hydrogeologic consulting services.
- RFS No. 2019-01 with Brownstein Hyatt Farber Schreck, LLP for \$25,000 for Mr. Russ McGlothlin to provide legal services to attend, if necessary, a status conference hearing; assist with filing the Watermaster Annual Report to Court by January 15, 2019 as may be needed; and provide miscellaneous legal consultation as may be required by Watermaster.

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 2019. All of these costs are included in the Budgets that the Board approved at its October 3, 2018 meeting.

If the geochemical modeling being performed in 2019 indicates the need to develop mitigation measures for possible adverse impacts from introducing non-native water into the Basin from the Monterey Peninsula Water Supply Project's desalination plant, the Pure Water Monterey Project's advance treated wastewater, or additional ASR water, I will develop an additional RFS for Montgomery & Associates during 2019 to use the Seaside Basin Groundwater Model to provide information to MPWMD's consultant (Pueblo Water Resources) that is preparing the Seaside Basin geochemical model for use in developing such mitigation measures. Funds for this additional RFS have been included in the Board-approved M&MP Operations Budget for 2019. When and if drafted, the RFS would come to the TAC and the Board for approval.

ATTACHMENTS:

1. Montgomery & Associates RFS No. 2019-01
2. Montgomery & Associates RFS No. 2019-02
3. MPWMD RFS No. 2019-01
4. MPWMD RFS No. 2019-02
5. Martin Feeney RFS No. 2019-01
6. Martin Feeney RFS No. 2019-02
7. Todd Groundwater RFS No. 2019-01.
8. Brownstein Hyatt Farber Schreck, LLP RFS No. 2019-01

SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: January 1, 2019

RFS NO. 2019-01
(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, 2019, 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: \$ 13,000.00 (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 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 telephonically. 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 2019 Monitoring and Management Program (M&MP) to which this RFS No. 2019-01 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 via telephone or in-person in Seaside, as requested by WATERMASTER.

\$10,000 in labor costs of this RFS No. 2019-01 are allocated to performing work on these Tasks. In addition to hourly labor costs, an allowance of \$1,000.00 is included in for this Task to cover travel and other incidental costs associated with the performance of this work.

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. 2019-01.

\$2,000 in labor costs of this RFS No. 2019-01 are allocated to performing work for Task M.1.g.

All work under this RFS No. 2019-01 will be billed at the following hourly rates, including all markups and other direct costs:

Derrick Williams = \$225.00/hour

Georgina King = \$200.00/hour

The total cost authorized by this RFS No. 2019-01 is \$13,000.00.

ATTACHMENT 2
SCHEDULE

Montgomery & Associates RFS No. 2019-01 Work Schedule																			
ID	Task Name	2019																	
		Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	A
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																		

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SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: 1/1/2019

RFS NO. 2019-02
(To be filled in by WATERMASTER)

TO: Hale Barter
Montgomery & Associates
PROFESSIONAL

FROM: Robert Jaques
WATERMASTER

Services Needed and Purpose: Prepare the Seawater Intrusion Analysis Report for 2019. See Scope of Work in Attachment 1.

Completion Date: All work of this RFS shall be completed not later than December 31, 2019, 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: \$ 21,100.00 (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 2019 Seawater Intrusion Analysis Report (SIAR).

To promote efficiency, much of the text and graphics from the 2018 SIAR will be incorporated directly into the 2019 SIAR.

Preparing the 2019 SIAR will involve analyzing all water quality data at the end of Water Year 2019 (October 1, 2018 to September 30, 2019) and producing semi-annual (2nd and 4th quarters 2019) 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.

A Draft 2019 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. 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 2019 SIAR. A CD containing an electronic version of the entire Final 2019 SIAR in MS Word and up to 15 printed and bound copies of the Final 2019 SIAR (quantity to be determined by WATERMASTER) will be provided to WATERMASTER.

ATTACHMENT 2

Montgomery & Associates RFS No. 2019-02 Work Schedule		2019																	
ID	Task Name	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1	1.4.c Annual Seawater Intrusion Analysis Report (SIAR)																		
2	HydroMetrics Provides Draft SIAR to Watermaster											◆ 11/12							
3	TAC Approves Annual Seawater Intrusion Analysis Report (SIAR)											◆ 11/20							
4	Board Approves Annual Seawater Intrusion Analysis Report (SIAR)											◆ 12/4							

ATTACHMENT 3

DETAILED BREAKDOWN OF ESTIMATED COSTS

Task	Hours		Costs			
	Georgina King (\$200 per hr)	Nick Byler (\$120 per hr)	Georgina King	Nick Byler	Expenses	Total Costs
2019 Seawater Intrusion Analysis Report						
Produce 2019 SIAR	32	100	\$6,400	\$12,000	\$500	\$18,900
Attend One TAC Meeting in Monterey	10	0	\$2,000	\$ -	\$200	\$2,200
TOTALS	42	100	\$8,400	\$12,000	\$700	\$21,100

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.

SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: January 1, 2019

RFS NO. 2019-01
(To be filled in by WATERMASTER)

TO: Jonathan Lear
Monterey Peninsula Water Management District
PROFESSIONAL

FROM: Robert Jaques
WATERMASTER

Services Needed and Purpose:

Perform certain Tasks contained within the Watermaster's Monitoring and Management Plan for 2019 (See detailed Scope of Work in Attachment 1).

Completion Date: The work of this RFS No. 2019-01 shall be completed in accordance with the schedule contained in Attachment 2.

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

Total Price Authorized by this RFS: \$ 50,024.00 (See Attachment 3 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.

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

Agreed to by: _____ **Date:** _____
PROFESSIONAL

ATTACHMENT 1

Detailed Scope of Work for RFS No. 2019-01

Background:

The Watermaster Board approved the Budget for the 2019 Monitoring and Management Program (hereinafter referred to as the “2019 M&MP”) at its meeting of October 3, 2018.

This RFS No. 2019-01 authorizes PROFESSIONAL to perform certain work on certain of the Tasks described in the 2019 M&MP. The Task numbers listed in Table 1 of this Detailed Scope of Work for RFS No. 2019-01 correspond to the Task numbers in the 2019 M&MP.

Table 1

M&MP TASK NO.	TASK DESCRIPTION	WORK TO BE PERFORMED
I. 2. a.1	Conduct ongoing data entry/ database maintenance	<p>PROFESSIONAL will perform water production, water level, and water quality data entry into WATERMASTER’s database, and data editing as necessary, and will provide appropriate quality control and quality assurance for this data. Upon request from WATERMASTER, PROFESSIONAL will also enter other data into the database, such as updated information pertaining to well records. WATERMASTER will provide PROFESSIONAL with water production data.</p> <p>PROFESSIONAL will review the water production data provided by WATERMASTER for quality assurance and quality control purposes, and will notify WATERMASTER of any discrepancies PROFESSIONAL observes in this data. WATERMASTER will follow-up as appropriate with the water producers to resolve any such discrepancies. PROFESSIONAL will also host and maintain the Watermaster’s Database. Any changes to WATERMASTER’s database will be authorized under a separate agreement for performing such work for WATERMASTER. That agreement will either be with PROFESSIONAL or with another consultant.</p> <p>PROFESSIONAL will prepare quarterly water production, water level, and water quality tabulations in Excel format and will provide those tabulations to another WATERMASTER Consultant who will post them to the WATERMASTER’s website, so it will be accessible to the public and other interested parties.</p>
I. 2. b. 2	Collect Monthly Water Levels	<p>The monitoring wells from which water level data is to be collected by PROFESSIONAL are listed under the heading “MONITORING TO BE PERFORMED BY PROFESSIONAL” in the column titled “Level” in Table 2. PROFESSIONAL will visit each of the indicated wells at the frequencies shown in Table 2 in order to obtain the water level data. At these visits PROFESSIONAL will measure and record water levels 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 already been equipped with dataloggers.</p> <p>This Task includes the purchase of one datalogger @ \$700 to keep in inventory as a spare if needed, plus \$50 in parts for the datalogger.</p> <p>All of the other wells will be manually measured.</p>

M&MP TASK NO.	TASK DESCRIPTION	WORK TO BE PERFORMED
I. 2. b. 3	Collect Quarterly Water Quality Samples	<p>The monitoring wells from which water quality data is to be collected by PROFESSIONAL are listed under the heading “MONITORING TO BE PERFORMED BY PROFESSIONAL” in the column titled “Quality” in Table 2. PROFESSIONAL will visit each of the indicated wells at the frequencies shown in Table 2 in order to obtain the water quality samples, and will perform water quality analyses on these samples. The water quality constituents that will be measured in these analyses are: Specific Conductance (micromhos/cm), Total Alkalinity (as CaCO₃), Bicarbonate (as HCO₃⁻), pH, Chloride, Sulfate, Ammonia Nitrogen (as NH₃), Nitrate Nitrogen (as NO₃), Total Organic Carbon, Calcium, Sodium, Magnesium, Potassium, Iron, Manganese, Orthophosphate, Total Dissolved Solids, Hardness (as CaCO₃), Boron, Bromide, and Fluoride. For the following wells listed in Table 2, Barium and Iodide will also be measured quarterly: MSC Shallow, MSC Deep, PCA-W Shallow, PCA-W Deep, MPWMD #FO-09 Shallow, and MPWMD #FO-09 Deep. The data may either come from water quality samples that are collected by the airlift method, by the positive displacement method during induction logging of these wells and/or other data gathering techniques, or combinations of these methods, at the discretion of PROFESSIONAL, and will be submitted to a State-certified analytical laboratory for analysis.</p> <p>Retrofitting to use the low-flow purge approach for getting water quality samples has already been completed on all of the wells that are sampled on a quarterly basis. Retrofitting of the wells that are sampled on an annual basis is not warranted. This sampling equipment sits in the water column and may periodically need to be replaced or repaired. Accordingly, an allowance of \$1,000 to perform maintenance on previously installed equipment has been included in this Task. Also, in the event a sampling pump is found to be no longer adequate due to declining groundwater levels, or if a sampling pump needs to be installed on a Sentinel Well, an allowance of \$2,000 to purchase a sampling pump has been included in this Task.</p>

M&MP TASK NO.	TASK DESCRIPTION	WORK TO BE PERFORMED
I. 2. b. 6	Reports	<p>PROFESSIONAL will prepare and submit reports to WATERMASTER according to the following schedule: PROFESSIONAL will review the water quality and water level data at the end of each quarter of the Water Year and will provide tabularized data summaries of the WQ/WL data twice per year, once for the Q1 and Q2 period and once for the Q3 and Q4 period, so this data can be posted to WATERMASTER’s website. No reporting on a quarterly basis is required but PROFESSIONAL will promptly notify WATERMASTER of any missing data or data collection irregularities that were encountered during the quarterly reporting period. PROFESSIONAL will prepare one annual report summarizing the water quality and water level data for the Water Year, and containing tables of this data for the complete Water Year. The report will include a brief cover letter describing any missing data or data collection irregularities that were encountered during the reporting period, and any recommendations for changes to be made to the data collection program.</p>
I.2.b.7	CASGEM Data Submittal	<p>PROFESSIONAL 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.</p>
I.4.c	Review Seawater Intrusion Analyses	<p>WATERMASTER will have another consultant perform analyses and prepare mapping and other documents pertaining to seawater intrusion detection. PROFESSIONAL may participate in meetings with that consultant during the course of its work, and may provide review comments and recommendations to WATERMASTER regarding this work as it is being carried out by that consultant.</p>

Table 2. Monitoring Wells

WELL NAME AND SUBAREA LOCATION ⁽⁸⁾	MONITORING NETWORK ⁽¹⁾		MONITORING REQUIRED BY DECISION ⁽²⁾		MONITORING CURRENTLY BEING PERFORMED BY PROFESSIONAL NOT SUBJECT TO THIS RFS ⁽³⁾		MONITORING TO BE PERFORMED BY PROFESSIONAL UNDER THIS RFS ⁽⁴⁾			
	Professional's	Watermaster's	Level (Monthly)	Quality (Annually)	Level		Level		Quality	
					Frequency		Frequency		Frequency	
					Monthly	Quarterly	Monthly	Quarterly	Annually	Quarterly
Northern Coastal Subarea (and vicinity)										
MSC-Shallow		X					X			X
MSC-Deep		X					X			X
PCA-W Shallow		X						X		X
PCA-W Deep		X						X		X
PCA-E (Multiple) Shallow	X				X					X
PCA-E (Multiple) Deep	X				X					X
Ord Grove Test-Shallow/Deep	X				X					
Paralta Test-Shallow/Deep	X				X					
Ord Terrace-Shallow	X				X					X
Ord Terrace-Deep	X				X					X
MPWMD #FO-09-Shallow	X				X					X
MPWMD #FO-09-Deep	X				X					X
MPWMD #FO-10-Shallow		X					X			X
MPWMD #FO-10-Deep		X					X			X
Fort Ord Monitor MW-B-23-180-Dune/Aromas		X					X			X
CDM MW-1-Dune/Aromas		X					X			
CDM MW-2-Dune/Aromas		X					X			
CAV Del Monte Observation-Shallow		X								X
SBWM MW-1-Deep (Purisima) ⁽⁶⁾		X						X		
SBWM MW-2-Deep (Purisima) ⁽⁶⁾		X						X		
SBWM MW-3-Deep (Purisima) ⁽⁶⁾		X						X		
SBWM MW-4-Deep (Purisima/Santa Margarita) ⁽⁶⁾		X						X		
Northern Inland Subarea (and vicinity)										
MPWMD #FO-01-Shallow	X					X				
MPWMD #FO-01-Deep	X					X				
MPWMD #FO-07-Shallow	X					X				
MPWMD #FO-07-Deep	X					X				
MPWMD #FO-08-Shallow	X					X				
MPWMD #FO-08-Deep	X					X				
MPWMD #FO-11-Shallow	X					X				
MPWMD #FO-11-Deep	X					X				
SBWM MW-5-Shallow (Paso Robles) ⁽⁶⁾		X						X		X
SBWM MW-5-Deep (Santa Margarita) ⁽⁶⁾		X						X		X

Table 2 (Continued)

Southern Coastal Subarea (and vicinity)										
Plumas '90 Test-Deep		X					X			
K-Mart-Dune/Aromas		X					X			
CDM MW-3-Dune/Aromas		X					X			
CDM MW-4-Dune/Aromas		X					X			
MW-BW-08A-Dune/Aromas		X					X			
MW-BW-09-180-Shallow		X					X			
Shea		X						X		
Sand City Public Works Well		X					X		X	
Laguna Seca Subarea (and vicinity)										
MPWMD #FO-03-Shallow	X						X			
MPWMD #FO-03-Deep	X						X			
MPWMD #FO-04-Shallow (E)	X						X			
MPWMD #FO-04-Deep (W)	X						X			
MPWMD #FO-05-Shallow	X						X			
MPWMD #FO-05-Deep	X						X			
MPWMD #FO-06-Shallow	X						X			
MPWMD #FO-06-Deep	X						X			
Justin Court (RR M2S)-Shallow	X						X			
LS Pistol Range (Mo Co TH-1)-Deep	X						X			
York Rd-West (Mo Co MW-1 D)-Deep	X						X			
Seca Place (Mo Co MW-2)-Deep	X						X			
Robley Shallow (North) (Mo Co MW-3S)-Shallow	X						X			
Robley Deep (South) (Mo Co MW-3D)-Deep	X						X			
LS No. 1 Subdivision-Deep	X						X			
Blue Larkspur-East End-Believed to be Deep	X						X			
York School-Shallow		X	X						X	
Laguna Seca Driving Range (SCS-Deep)-Shallow		X						X	X	
Laguna Seca County Park #2-Shallow		X	X						X	
CAW Granite Construction-Deep		X					X			
CAW Ryan Ranch (RR) #7-Deep		X	X						X	
Laguna Seca Golf New #12-Deep ⁽⁹⁾		X							X	
Pasadera Main Gate-Deep		X	X						X	
No. of Wells in Each Network⁽⁹⁾	32	31	4	0	8	24	15	10	17	6

ATTACHMENT 2 SCHEDULE

MPWMD RFS No. 2019-01 Work Schedule		2019												2020									
ID	Task Name	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1	1.2.a DATABASE MANAGEMENT																						
2	1.2.a.1 Conduct Ongoing Data Entry/Database Maintenance																						
3	1.2.b DATA COLLECTION PROGRAM																						
4	1.2.b.2 Collect Monthly Water Levels (MPWMD)																						
5	1.2.b.3 Collect Quarterly Water Quality Samples (MPWMD)																						
6	1.2.b.6 Reports (from MPWMD)																						
7	Water Level and Water Quality Data Summaries for 1st & 2nd Quarters																						
8	Water Level and Water Quality Data Summaries for 2nd & 3rd Quarters																						
9	Annual Water Production, Water Level, and Water Quality Report for 2019																						
10	1.2.b.7 CASGEM Data Submittal																						
11	1.4.c. MPWMD Provides Assistance in Seawater Intrusion Detection																						

ATTACHMENT 3 SUMMARY OF ESTIMATED COSTS

M&MP TASK NO.	LABOR HOURS		HOURLY RATE	SUPPLIES AND MATERIALS		TOTAL
	BREAKDOWN	TOTAL		BREAKDOWN	TOTAL	
I 2. a. 1	12 mo. @ 8 hrs/mo.	96	\$149	Other services needed to host and maintain Watermaster's Database, estimate \$300 for the year.	\$300	\$14,604
I 2. b. 2.	12 mo. @ 4 hrs/mo.	48	\$62	Purchase one datalogger @ \$700 plus \$50 in parts to keep in inventory as a spare if needed.	\$750	\$3,726
I 2. b. 3.	Quarterly WQ wells (Table 2): MPWMD Coastal wells (6 wells - shallow and deep aquifers @ 3 sites: MSC, PCA-W, FO-09), plus one additional verification WQ sample at Ord Terrace Shallow Well. Labor: 4 events @ 16 hrs/event	64	\$62	Fuel: 4 events @ \$10/site x 3 sites = \$120; Lab costs: 4 events @ \$225/well x 7 wells = \$6,300; plus one verification sample lab cost = \$225.	\$6,645	\$10,613
	Annual WQ wells (Table 2): 1 event @ 28 hrs/event = 28 hrs	28	\$62	BLM site: Eductor setup (use MPWMD portable unit): \$0 x 1 site = \$0, Airlift equip.: \$100 x 1 site x 1 event = \$100; Fuel: \$20 x 1 site x 1 event = \$20. Lab cost (annual WQ wells): \$175 x 15 wells x 1 event = \$2,625; maintenance on previously installed sample collection equipment = \$1,000. One-time cost, if necessary for replacing a well sampling pump if the existing pump is found to be inadequate due to dropping groundwater levels, or if a sampling pump needs to be installed on a Sentinel Well = \$2,000.	\$5,745	\$7,481
	WM Sentinel and Northern Inland wells: download/store dataloggers, 4 events @ 2 hrs/event	8	\$62	N/A	\$0	\$496
	Compile data: 4 events @ 24 hours/event	96	\$62	N/A	\$0	\$5,952
I 2. b. 6	Data summaries and 1-annual report	24	\$149	N/A	\$0	\$3,576
I 2. b. 7	CASGEM Data Submittal for Watermaster's Voluntary Wells	16	\$149	N/A	\$0	\$2,384
I 4. c	Provide SWI supplemental data and review.	8	\$149	N/A	\$0	\$1,192
TOTAL ESTIMATED COST =					\$50,024	

Notes:

1. Vehicle mileage is included in the labor costs above.
2. 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 A-1 of this RFS is binding and limiting as defined in Section V of the Agreement.

SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: January 1, 2019

RFS NO. 2019-02

(To be filled in by WATERMASTER)

TO: Jonathan Lear

FROM: Robert Jaques

Monterey Peninsula Water Management District
PROFESSIONAL

WATERMASTER

Services Needed and Purpose:

Perform water level and water quality data collection for specified wells within the Seaside Basin in accordance with the Scope of Work contained in Attachment 1.

Completion Date: The work of this RFS No. 2019-02 shall be completed on an as-directed basis from the Watermaster during 2019. All work under this RFS will be completed not later than December 31, 2019.

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

Total Price Authorized by this RFS: \$3,915.00 (See Attachment 1 for details regarding this Total Price, and how costs will be authorized on an as-directed basis. 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.

Requested by: _____ Date: _____
WATERMASTER Technical Program Manager

Agreed to by: _____ Date: _____
PROFESSIONAL

ATTACHMENT 1
Scope of Work for RFS No. 2019-02

Background:

The WATERMASTER Board authorized its staff to contract with the PROFESSIONAL to collect water level and water quality data from certain wells located within the Seaside Basin, if the owners/operators of those wells expressed this desire to the WATERMASTER. The procedures for this data collection are described in the January 17, 2008 “Notice to Well Owners” that was sent out by the Watermaster to well owners in the Seaside Groundwater Basin.

This RFS No. 2019-02 authorizes PROFESSIONAL to perform this data collection work on an as-directed basis, with formal authorization from the WATERMASTER to the PROFESSIONAL being required prior to the PROFESSIONAL performing such work on any specified well. This will provide the WATERMASTER with full control over which wells are provided this service, as well as over the costs for having this work performed.

The wells to which these services may be provided are listed in Table 1.

The estimated costs, per well, to perform these services are as follows:

Monthly Water Levels - It is estimated that it will take approximately 0.5 hour/well to perform a water level measurement. This time estimate is based on the assumption that the water level measurements will be performed at the time that a field person is already out and about collecting data from other wells, and the fact that the distance between wells located within the Basin is not that great. This labor would be billed at the field rate of \$62/hr, so the estimated cost per water level measurement would be \$31.00.

The total estimated cost would be \$372 per year per well for 12 monthly measurements.

Annual Water Quality Sampling - Assuming that annual water sample collection would coincide with water level collection at a well, it is estimated that it will take approximately 0.5 hr to collect the water quality sample, including sampling time, bottle labeling, custody forms, delivery to laboratory, etc. There will also be an estimated 0.5 hr for receipt, review and computer entry of laboratory data, and an estimated \$175 per sample for the laboratory analysis. The sampling work would be billed at the field rate of \$62/hr, and the review and computer data entry work would be billed at the rate of \$149/hr, so the estimated cost per annual water quality sample would be \$105.50 for labor, and \$175 for laboratory services, for a total cost per sample of \$280.50. Only one sample per well per year will need to be collected and analyzed. This sample will be collected in the fall.

The total estimated cost for collecting and analyzing the sample per well is \$280.50.

Combined Water Level Measurements and Water Quality Sampling: For combined water level and water quality monitoring, the total estimated cost, per well, for the 12-month period is \$652.50.

Of the wells listed in Table 1 it is assumed that not more than 6 will ask to have data collected for them by the WATERMASTER, the total estimated cost would be:

Potential No. of Wells Needing Water Level Data Collected	= 6 @ \$372 =	\$2,232
Potential No. of Wells Needing Water Quality Data Collected	= 6 @ \$280.50 =	<u>\$1,683</u>
	TOTAL =	<u>\$3,915</u>

Table 1

APN	DETAILS	COMPANY	Watermaster "Producer" Well?	MPWMD Assigned Well #	Monthly Water Levels Required	Monthly Water Levels Being Collected?	Annual Water Quality Analyses Required?	Annual Water Quality Data Being Collected?
Within MPWMD Boundaries								
012-432-004	CAW - Plumas #4	California American Water Co.	Y	T15S /R 1E -27Jg	Y	Y	Y	N
012-843-013	CAW - Darwin	California American Water Co.	Y	T15S /R 1E -23Ea	Y	Y	Y	N
011-041-018	CAW - Military	California American Water Co.	Y	T15S /R 1E -14Nd	Y	Y	Y	N
011-061-004	CAW - Ord Grove #2	California American Water Co.	Y	T15S /R 1E -23Bc	Y	Y	Y	N
011-071-018	CAW - New Luzern	California American Water Co.	Y	T15S /R 1E -23De	Y	Y	Y	N
011-091-017	CAW - Playa #3	California American Water Co.	Y	T15S /R 1E -22Bc	Y	Y	Y	N
011-091-017	CAW - Playa #4	California American Water Co.	Y	T15S /R 1E -22Bf	Y	Y	N	
011-493-028	CAW - Paralta	California American Water Co.	Y	T15S /R 1E -14Ra	Y	Y	Y	N
031-151-010	Reservoir Well	City of Seaside	Y	T15S /R 1E -13Na	Y	?	Y	N
031-231-062	Coe Avenue Well	City of Seaside	Y	T15S /R 1E -14Ma	Y	?	Y	N
011-181-014	Public Works Corp. Yard	City of Sand City	Y	T15S /R 1E -22Ed	Y	?	Y	N
011-011-020	Cypress Pacific	Monterey Peninsula Engineering	Y	T15S /R 1E -22Dd	Y	N	Y	N
011-236-010	Robinette -Design Ctr.	City of Sand City	Y	T15S /R 1E -22Mc	Y	?	Y	N
011-041-043	(in front of Target)	DBO Development	Y	T15S /R 1E -22Ce	Y	N	N	
011-061-022	MMP prod well	Mission Memorial Park	Y	T15S /R 1E -23Ab	Y	Y	N	
011-061-022	PRTIW -operated by MMP	Mission Memorial Park	Y	T15S /R 1E -23Ac	Y	N	Y	N
011-501-014-500		Security National Guaranty, Inc.	Y	T15S /R 1E -15K1	Y	N	Y	N
011-532-005		Granite Rock Company	Y	T15S /R 1E -22Eb	Y	?	N	
012-511-005	Shea Well	City of Del Rey Oaks	Y	T15S /R 1E -26Mc	Y	N	N	
012-115-017	City #4	Seaside Municipal Water System	Y	T15S /R 1E -23Gc	Y	?	Y	?
012-653-003	City #2	Seaside Municipal Water System	Y	T15S /R 1E -23Pb	Y	?	N	
012-664-017	City #1	Seaside Municipal Water System	Y	T15S /R 1E -23Lb	Y	?	N	
012-115-017	City #3	Seaside Municipal Water System	Y	T15S /R 1E -23Ga	Y	?	Y	?
173-071-052	East Well (Lot #9)	CAW - Bishop Unit	Y	T16S /R 2E -05Fa	Y	N	N	
173-072-034	well lot Bishop #1 (west)	CAW - Bishop Unit	Y	T16S /R 2E -05Ea	Y	Y	N	
173-072-041	well lot Bishop #2 (east)	CAW - Bishop Unit	Y	T16S /R 2E -05Fb	Y	Y	N	
416-111-002	Mutual	CAW - Hidden Hills Unit	Y	T16S /R 2E -09Cb	Y	N	N	
416-111-004	Standex	CAW - Hidden Hills Unit	Y	T16S /R 2E -09Cc	Y	N	N	
416-111-004	Bay Ridge	CAW - Hidden Hills Unit	Y	T16S /R 2E -09Cd	Y	Y	N	
259-031-011	RR#7	CAW - Ryan Ranch #7	Y	T15S /R 1E -36Nb	Y	Y	N	
259-031-012	RR#8	CAW - Ryan Ranch #8	Y	T16S /R 1E -01Cb	Y	Y	N	
259-031-012	RR#11	CAW - Ryan Ranch #11	Y	T16S /R 1E -01Cd	Y	Y	N	
173-071-056	Old Main Gate (Lot #12)	Pasadera - New Cities Developm	Y	T16S /R 2E -05Mg	Y	Y	N	
173-071-051	Paddock #1(Lot #11)	Pasadera - New Cities Developm	Y	T16S /R 2E -05Mf	Y	N	N	
203-031-034	01-349	York School	Y	T15S /R 1E -36Qa	Y	?	N	
173-071-048	(new #12)	Laguna Seca Golf Resort	Y	T16S /R 2E -06Hb	Y	Y	N	
173-071-048	(racetrack)	Laguna Seca Golf Resort	Y	T16S /R 2E -06Ga	Y	Y	N	
Outside MPWMD Boundaries								
173-011-025, -026	LS Cnty Park #3	MPRPD	Y	T16S /R 2E -05Gd	Y	?	N	
173-011-025, -026	LS Cnty Park #4	MPRPD	Y	T16S /R 2E -05Ge	Y	?	N	
					Y = 38	N or ? = 21	Y = 16	N or ? = 16

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SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: January 1, 2019

RFS NO. 2019-01
(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 2019 (See detailed Scope of Work in Attachment 1).

Completion Date: The work of this RFS No. 2019-01 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: \$ 17,540.56 (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. 2019-01

Background:

The Watermaster Board approved the Budget for the 2019 Management and Monitoring Program Work Plan (hereinafter referred to as the “2019 M&MP Work Plan”) at its meeting of October 3, 2018.

Scope of Work

This RFS No. 2019-01 authorizes PROFESSIONAL to perform the work described in PROFESSIONAL’s Proposal for Hydrogeologic Services, dated July 19, 2018 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 WATERMASTER.

ATTACHMENT 2

Martin B. Feeney
Consulting Hydrogeologist

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

July 19, 2018

Seaside Basin Watermaster
PO Box 51502
Pacific Grove CA
93950

Attention: Bob Jaques, PE

Subject: Sentinel Well Data Collection Program 2019 – 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 are 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 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

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 \$ 17,541 inclusive of outside services. A breakdown of costs is presented in the table below.

SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: January 1, 2019

RFS NO. 2019-02
(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, 2019.

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.

An allowance for 20 hours of consulting services at \$195/hour, plus \$100 for related other direct costs (such as travel costs), is hereby authorized by this RFS No. 2019-02 to provide these services. Services under this RFS No. 2019-02 will only be provided when specifically requested by WATERMASTER.

The total cost authorized by this RFS No. 2019-02 is \$4,000.

SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: January 1, 2019

RFS NO. 2019-01
(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, 2019.

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.

Estimated Costs

Consulting services provided under this RFS No. 2019-01, including attending meetings either via telephone or in-person as requested by WATERMASTER, will be billed at PROFESSIONAL's standard hourly rates for calendar year 2019, including all markups and other direct costs.

In addition to hourly labor costs, an allowance of \$500.00 is included in the estimated cost of this RFS to cover travel and other incidental costs associated with the performance of this work.

The total cost authorized by this RFS No. 2019-01 is \$4,000.00.

SEASIDE BASIN WATERMASTER
REQUEST FOR SERVICE

DATE: January 1, 2019

RFS NO. 2019-01

TO: Russ McGlothlin
Brownstein Hyatt Farber Schreck, LLP
1020 State Street
Santa Barbara, CA 93101-2711

FROM: Laura Dadiw
Watermaster
PO Box 51502
Pacific Grove, CA 93950

Services Needed and Purpose: Provide legal services to prepare and file a motion, and attend a status conference hearing if ordered by the Superior Court; assist as may be requested with filing the Watermaster Annual Report to Court by January 15, 2019; and provide miscellaneous legal consultation as may be needed by Watermaster.

Completion Date: All work under this RFS will be completed no later than December 31, 2019.

Method of Compensation: Time and Expense Payment Method. Hourly rates and costs for Other Direct Costs and Expenses are described in Attachment I.

Total Price Authorized by this RFS: \$25,000.00 (Cost is authorized only when evidenced by signature below.)

Total Price may not be exceeded without prior written authorization by WATERMASTER.

Requested by: Not Applicable to this RFS Date: _____

Authorized by: _____ Date: _____
Paul Bruno
WATERMASTER Chairman of the Board

Agreed to by: _____ Date: _____
PROFESSIONAL

ATTACHMENT 1

BROWNSTEIN HYATT FARBER SCHRECK, LLP STANDARD TERMS AND CONDITIONS

Duties of the Parties: Brownstein Hyatt Farber Schreck, LLP (the "Firm") agrees to represent you in accordance with the accompanying Engagement Agreement for Legal Services (the "Agreement") and these Standard Terms and Conditions (the "Terms"). You agree to fully cooperate with us, be open and truthful, provide us with complete information pertaining to the representation, keep us informed of developments, promptly respond to our inquiries and communications, and pay our bills in a timely manner.

Fees: We record time in 6-minute increments unless other arrangements are made, and our billing statements will be based on time recorded in those increments. You agree to pay our fees based on time expended on your behalf, computed on an hourly basis at our then applicable rates for this engagement for the applicable attorneys and staff assigned to the matter. Generally speaking, these hourly rates currently are, with limited exceptions, as follows:

Shareholders:	From \$365 to \$1195 per hour
Counsel:	From \$350 to \$1165 per hour
Associates:	From \$250 to \$475 per hour
Lit Support Analysts:	From \$240 to \$365 per hour
Land Use Planners:	From \$215 to \$450 per hour
Paralegals:	From \$160 to \$320 per hour
Law Clerks:	From \$180 to \$245 per hour
Legal Assistants:	From \$95 to \$230 per hour

We change our rates, as well as our other standard charges, from time to time (typically on January 1 of a calendar year), to reflect competitive or market conditions, inflation, changes in attorney seniority or status, changes to our rates generally, changes in the nature or scope of the services performed and other factors. Unless otherwise agreed to in writing, you agree that any new rates or charges apply prospectively to all matters then being handled by the Firm for you. You agree to pay all fees billed at the then-current rates. Individual rate changes will be reflected in the first billing statement that includes the new rates and will be evident from the information you receive with each bill.

Outside Contract Attorneys and Legal Assistants: You agree that we may utilize contract attorneys and legal assistants who are supervised by our attorneys but not employed by the Firm, and who may reside inside or outside of the United States. Contract attorneys typically will be billed at the rates of the attorneys at the firm who provide a comparable, applicable level of service, if not otherwise agreed to in writing.

In-House Costs and External Expenses: In addition to fees incurred for legal work, your statement will include other charges and costs, some of which are summarized below, that you agree to pay.

Charges for long distance telephone calls, in-office copying, ordinary postage, and deliveries made by in-house staff are covered by an administrative fee, currently calculated at 2.5% of fees incurred. This administrative fee is charged in lieu of itemizing those costs.

Other costs which you agree to pay include, but are not limited to: computer-assisted legal research; third party vendor fees (including document copying, transcript production, depositions, e-discovery file processing, and trial preparation materials); messenger and other delivery fees; the cost of

licensing and installing special computer applications used to manage your case; secretarial overtime (when required by the urgency of your matter); extraordinary administrative, technical or accounting support; professional mediator, arbitrator, and/or special master fees; other vendor costs; and reasonable expenses for travel, meals and hotel accommodations.

For Litigation matters that involve e-Discovery tasks of processing and reviewing electronic data requiring the Firm to host data in excess of 5 gigabytes ("GB"), we will bill you \$10 per hosted GB per month, which may be more than the Firm's direct cost to account for overhead and related expenses. These hosting charges may continue to be billed for as long as we continue to host the data in an active server environment.

We may select experts, consultants and investigators who in our judgment are necessary to aid in the preparation of your matter. We will inform you of the persons selected and their charges. You authorize us to incur all reasonable costs and to hire such experts, consultants and investigators, and you agree to pay these expenses.

At our discretion, all costs may be included on your statement or billed directly to you. We may also require that you advance to us the estimated amount for such items prior to our incurring them on your behalf. You agree to pay such costs, and we assume no obligation to advance any costs on your behalf or to pay vendors, experts, consultants or other third parties we engage on your behalf.

Estimates Not Binding: It is often impractical to determine in advance the amount of time and effort that will be needed to complete all the necessary work on a matter or the total amount of fees, charges, and costs that may be incurred. Additionally, if any estimates or budgets are provided, they may need to be adjusted upward or downward in response to changing circumstances. Accordingly, unless otherwise expressly agreed in writing, our estimates and budgets are not intended to be binding, are subject to unforeseen or unanticipated circumstances, and do not limit or "cap" our fees and other charges or costs.

No Guarantees: Comments or expressions of opinion about the potential outcome of your matter or any phase thereof are expressions of opinion only. We cannot guarantee the outcome or make any promises in that regard. Unless otherwise specifically agreed in writing, our fees are not contingent upon the outcome or completion of a matter.

Billing Disputes: You agree to inform us of any dispute you may have with respect to a billing statement within ten (10) days of the statement date. Even if you dispute a portion of a billing statement, you agree to pay the undisputed portion within 30 days of your receipt of the statement. You will be responsible for any costs of collection incurred by the Firm, including reasonable attorneys' and paralegals' fees and costs.

Retainer Deposits: You agree to pay advance fee deposits in accordance with the provisions of the Agreement and the Terms. In addition, for matters involving litigation, arbitration, or adjudication of disputes in other tribunals, we reserve the right to request from you an additional deposit before trial or hearing in an amount reflective of the anticipated fees and costs of that proceeding. You agree to timely provide such a deposit. If you do not provide this deposit, we shall have the right to withdraw

Rev'd 06/06/2017

from this representation, consistent with our obligations under applicable law and the rules of professional conduct, and you agree not to oppose our withdrawal.

Responses to Auditors' Inquiries: We are frequently asked to provide information to third-party auditing firms regarding legal matters of our clients. We respond to those inquiries with the same level of care that we use to handle our clients' other legal work, and we will charge for these services at the hourly rates applicable to your engagement. When an auditing firm requests information on your behalf, that request will be deemed to be your consent for us to disclose the requested information to that auditing firm and to bill for those services.

Permission to List the Company as a Client: Occasionally, we may provide lists of representative clients or matters to legal or other publications and may use our clients' names or a description of their matters in marketing materials. Unless you instruct otherwise, you agree that such use is acceptable.

Communications and Special Requirements: During the course of our engagement, we may exchange emails and electronic versions of documents with you using commercially available software. Such communications are occasionally victimized by the creation and dissemination of viruses and other destructive electronic programs and hackers who compromise the privacy of electronic communications. Our virus scanning software may also occasionally reject a communication that you send to us, or we may send you a message that is rejected by your system. Although infrequent, these occurrences are to be expected as part of the ordinary course of business. Accordingly, we cannot guarantee that our communications and documents will always be virus-free or immune from invasions of expected privacy. If for these or other reasons you would prefer or require that we not use electronic communications or that we follow special instructions or encrypt emails or other communications, you should promptly advise in writing those working on your matters of such preferences or requirements.

Ownership of Records and Files: You understand and agree that your client file consists of any correspondence, legal memoranda, pleadings, agreements, or other documents that the Firm retains in its electronic document management system, which is duplicated in hard copy. It is our policy to destroy all client files (including all documents and materials therein) no less than eight years following completion of each matter. This file destruction procedure is automatic, and you will not receive further notice prior to the destruction of these files. Accordingly, we advise you to maintain your own files relating to the matters which we are handling. Alternatively, you may request, prior to our scheduled destruction date, that we deliver all or certain portions of these client files to you rather than destroying them.

Termination: You may terminate our services at any time. If you choose to do so, you agree to give us prompt notice of the termination. Upon such termination, you will remain obligated to pay for all services rendered and costs paid or incurred on your behalf before the termination or which are reasonably necessary thereafter. If we are attorneys of record in any proceeding, you agree to promptly execute and return to us appropriate documents effecting our substitution or withdrawal. We will promptly return to you any remaining balance of your retainer as well as a copy of your client file, as described above.

Except to the extent limited by applicable law or rules of professional conduct, we may also withdraw from this representation at any time. We may withdraw, by way of example, if:

- You fail to fulfill an obligation to the Firm or to honor the terms of the Agreement or these Terms, such as by failing to pay our statements or to post deposits in a timely manner;
- You make it unreasonably difficult to represent you;
- Our continued representation of you will result in an unreasonable financial burden on the Firm; or
- Facts or circumstances arise that, in our view, render our continuing representation unlawful or unethical.

If we elect to withdraw, you agree to take all steps reasonably necessary to free us of any obligation to perform further services. Notwithstanding such withdrawal, you will remain obligated to pay us for all services provided and to reimburse us for all costs paid or incurred on your behalf before the termination or which are reasonably necessary thereafter.

Our representation of you will be considered terminated at the earliest of your termination of our representation, our withdrawal from our representation of you, or the substantial completion of our work for you (as may be evidenced by a final bill, by a substantial period of inactivity, or otherwise).

Disputes: All disputes arising out of or relating to the Agreement and these Terms shall be resolved in a binding arbitration administered by JAMS pursuant to its Comprehensive Arbitration Rules and Procedures. The arbitration will take place in, and be administered in accordance with the laws of, the state in which the legal services provided by the Firm were primarily performed. The arbitrator shall award the substantially prevailing party its reasonable attorney fees and costs, and judgment on the award may be entered by a court of competent jurisdiction.

Interpretation and Effective Date: The Agreement and these Terms supersede all other prior and contemporaneous written and oral agreements and understanding between us, including any outside counsel guidelines or service level agreements, or the like, that you adopt, unless such outside counsel guidelines or service level agreements have been provided to us prior to the date of the Agreement or unless the Agreement and these Terms have been made expressly subject thereto. You acknowledge that no promises have been made to you by us other than those in the Agreement and these Terms. In the event that these Terms conflict with the Agreement, the Agreement will govern. If any provision of these Terms or the Agreement is found unenforceable, the remaining provisions will remain in effect. If the Agreement does not take effect for any reason, you will still be required to pay us the reasonable value of any services we performed for you and all costs actually and reasonably incurred on your behalf.

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SEASIDE GROUNDWATER BASIN WATERMASTER

TO: Board of Directors
FROM: Laura Dadiw, Administrative Officer
DATE: January 2, 2019
SUBJECT: Watermaster Declaration of **NO** Replenishment Water Available for Water Year 2019
PURPOSE: To notify all Seaside Groundwater Basin producers that the Watermaster has declared for Water Year 2019 that **NO** Artificial Replenishment Water is available to offset Over-Production in excess of the Operating Yield for the Seaside Groundwater Basin pursuant to the Amended Decision entered in the Seaside Adjudication.

RECOMMENDATION:

Consider approving the Declaration of No Artificial Replenishment Water Available for Water Year 2019.

DISCUSSION:

The Court has declared in Section III L 3 j iii of the adjudication Decision that in the event Watermaster cannot procure Artificial Replenishment Water to offset Operating Yield Over-Production during the ensuing Water Year that the Watermaster Board shall so declare in December that no Operating Yield Over-Production then in effect may occur during the ensuing Water Year.

Watermaster has determined that there is no foreseeable replenishment water available for Water Year 2019. As ordered by the Court at the January 12, 2007 hearing, a fifth full triennial 10% reduction in Operating Yield will be in effect for the entire Water Year 2019. (*Commencing with the fourth Water Year, and triennially thereafter the Operating Yield for both Subareas will be decreased by ten percent (10%) until the Operating Yield is equivalent of the Natural Safe Yield.*)

The Court has also declared in Section III F of the adjudication Decision that Carryover of a Standard Producer's unproduced allocation is limited to the total amount of the Standard Producer's Storage Allocation, and that in no circumstance may the sum of a Producer's Storage Credits and Carryover Credits exceed the Producer's available Storage Allocation. The 2010 Declaration of Useable Storage Space in the Basin is attached listing Standard Producer Allocations of Storage Space, revised to account for Cypress Pacific Investors LLC 2015 partial conversion of its Alternative Production Allocation to Standard Production Allocation. Only Standard Producers are allocated storage space.

ATTACHMENTS

- 1) 2019 Declaration of Unavailability of Replenishment Water with production limits

NOTICE TO ALL SEASIDE GROUNDWATER PRODUCERS:

Case No. M66343 Amended Decision Section III.B.2.

Commencing with the fourth Water Year, and triennially thereafter, the Operating Yield for both Subareas will be decreased by ten percent (10%) until Operating Yield is the equivalent of the Natural Safe Yield unless:

- a. The Watermaster has secured and is adding an equivalent amount of Non-Native water to the Basin on an annual basis; or*
- b. The Watermaster has secured reclaimed water in an equivalent amount and has contracted with one or more of the Producers to utilize said water in lieu of their Production Allocation, with the Producer agreeing to forego their right to claim a Stored Water Credit for such forbearance; or*
- c. Any combination of a and b above which results in the decrease in Production of Native Water required by this Decision; or*
- d. The Watermaster has determined that Groundwater levels within the Santa Margarita and Paso Robles aquifers are at sufficient levels to ensure a positive offshore gradient to prevent seawater intrusion.*

The Watermaster has determined that the conditions necessary to avoid the ten percent Operating Yield reduction have not been met as follows:

- 1. Watermaster has not secured water for adding an equivalent amount of Non-Native water to the Basin on an annual basis.
- 2. The Watermaster has not secured reclaimed water in an equivalent amount.
- 3. The Watermaster has not secured Non-Native water or reclaimed water that results in the decrease in Production of Native Water required by the Decision.
- 4. The firm contracted by Watermaster for technical analyses continued to report in 2018 that Groundwater levels within the Santa Margarita and Paso Robles aquifers are not at sufficient levels to ensure a positive offshore gradient to prevent seawater intrusion, so the requirement for this item continues to not be met.

Section III.L.3.j.iii: Watermaster declares that for Water Year 2019 Artificial Replenishment Water is not available to offset Operating Yield Over-Production and producers are limited in production to the following quantities of water:

Coastal Subarea Alternative Producers:

Seaside (Golf)	540.00 acre-feet
SNG	149.00 acre-feet
Cypress (Calabrese)	6.00 acre-feet
Mission Memorial (Alderwood)	31.00 acre-feet
Sand City	9.00 acre-feet

Laguna Seca Subarea Alternative Producers:

Nicklaus Club Monterey	251.00 acre-feet
Bishop	320.00 acre-feet
York School	32.00 acre-feet
Laguna Seca County Park	41.00 acre-feet

Coastal Subarea Standard Producers:

California American Water	2,245.49 acre-feet*
Seaside (Municipal)	146.99 acre-feet**
Granite Rock	235.86 acre-feet***
D.B.O. Development 30	429.12 acre-feet****
Cypress (Calabrese).....	19.46 acre-feet*****

Laguna Seca Subarea Standard Producers:

California American Water.....	0.0 acre-feet
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- * Total is the 2018 base allocation of 1,791.62 acre-feet plus 182.91 of not free carryover plus 270.96 free carryover.
California American Water has a positive balance of 144.78 acre-feet of stored water credit at WY-end 2018 from Basin extractions exceeding injections since WY 2010 under the CAW/MPWMD ASR Program, formalized through a Storage Agreement in 2012.
 - ** Total is the 2019 base allocation of 146.99 acre-feet.
 - *** Total includes 180.68 acre-feet of “free” carryover and 41.32 acre-feet of “not-free” carryover credit from previous water years ***capped at the producers storage allocation of 222.0 acre-feet***, plus the 2019 base allocation of 13.87 acre-feet.
 - **** Total includes 341.51 acre-feet of “free” carryover plus 62.45 acre-feet of “not-free” carryover credit from previous water years ***capped at the producers storage allocation of 403.96 acre-feet***, plus the 2019 base allocation of 25.16 acre-feet.
 - ***** Total includes 14.36 acre-feet of “free” carryover and 1.73 acre-feet of “not-free” carryover credit from previous water years plus the 2019 base allocation of 3.37 acre-feet.

NOTICE TO ALL SEASIDE GROUNDWATER PRODUCERS

Pursuant to Section III.3.L.3.j.xix of the Amended Decision Filed February 2, 2007 in the Superior Court of the State of California, in and for the County of Monterey, Case No. M66343 (the “Decision”), the Seaside Basin Watermaster hereby Declares that the Total Usable Storage Space in the Seaside Groundwater Basin (“Basin”) is as follows:

Total Usable Storage Space in the Coastal and Northern Inland Subareas is 31,770 acre-feet.
 Total Usable Storage Space in the Laguna Seca Subarea is 20,260 acre-feet.
 Total Usable Storage Space in the entire Seaside Groundwater Basin is 52,030 acre-feet.

Pursuant to Section III.B.3.b of the Decision, Alternative Producers do not receive a storage allocation, only Standard Producers receive such an allocation. Pursuant to Section III.H.2 of the Decision, the Seaside Basin Watermaster further Declares that the Total Usable Storage Space in the Basin shall be allocated to the Standard Producers, who are identified in the Decision, as follows:

Producer	Current Allocation (Using Table 1 of the Decision)		
	Operating Yield Allocation Percentage (1)	Usable Storage Allocation Percentage (2)	Useable Storage Allocation (acre-feet)
Coastal and Northern Inland Subareas			
California American Water ⁽³⁾	77.55%	90.44%	28,733
City of Seaside (Municipal)	6.36%	7.42%	2,357
Granite Rock Company	0.60%	0.70%	222
DBO Development No. 27	1.09%	1.27%	404
Calabrese (Cypress Pacific Investors LLC)	0.15%	0.17%	54
SUBAREAS TOTAL	85.75%	100.00%	31,770
Laguna Seca Subarea			
California American Water (3)	45.13%	100.00%	20,260
SUBAREA TOTAL	45.13%	100%	20,260
BASIN TOTAL		100%	52,030

Footnotes:

- (1) From Table 1 on page 19 of the Decision.
- (2) Calculated as each Standard Producer’s percentage of the total Standard Producers’ operating yield allocation percentages within each subarea.
- (3) CAW’s Usable Storage Allocation is subject to the provisions and requirements of Section III.H.3 of the Decision.

Pursuant to Section III.H.6 of the Decision, no Producer may store water in the Basin without first executing with the Watermaster a Storage and Recovery Agreement.

February 3, 2010
 Revised January 15, 2015

SEASIDE GROUNDWATER BASIN
WATERMASTER

TO: Board of Directors

FROM: Robert S. Jaques, Technical Program Manager

DATE: January 2, 2019

SUBJECT: Discussion/Consider Approving Agreement with Cal Am and MPWMD for Storage and Recovery of Water from the Pure Water Monterey Project

RECOMMENDATIONS:

It is recommended that the Board approve the.

BACKGROUND:

At its March 14, 2018 meeting the TAC approved a joint application from Cal Am and MPWMD to store and recover water from the Pure Water Monterey Project in the Seaside Basin. The Board approved that application at its October 3, 2018 meeting.

DISCUSSION

Using the data and information contained in that application, the attached Agreement for Storage and Recovery of Water in the Seaside Basin was jointly prepared by me, MPWMD, and Cal Am. The format of this Agreement is similar to the Agreement with Cal Am for storage and recovery of ASR water in the Basin that was issued by the Watermaster on October 21, 2011.

The TAC approved this Agreement at its November 21, 2018 meeting.

ATTACHMENTS:

Agreement for Storage and Recovery of Non-Native Water from the Seaside Groundwater Basin

**AGREEMENT FOR STORAGE AND
RECOVERY OF
NON-NATIVE
WATER FROM THE
SEASIDE GROUNDWATER BASIN**

THIS AGREEMENT is made and entered into on _____, _____, by and between the SEASIDE BASIN WATERMASTER (the "WATERMASTER"), California-American Water Company (the "PRODUCER"), and the Monterey Peninsula Water Management District (the "DISTRICT") as follows:

Recitals

1. The WATERMASTER was created by the Amended Decision of the Monterey County Superior Court, filed February 9, 2007, Case No. M66343 (the "Decision"). This Decision was made for the purposes of managing and protecting the Seaside Groundwater Basin ("Basin") for the benefit of the businesses, individuals, and public agencies that overlie or extract groundwater from the Basin. PRODUCER and DISTRICT are parties to the Decision.
2. In February of 2010, the WATERMASTER, in accordance with Section III.3.L.3.j.xix and III.H.2 of the Decision, allocated 28,784 acre-feet of Storage in the Coastal and Northern Inland Subareas to the PRODUCER. In accordance with Section III.H.3 of the Decision, PRODUCER may use its Storage Allocation for the benefit of its customers and for other purposes as PRODUCER deems appropriate.
3. Section III.H.1 of the Decision states that the Parties shall be permitted to utilize available Storage space for "bona fide Groundwater Storage Projects." Further, Section III.Q of the Decision states that: (a) DISTRICT can store water for the benefit of DISTRICT in the Basin; and (b) the Decision preserves DISTRICT's statutory right to store water in subterranean reservoirs.
4. The PRODUCER and WATERMASTER have an existing *Agreement for Storage and Recovery of Non-Native Water from the Seaside Groundwater Basin* dated October 21, 2011, which authorizes PRODUCER to store 2,426 acre-fee per year of Non-Native water in, and to subsequently recover that stored water from, the Basin.
5. In accordance with the *Water Purchase Agreement for Pure Water Monterey Project* made by and between PRODUCER, DISTRICT, and MONTEREY ONE WATER ("MIW") (formerly the Monterey Regional Water Pollution Control Agency) dated September 19, 2016 (the "WPA"), incorporated herein by this reference, the DISTRICT will deliver for the benefit of PRODUCER advanced treated recycled water from the Pure Water Monterey project (the "AWT Water") to the Basin for injection, storage, and recovery from the Basin.

6. PRODUCER and DISTRICT have applied to the WATERMASTER for permission to, using PRODUCER's Storage Allocation, Store the AWT Water in, and subsequently recover that Stored Water from, the Basin.
7. Under the authorities granted to the WATERMASTER by the Decision, on October 3, 2018 the WATERMASTER approved the application of the PRODUCER and the DISTRICT and hereby grants permission to the PRODUCER and the DISTRICT to store Non-Native water/AWT Water in, and to recover that stored water from, the Basin, as described in and subject to the Terms and Conditions contained in this Agreement.

Terms and Conditions

NOW, THEREFORE, in consideration of the foregoing and the mutual promises contained herein, the parties hereto agree to the following terms and conditions:

1. Definitions. Unless otherwise specifically defined herein, the defined terms shall be given the same definition and meaning set forth in the Decision, as listed in Attachment A.
2. Storage Quantity. The PRODUCER is authorized to store, by means of direct injection by DISTRICT or M1W, 6,000 acre-feet per year of the AWT Water in the Basin, which includes AWT Water used to backflush an injection well that percolates into the ground. The DISTRICT is authorized, using the PRODUCER's Storage Allocation, to store by means of direct injection up to 4,000 acre-feet of the AWT Water for the PRODUCER's future use (the "Reserve Water"). In the event the WATERMASTER revises the Total Usable Storage Space of the Basin in accordance with Section III.H.4 of the Decision, or if one or more Alternative Producers converts entirely or in part from an Alternative Production Allocation to a Standard Production Allocation in accordance with Section III.B.3.e of the Decision, the PRODUCER's Storage Allocation may change, and this may affect the storage quantity authorized by this Agreement; however, any reduction in storage quantity will not result in a corresponding reduction in the amount of AWT Water actually stored at the time of the change. In such instance this Agreement will be modified to reflect these changes. Further, the parties may agree by written amendment to this Agreement to revise the storage quantities authorized herein.
3. Storage Location(s). The storage of water authorized under paragraph 2 above will be performed at the following location(s): see Attachment B.
4. Recovery Location(s). PRODUCER is authorized to recover the AWT Water stored at the location(s) described under paragraph 3 above, which recovery must be performed within the same Subarea of the Basin as the location(s) within which it was stored. PRODUCER will recover the AWT Water at the following location(s), or at such other locations as may be approved by WATERMASTER upon written request by PRODUCER or DISTRICT:

- A. Ord Grove Well #2, 1987 Park Ct., Seaside (Santa Margarita)
- B. Paralta Well, 2104 Paralta Ave., Seaside (Santa Margarita)

- C. Luzern Well #2, 1984 Luzern St., Seaside (Paso Robles)
 - D. Playa Well #3, 1237 Playa Ave., Seaside (Paso Robles)
 - E. Plumas Well #4, 1453 Plumas Lane, Seaside (Paso Robles)
 - F. Santa Margarita ASR-1, 1910 General Jim Moore Blvd, Seaside (Santa Margarita)
 - G. Santa Margarita ASR-2, 1910 General Jim Moore Blvd, Seaside (Santa Margarita)
 - H. Seaside Middle School ASR-3, 2111 General Jim Moore Blvd, Seaside (Santa Margarita)
 - I. Seaside Middle School ASR-4, 2111 General Jim Moore Blvd, Seaside (Santa Margarita)
 - J. Fitch Park ASR-5, General Jim Moore Blvd, Seaside (Santa Margarita)
 - K. Fitch Park ASR-6, General Jim Moore Blvd, Seaside (Santa Margarita)
5. Recovery Quantity. The PRODUCER is initially authorized to recover (Extract) the full amount of the AWT Water actually Stored in accordance with this Agreement. However, due to the hydrogeologic characteristics of the Seaside Basin, naturally occurring losses of Stored Water may result in the WATERMASTER reducing the percentage of Stored Water that may be Extracted. Should the WATERMASTER determine that this needs to be done, this Agreement will be modified to reflect the reduced quantity of water that the PRODUCER may recover, and the technical basis for this determination will be provided to all PRODUCERS.
6. Water Quality. The DISTRICT hereby certifies that prior to the AWT Water being introduced into the Basin for Storage in accordance with this Agreement, all such water will meet all of the requirements imposed on the DISTRICT or M1W by permits and/or approvals issued to the DISTRICT or M1W by the California Regional Water Quality Control Board and any other water quality standards imposed by any other government entity, including without limitation the California Department of Public Health and the Monterey County Department of Environmental Health.

DISTRICT shall ensure that the water quality characteristics of the AWT Water that will be stored under this Agreement meet the “Water Treatment Guarantee” as defined in the WPA, which definition is incorporated herein by this reference, which characteristics are considered by all parties to this Agreement to not pose a threat of harm to the Basin.

DISTRICT agrees that prior to injecting any AWT Water into the Basin for Storage, it must provide to the WATERMASTER the geochemical interaction modeling assessment (including any recommended mitigation measures) (“Modeling Assessment”) contemplated by the February 10, 2018 Memorandum of Agreement Between the Seaside Basin Watermaster, the Monterey Peninsula Water Management District, California American Water Company, and Monterey One Water to Share in the Costs of Performing Geochemical Modeling of the Seaside Basin Groundwater Basin (see Attachment C). If the Modeling Assessment recommends implementation of mitigation measures to avoid a Material Injury (as defined in the Decision) resulting from the injection of AWT Water into the Basin, DISTRICT must, prior to the initial injection of AWT Water, demonstrate

to the reasonable satisfaction of WATERMASTER that sufficient measures will be implemented to avoid Material Injury.

The Parties expect that desalinated water will not be present/injected into the Basin prior to the initial injection of AWT Water, therefore, in that case, any mitigation measures to be implemented prior to the initial injection of AWT Water shall not include any measures recommended as a result of the presence/injection of desalinated water. Any mitigation measures to be required as a result of the injection of desalinated water into the Basin will be addressed at the time a Storage and Recovery Agreement for desalinated water is presented to the WATERMASTER for consideration.

7. Carryover and Stored Water Credits. In accordance with Section III.F of the Decision, if during a particular Water Year the PRODUCER does not Extract from the Basin a total quantity equal to the PRODUCER's Standard Production Allocation for the particular Water Year, the PRODUCER may establish Carryover Credits, up to the total amount of the PRODUCER's Storage Allocation.

However, in accordance with the Decision in no circumstance may the sum of the PRODUCER's Stored Water Credits and Carryover Credits exceed the PRODUCER's available Storage Allocation. Further, in accordance with Section III.H.5 of the Decision, unused (not Extracted) Stored Water Credits may be carried over from year to year, but due to the hydrogeologic characteristics of the Seaside Basin, naturally occurring losses of Stored Water may require Watermaster to discount the percentage of Stored Water that may be Extracted.

8. Measurement and Reporting of Extractions and Storage. In accordance with Section III.J of the Decision, the DISTRICT shall ensure that adequate measuring devices are installed, maintained, and used on all AWT Water injection facilities, and the PRODUCER shall ensure that adequate measuring devices are installed, maintained, and used on all of PRODUCER's Extraction facilities, as required by the WATERMASTER's Rules and Regulations and this Agreement.

Beginning on the initial delivery of AWT Water to the Basin for Storage in accordance with this Agreement, the DISTRICT shall provide to the WATERMASTER a monthly injection report containing the following data for the preceding month:

- The quantity of AWT Water that was injected by the DISTRICT for delivery to PRODUCER (defined as "Company Water" in the WPA, which definition is incorporated herein by this reference)
- The quantity of AWT Water that was injected by the DISTRICT as Reserve Water
- The location(s) where the water was injected

Beginning on the initial delivery of Company Water by the DISTRICT to the PRODUCER in accordance with the WPA, the PRODUCER shall provide to the WATERMASTER, as part of each monthly Production Report, data for the reporting period stating:

- The quantity of Company Water that was recovered (Extracted)
- The location(s) where the Company Water was recovered (Extracted)

9. Indemnification. The PRODUCER shall assume the defense of, indemnify and hold harmless, the WATERMASTER, its officers, agents and employees from all claims, liability, loss, damage or injury of any kind, nature or description arising directly or indirectly from actions or omissions by the PRODUCER or any of its officers, agents, employees, or independent contractors relating to this Agreement, excepting claims, liability, loss, damage or injury which arise from the willful or negligent acts, omissions, or activities of an officer, agent or employee of the WATERMASTER.

The DISTRICT shall assume the defense of, indemnify and hold harmless, the WATERMASTER, its officers, agents and employees from all claims, liability, loss, damage or injury of any kind, nature or description arising directly or indirectly from actions or omissions by the DISTRICT or any of its officers, agents, employees, or independent contractors relating to this Agreement, excepting claims, liability, loss, damage or injury which arise from the willful or negligent acts, omissions, or activities of an officer, agent or employee of the WATERMASTER.

10. Successors and Assigns. This Agreement, and all the terms and conditions hereof, shall apply to and bind the successors and assigns of the respective parties hereto; provided that the PRODUCER and the DISTRICT shall not assign this Agreement without prior written consent of the WATERMASTER.
11. Further Cooperation. Each of the parties agree to reasonably cooperate with each other, and to execute and deliver to the other all such documents and instruments, and to take such further actions, as may reasonably be required to give effect to the terms and conditions of this Agreement.
12. Interpretation. It is agreed and understood by the parties hereto that this Agreement has been arrived at through negotiation and that no party is to be deemed the party which prepared this Agreement within the meaning of Civil Code §1654. The provisions of this Agreement shall be interpreted in a reasonable manner to effect the purpose of the parties and this Agreement.
13. Disputes. If any dispute under this Agreement arises the parties shall first meet and confer in a good faith attempt to resolve the matter between themselves. Each party shall make all reasonable efforts to provide to the other parties all the information that the party has in its possession that is relevant to the dispute, so that all parties will have ample information with which to reach a decision. If the dispute is not resolved by meeting and conferring, the matter shall be submitted to the Court for resolution pursuant to the Court's reserved jurisdiction as set forth in the Decision.
14. Modification. This Agreement may be amended, altered or modified only by a writing, specifying such amendment, alteration or modification, executed by authorized representatives of each of the parties hereto.
15. Attorney's Fees and Costs. In the event it should become necessary for any party to enforce

any of the terms and conditions of this Agreement by means of court action or administrative enforcement, the prevailing party/parties, in addition to any other remedy at law or in equity available to such party, shall be awarded from the non-prevailing party/parties all reasonable costs and reasonable attorney's fees in connection therewith, including the fees and costs of experts reasonably consulted by the attorneys for the prevailing party/parties.

16. Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which shall be deemed to constitute one and the same instrument.

17. Written Notice. 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. PRODUCER: Director of Operations
 California American Water
 511 Forest Lodge Road, Suite 100
 Pacific Grove, CA 93950

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

18. Conflicts with the Decision. The Parties believe this Agreement to be consistent with the terms of the Decision and agree that the PRODUCER's and DISTRICT's rights under this Agreement are subject to the Decision and in the event of any conflict between the provisions of this Agreement and the Decision, the Decision shall control.

19. Entire Agreement. This Agreement constitutes the entire and complete agreement between the parties regarding the subject matter hereof, and supersedes all prior or contemporaneous negotiations, understandings or agreements of the parties, whether written or oral, with respect to such subject matter.

20. Term. This Agreement shall be effective on the date it has been executed by all Parties and shall be coterminous with the WPA.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement consisting of seven (7) pages and three (3) attachments in triplicate on the date hereinabove written.

WATERMASTER

By _____
Paul Bruno
Chairperson

PRODUCER

By _____
Garry Hofer
Vice President, Operations

DISTRICT

By _____
David Stoldt
General Manager

ATTACHMENT A

DEFINITIONS (Excerpted from the Decision)

"Artificial Replenishment" means the act of the WATERMASTER, directly or indirectly, engaging in or contracting for Non-Native Water to be added to the Groundwater supply of the Seaside Basin through Spreading or Direct Injection to offset the cumulative Over-Production from the Seaside Basin in any particular Water Year pursuant to Section III.L.3.j.iii. It shall also include programs in which Producers agree to refrain, in whole or in part, from exercising their right to produce their full Production Allocation where the intent is to cause the replenishment of the Seaside Basin through forbearance in lieu of the injection or spreading of Non-Native Water.

"Carryover" means that portion of a Party's Production Allocation that is not Extracted from the Basin during a particular Water Year. Each acre-foot of Carryover establishes an acre-foot of Carryover Credit.

"Carryover Credit(s)" means the quantity of Water established through Carryover, that a Party is entitled to Produce from the Basin pursuant to Section III.F.

"Extraction," "Extractions," "Extracting," "Extracted," and other variations of the same noun or verb, mean pumping, taking, diverting or withdrawing Groundwater by any manner or means whatsoever from the Seaside Basin.

"Groundwater" means all Water beneath the ground surface in the Seaside Basin, including Water from Natural Replenishment, Artificial Replenishment, Carryover, and Stored Water.

"Natural Replenishment" means all processes by which Water may become a part of the Groundwater supply of the Seaside Basin without the benefit of the Physical Solution and the coordinated management it provides. Groundwater that occurs in the Seaside Basin as a result of the Physical Solution, which is not Natural Replenishment, includes, but is not limited to Storage, Carryover, and Artificial Replenishment.

"Non-Native Water" means all Water that would not otherwise add to the Groundwater supply through natural means or from return flows from surface applications other than intentional Spreading.

"Physical Solution" means the efficient and equitable management of Groundwater resources within the Seaside Basin, as prescribed by this Decision, to maximize the reasonable and beneficial use of Water resources in a manner that is consistent with Article X, Section 2 of the California Constitution, the public interest, and the basin rights of the Parties, while working to bring the Production of Native Water to Natural Safe Yield.

"Producer" means a Party possessing a Base Water Right.

"Standard Production Allocation" is the amount of Groundwater that a Producer participating in this allocation method may Produce from a Subarea of the Seaside Basin as provided in Section III.B.2, which is determined by multiplying the Base Water Right by the Operating Yield.

"Storage" means the existence of Stored Water in the Seaside Basin.

"Storage Allocation" means that quantity of Stored Water in acre feet that a Party is allowed to Store in the Coastal Subarea or the Laguna Seca Subarea at any particular time.

"Storage Allocation Percentage" means the percentage of Total Usable Storage Space allocated to each Producer proceeding under the Standard Production Allocation. Producers proceeding under the Alternative Production Allocation are not allocated Storage rights and, consequently, their share of the Total Usable Storage Space is apportioned to the Producers proceeding under the Standard Production Allocation. Pursuant to the terms of Section III.B.3, Parties proceeding under the Alternative Production Allocation enjoy a one-time right to change to the Standard Production Allocation. Due to the recalculation of the Storage Allocation Percentage necessitated when a Party changes to the Standard Production Allocation, the WATERMASTER will maintain the up-to-date Seaside Basin Storage Allocation Percentages.

"Storage and Recovery Agreement" means an agreement between WATERMASTER and a Party for Storage pursuant to Section III.L.3.j.xx.

"Store" and other variations of the same verb refer to the activities establishing Stored Water in the Seaside Basin.

"Stored Water" means (1) Non-Native Water introduced into the Seaside Basin by a Party or any predecessors-in-interest by Spreading or Directly Injecting that Water into the Seaside Basin for Storage and subsequent Extraction by and for the benefit of that Party or their successors-in-interest; (2) Groundwater within the Seaside Basin that is accounted for as a Producer's Carryover; or (3) Non-Native water introduced into the Basin through purchases by the WATERMASTER, and used to reduce and ultimately reverse Over-Production.

"Stored Water Credit" means the quantity of Stored Water augmenting the Basin's Retrievable Groundwater Supply, which is attributable to a Party's Storage and further governed by this Decision and a Storage and Recovery Agreement.

"Total Useable Storage Space" means the maximum amount of space available in the Seaside Basin that can prudently be used for Storage as shall be determined and modified by WATERMASTER pursuant to Section III.L.3.j.xix, less Storage space which may be reserved by the WATERMASTER for its use in recharging the Basin.

ATTACHMENT B

Delivery Point

AWT Water will be injected by DISTRICT or MIW into the Seaside Groundwater Basin using new injection wells. The proposed new Injection Well Facilities will be located east of General Jim Moore Boulevard, south of Eucalyptus Road in the City of Seaside, including up to eight injection wells (four deep injection wells, four vadose zone wells, in pairs identified as #5, #6, #7, and #8 in the figure below), six monitoring wells, and back-flush facilities.



ATTACHMENT C
MODELING AGREEMENT

MEMORANDUM OF AGREEMENT

**BETWEEN THE SEASIDE BASIN WATERMASTER,
THE MONTEREY PENINSULA WATER MANAGEMENT
DISTRICT,
CALIFORNIA AMERICAN WATER COMPANY,
AND
MONTEREY ONE WATER**

**TO SHARE IN THE COSTS OF PERFORMING GEOCHEMICAL
MODELING
OF THE SEASIDE BASIN GROUNDWATER BASIN**

THIS AGREEMENT is made and entered into this 10th day of February, 2018, by and between the SEASIDE BASIN WATERMASTER, hereinafter referred to as the "WATERMASTER", and the MONTEREY PENINSULA WATER MANAGEMENT DISTRICT, hereinafter referred to as the "DISTRICT", CALIFORNIA AMERICAN WATER COMPANY, hereinafter referred to as "CAWC," and MONTEREY ONE WATER, hereinafter referred to as "MIW," as follows.

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

RECITALS:

- A. The WATERMASTER was established for the purposes of administering and enforcing the provisions of the Amended Decision filed February 9, 2007 in Case No. M66343, California Superior Court, Monterey County ("Amended Decision").
- B. Section L.3.j.xxi of the Judgment states in part "The Watermaster will monitor and perform or obtain engineering, hydrogeologic, and scientific studies concerning all characteristics and workings of the Seaside Basin, and all natural and human-induced influences on the Seaside Basin, as they may affect the quantity and quality of Water available for Extraction, that are reasonably required for the purposes of achieving prudent management of the Seaside Basin in accord with the provisions of this Decision."
- C. Section L.3.j.xxiii of the Judgment states in part "The Watermaster will take any action within the Seaside Basin, including, but not limited to, capital expenditures and legal actions, which in the discretion of Watermaster is necessary or desirable to accomplish any of the following:

- Prevent contaminants from entering the Groundwater supplies of the Seaside Basin, which present a significant threat to the Groundwater quality of the Seaside Basin, whether or not the threat is immediate;
 - Remove contaminants from the Groundwater supplies of the Seaside Basin presenting a significant threat to the Groundwater quality of the Seaside Basin;
 - Determine the existence, extent, and location of contaminants in, or which may enter, the Groundwater supplies of the Seaside Basin;
 - Determine Persons responsible for those contaminants; and
 - Perform or obtain engineering, hydrologic, and scientific studies as may be reasonably required for any of the foregoing purposes.
- D. The DISTRICT, CAWC, and MIW intend to submit application(s) to the WATERMASTER for Storage of Non-Native Water in the Seaside Basin (“Application(s)”) in accordance with Section III.L.3.j.xx of the Amended Decision, which states in part: “The Watermaster will review applications for Storage in the Seaside Basin, regulate the Storage of Non-Native Water in the Seaside Basin, and issue Storage and Recovery Agreements, all as provided below. All applications for Storage in the Seaside Basin shall be considered and voted on before a noticed meeting of the Watermaster. However, all such applications shall be approved absent the issuance of findings that a Material Injury to the Seaside Basin or Producers will or is likely to occur as a result of the proposed Storage program and no reasonable conditions could be imposed to eliminate such risk. If a Storage application is approved, the Watermaster shall issue a Storage and Recovery Agreement. The Storage and Recovery Agreement may include, among other possible elements and/or provisions, the following conditions to avoid Material Injury: ... (4) the particular Water quality characteristics that are required pursuant to the Storage and Recovery Agreement... and any other terms and conditions deemed necessary to protect the Seaside Basin and those areas affected by the Seaside Basin.”
- E. The DISTRICT, CAWC, and MIW propose to store Non-Native Water from the following sources: (1) ASR water produced by the DISTRICT; (2) desalinated seawater produced by CAWC’s Monterey Peninsula Water Supply Project (“Desal Water”), and water produced by MIW’s Pure Water Monterey project (“PWM Water”). As part of carrying out its duties and responsibilities under the Amended Decision, the WATERMASTER has requested that the Application(s) include a geochemical interaction modeling assessment investigating the potential for adverse geochemical reactions resulting from the introduction of these waters into the Seaside Basin and, if applicable, identifying measures to avoid such adverse reactions.

Terms and Conditions

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

- A. Work to be performed.** The DISTRICT will contract directly with its consultant, Pueblo Water Resources, Inc. ("Consultant"), to perform modeling of the proposed groundwater storage and recovery projects to assess the geochemical interaction effects of introducing the non-native water from these projects into the native water in the Basin ("Work"). The Scope of Work and the estimated costs to perform this work are described in Attachment 1 to this Agreement. The DISTRICT will invite the staff of each of the Parties to this Agreement to attend any key milestone meetings and conference calls that are held between the DISTRICT and its Consultant as the Work is being performed, in order to enable each of the Parties to stay abreast of the work, raise pertinent questions in a timely manner, and provide input as appropriate.

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

- B. Costs to be shared.** The \$68,679 cost to be shared is contained in the Estimated Fee Summary of Attachment 1. This cost will be shared in the following percentages:
- Watermaster share = 0% (\$0)
 - District share = 33 and 1/3% (\$22,893)
 - CAWC share = 33 and 1/3% (\$22,893)
 - M1W share = 33 and 1/3% (\$22,893)

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

As noted under the heading "Services Not Included" in Attachment 1, certain items are not included in the Consultant's scope of work or estimated costs. These items include:

- Laboratory fees
- Construction of site facilities
- Permit fees
- Cost of water, electricity, or other utilities, and
- Any other items not specifically included in the Consultant's scope of services.

The parties agree that the DISTRICT, CAWC, and M1W will each undertake and pay for these activities for their individual projects.

- C. Documents to be provided.** The DISTRICT will ensure that: (1) After completion of Tasks 1, 2, 3, 4, and 5, as described in Attachment 1, a Technical Memorandum or summary report will be prepared by the Consultant and provided by the DISTRICT to each of the other Parties, and (2) After completion of Task 6 an overall summary report will be prepared by the Consultant and provided by the DISTRICT to each of the other Parties.
- D. Payment of costs and reimbursement to the DISTRICT.** The DISTRICT will make progress payments to the Consultant as it satisfactorily performs the Work. After the satisfactory completion of the work, the DISTRICT will provide to CAWC and MIW copies of the invoices received from and payments made to the Consultant. Within 45 days of receiving those documents, CAWC and MIW will reimburse the DISTRICT for their respective shares of those costs.
- E. Term of Agreement.** The term of this Agreement shall commence on the date of its execution by all Parties, and shall continue in effect until the DISTRICT has been reimbursed as described in paragraph D above.
- F. Hold Harmless.** Under this Agreement the Parties do hereby agree to indemnify, defend, and hold the other Parties, their respective Board members, officers, employees, agents, and representatives harmless from and against any and all liability, claims, suits, actions, damages, and causes of action of any kind arising out of the indemnifying Party's use of the Work in the planning, design, and construction, operation, and maintenance of the indemnifying Party's projects.
- G. Venue.** This Agreement shall be governed by the laws of the state of California. The Parties agree that venue for any litigation arising out of this Agreement shall be exclusively vested in the state courts of the County of Monterey, or the United States District Court for the Northern District of California. Further, the prevailing Party shall be entitled to reasonable attorney fees and costs.
- H. Miscellaneous.** This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which shall be deemed to constitute one and the same instrument. Paragraph headings are for convenience only and shall not be used in interpreting this Agreement. All Attachments to this Agreement are incorporated herein. This Agreement constitutes the entire agreement between the Parties with respect to the subject matter herein and may only be modified in a writing executed by all Parties. Each Party acknowledges that it participated in the drafting of this Agreement and agrees that any ambiguity herein shall not be construed against any Party as the drafter of the Agreement.
- I. Notices.** Written notice shall be deemed to have been duly served if delivered in person or by mail to the individuals and at the addresses listed below:

- A. WATERMASTER: Technical Program Manager
Seaside Basin Watermaster
P.O. Box 51502
Pacific Grove, CA 93950
- B. DISTRICT: General Manager
Monterey Peninsula Water Management District
5 Harris Court, Building G
Monterey, CA 93940
- C. CAWC: Operations Manager, Central Division
California American Water
511 Forest Lodge Road, Suite 100
Pacific Grove, CA 93950
- D. MIW: General Manager
Monterey One Water
5 Harris Court, Building D
Monterey, CA 93940

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

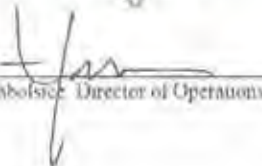
WATERMASTER
Date: 2/10/18

By: 
Ralph Rubiff, Chair, Board of Directors

DISTRICT
Date: 2/12/18

By: 
David Stoll, General Manager

CAWC
Date: 2/7/18

By: 
Eric Sabolsick, Director of Operations

MIW

Date: 2-14-18

By: *Paul Sciuto*
Paul Sciuto, General Manager

-

ATTACHMENT 1

Scope of Work and Cost

to

Perform Modeling

**of Proposed Groundwater Recharge Projects to Assess the Geochemical
Interaction Effects of Introducing Non-native Water from Those
Projects into the Native Water in the Basin**



November 17, 2017
Project No. 12-0048

Monterey Peninsula Water Management District
5 Harris Court, Building G
Monterey, California 93942

Attention: Mr. Jonathan Lear, Senior Hydrogeologist

Subject: Proposal for Seaside Groundwater Basin Geochemical Interaction Evaluation

Dear Mr. Lear:

In accordance with your request, Pueblo Water Resources, Inc. (PWR) is pleased to submit this proposal to provide a geochemical interaction evaluation of various managed aquifer recharge (MAR) projects currently planned to be implemented in the Seaside Groundwater Basin (SGB). Presented in this proposal is a detailed scope of work, estimated costs, and schedule to provide the requested services.

PURPOSE AND SCOPE

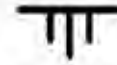
The purpose of the proposed work is to perform an initial geochemical interaction modeling assessment of various active and proposed MAR projects in the SGB. The only currently active MAR project is the Monterey Peninsula ASR Project, which injects treated excess Carmel River System water into 4 existing ASR wells (ASR-1 through ASR-4). Proposed MAR projects include the Pure Water Monterey and Monterey Peninsula Water Supply Project (MPWSP), which would inject advanced treated recycled water and desalinated seawater, respectively, into future injection wells in the SGB. The proposed activities and programs related to MAR in the SGB will ultimately result in the mixing and interaction of the following 4 waters:

- Santa Margarita Sandstone aquifer native groundwater
- Treated and disinfected Carmel River System water
- Treated water from the Pure Water Monterey project
- Desalinated seawater from the MPWSP

All of these waters will mix together in various proportions at various times within the geologic matrix of the Santa Margarita Sandstone aquifer (Tsm) within the SGB. The intermixing of these 4 waters and their individual and combined reactions with the minerals in the Tsm formation will result in a variety of geochemical reactions – these reactions may be beneficial (e.g., stabilization of water quality and reduction in corrosivity) or potentially problematic (e.g., precipitation of cementitious scales or evolution of gasses) – and would alter the quality of the

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water recovered from the ASR wells and California American Water's (CAW) other municipal production wells in the SGB.

It is therefore prudent to investigate these geochemical reactions and to identify the potential for adverse reactions; and if present, to identify measures to avoid such adverse conditions. The investigation proposed herein will address these issues through a stepwise approach as discussed below.

Scope of Services

The above scenarios can be analyzed through utilization of geochemical simulations from various interaction models and chemical equilibrium databases. A geochemical interaction model has been developed by PWR in recent years to address the interaction of the Tsm mineralogy with Carmel River System waters and Native Tsm groundwater to address these same issues, and will be expanded to cover the more complex interactions of the 4 proposed project waters. PWR's existing geochemical model is based on the USGS geochemical interaction software PHREEQC-2, version 2.15.2697 combined with the robust Lawrence Livermore National Laboratory (LLNL) geochemical equilibrium database.

Implementation of the investigation will include the following tasks, which are structured to allow assessment of results at each step and provide the opportunity to modify the investigation or drop specific lines of analysis due to either fatal flaws or findings of no potential significance. A brief overview of the proposed scope or work by task is presented below:

Task 1 – Water Chemistry Data Compilation

Characterize the complete composition and character of the 4 water sources via laboratory and field analyses, or in the case of waters that do not currently exist (ie MPWSP disposal plant water and Pure Water Monterey project effluent), quantitative process modeling estimations of water quality parameters (note that these process modeling estimations are not part of our services and would be provided by the project proponent's engineers). The initial step in this effort will be the preparation of a list of water chemistry parameters necessary for geochemical interaction modeling and a request for data for the injection source waters from the Pure Water Monterey and MPWSP project sponsors (MRWPCA and CAW, respectively). Data gaps will be identified and a Sampling and Analysis Plan (SAP) will be developed to fill any data gaps.

Task Deliverable: A Technical Memorandum (TM) summarizing the available water quality data for each of the project sources, and a SAP to fill-in missing data. *Note that no costs for collection of field or laboratory data are budgeted in this task. If additional sampling is necessary, such costs are assumed to be the responsibility of the respective source water generators or project proponents.*

Task Duration: 4 weeks



Task 2 – Aquifer Mineralogy Data Compilation

Characterize the mineral composition of the Tsm aquifer via empirical laboratory analysis of well cuttings and/or core samples. These data already exist for two of the ASR project wells (ASR-2 and ASR-3) that characterize the Tsm aquifer mineralogy at the two ASR facilities (Santa Margarita and Seaside Middle School, respectively); however, similar data will be needed for the Pure Water Monterey and MPWSP well facilities, and will need to be coordinated with the construction of the new wells for these projects. In addition, the older/existing mineralogical data may be incomplete for purposes of this new modeling effort. To maximize the quality and quantity of data available for this work, detailed protocols for sample collection and analytical testing will be provided.

Task Deliverable: A TM summarizing the mineral characterization of the Tsm, and protocol for the sample collection and analysis of upcoming Tsm mineralogy samples. *Note that no costs for field or laboratory analyses are budgeted for this task, but are reportedly included in the current budgets for the construction of the monitoring well for the Pure Water Monterey project in May 2018.*

Task Duration: 2 weeks

Task 3 – Geochemical Model Development

Develop a geochemical interaction model based on the data derived from Tasks 1 and 2 above, combined with the geochemical equilibrium databases discussed previously.

To complete this work, the existing model will be upgraded and expanded, including the addition of the most recent French Geological Survey (BRGM) Thermoddem V1.1 database and the Swiss (ETH Zurich) CHEMDATA17 database. The upgrades will allow further analysis of water quality stabilization, more accurate identification of sulfate/carbonate/siliceous scaling, and assessment of corrosivity issues in recovered waters.

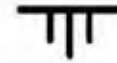
Task Deliverable: A summary of model base and primary settings will be provided if requested.

Task Duration: 3 weeks

Task 4 – Model Mixing Ratios

Upon completion of Task 3, PWR will model a number of mixing ratios of the four water types. For the purpose of planning, there will be 21 mixtures of various percentage mixtures of the four water types; **Table 1** outlines the mixing ratios that will initially be modeled. The matrix of water mixtures presented in **Table 1** were chosen through discussions with MPWMD staff to bracket the potential extreme case mixing scenarios that might occur during program operations; this methodology should identify potential problem areas to avoid early in the investigation, which will allow additional efforts to analyze these scenarios if warranted.

PWR will analyze the geochemical stability of each of the individual waters, and perform the modeling of the proposed intermixing scenarios described above. The results of the



modeling will be analyzed and interpreted with specific attention to potentially adverse geochemical interactions such as mineral scale formation, gas evolution, and leaching/mobilization of deleterious compounds within the Tsm formation.

Task Deliverable: A TM summarizing the results of the geochemical interaction modeling, and recommendations for additional model scenarios based on the initial output runs.

Task Duration: 6 weeks

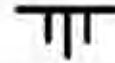
Table 1. Summary of Mix Ratios for Geochemical Modeling

Mix No.	% Native Tsm Water	% Treated Carmel River Water	% Reclaimed PWM Water	% Desal Water
1	100	0	0	0
2	0	100	0	0
3	0	0	100	0
4	0	0	0	100
5	66	33	0	0
6	66	0	33	0
7	66	0	0	33
8	33	66	0	0
9	0	66	33	0
10	0	66	0	33
11	33	0	66	0
12	0	33	66	0
13	0	0	66	33
14	33	0	0	66
15	0	33	0	66
16	0	0	33	66
17	55	15	15	15
18	15	55	15	15
19	15	15	55	15
20	15	15	15	55
21	25	25	25	25

Task 5 – (Optional Task) Additional Focused Analysis

Based on the results of Task 4 above, PWR will identify those mixture simulations that show undesirable geochemical reactions (ie mineral precipitation or gas evolution) and will re-run those model simulations under various modifications of mix ratios and/or aquifer conditions

12-0048_SGB_Geochem_Modeling_prc_draft_2017-11-07REV4



to identify methods of mitigating the observed adverse reactions and to identify potential operational scenarios which would prevent such adverse geochemical reactions from occurring.

Task Deliverable: A TM summarizing the results of the supplemental modeling and recommendations for project design and/or operational changes associated with enhancing recovered water quality or avoiding adverse geochemical reactions.

Task Duration: 4-6 weeks

Task 6 – Reporting

Upon the conclusion of tasks 1-5, PWR will develop an overall summary report and recommendations for process and/or operational changes for each project to reduce or avoid adverse geochemical reactions. PWR will also participate in two technical workshops with project stakeholders to discuss the impacts to the various regional projects, and participate in one presentation to the Watermaster Board to address questions and present findings.

Task Duration: 4 weeks

Task 7 – Project Management and Meetings

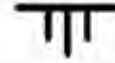
Provide routine project management, including invoicing, schedule management, project coordination and communication. This will include one intermediate and one final presentation of the evaluation findings and recommendations to the SGB Water Master Technical Advisory Committee (TAC).

Task Duration: Ongoing

Services Not Included

It should be noted that completion of this project will require services which are not included in our proposal; the costs for these items are presumed to be paid for by the project proponents under the provisions of the Storage Agreement. These items include (but are not limited to) the following:

- Laboratory fees;
- Construction of site facilities;
- Permit fees;
- Cost of water, electricity, or other utilities;
- Any other items not specifically included in PWR's scope of services.



ESTIMATED FEES AND SCHEDULE

Based on the scope of services presented herein, we estimate the fees for our services will be approximately \$51,365, which will be billed on a time-plus-expenses basis in accordance with our current Fee Schedule (attached). An estimated fee summary worksheet is attached summarizing the estimated man-hours and costs per task/work item. The spreadsheet also identifies the cost total including Optional Task 5, as well as a 10 percent contingency which has been noted in the attached budget summary in the event that unforeseen project complications or constraints arise (total with optional task and 10% contingency is \$66,679). We recommend the contingency be held for authorization by District staff upon written justification by PWR.

We understand that in order to authorize this work, your Board must first approve a formal contract amendment. Based on our current workload, we believe that we can commence work within two weeks of your authorization and that the work will be completed within approximately 4 months.

We appreciate the opportunity to provide ongoing assistance to the District on this important community water-supply project. If you require additional information regarding this or other matters, please contact me.

Sincerely,

PUEBLO WATER RESOURCES, INC.

Stephen P. Tanner, P.E.
Principal Engineer

SPT.rdm

Attachments: Cost Estimation Spreadsheet
2018 Fee Schedule

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT
Professional Services for SGB Geochemical Interaction Evaluation



PWR Project No. 12-004S

ESTIMATED FEE SUMMARY

LABOR		Principal Professional	Senior Professional	Drafting	WP	Hours by Task	Estimated Task Cost
Hours Fee		\$200	\$100	\$100	\$50		
Task No.	Task Description						
1	Water Chemistry Data Collection	20			12	34	\$2,800
2	Aquifer Mineralogy Correlations	30				30	\$2,700
3	Geochemical Model Development	42				42	\$2,680
4	Mineralogical Analyses	67				67	\$13,700
5	Natural Fluid Analysis (NFA)	53				54	\$11,070
6	Reporting	42				42	\$2,680
7	PM and Meeting	20				20	\$4,000
						0	\$0
						0	\$0
						0	\$0
Hours by Labor Category		208	0	0	12		
Costs by Labor Category		\$41,600	\$0	\$0	\$1,100		
Total Labor Hours (not inc. Optional Task)						257	
Total Labor Costs (not inc. Optional Task)							\$51,380
Total Labor Hours (inc. Optional Task)							211
Total Labor Costs (inc. Optional Task)							\$62,438

OTHER DIRECT COSTS (ODCs)					
Item	Units	Unit Price	No. of Units	Fee	
Travel	Days	\$70		\$0	
Travel and Other	Days	\$100		\$0	
				\$0	
				\$0	
				\$0	
Subtotal ODCs					\$0

OUTSIDE SERVICES					
Task No.	Item	Units	Unit Price	No. of Units	Fee
					\$0
					\$0
					\$0
					\$0
					\$0
Subtotal Outside Services					\$0
Subtotal Outside Services w/ Markup (15%)					\$0

COST SUMMARY	
Labor (not inc. Optional Task)	\$51,380
Other Direct Costs	\$0
Outside Services	\$0
Subtotal (not inc. Optional Task)	\$51,380
10 % Contingency (not inc. Optional Task)	\$5,137
TOTAL ESTIMATED PROJECT COST (not inc. Optional Task)	\$56,517
Task 5 (Optional)	\$11,070
Subtotal (inc. Optional Task)	\$67,587
10 % Contingency (inc. Optional Task)	\$6,758
TOTAL ESTIMATED PROJECT COST (inc. Optional Task)	\$74,345

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**PUEBLO WATER RESOURCES, INC
2018 FEE SCHEDULE**

Professional Services

Principal Professional.....	\$205/hr
Senior Professional.....	\$190/hr
Project Professional.....	\$175/hr
Staff Professional.....	\$145/hr
Technician.....	\$135/hr
Illustrator.....	\$120/hr
Word Processing.....	\$100/hr

Other Direct Charges

Subcontracted Services.....	Cost Plus 15%
Outside Reproduction.....	Cost Plus 15%
Travel Expenses.....	Cost Plus 15%
Per Diem*.....	\$150/day
Vehicle	\$75/day

Equipment Charges

Drilling Fluid Test Kit.....	\$100/day, \$400/week
Field Water Quality Meter (Hach DR890).....	\$75/day, \$275/week
Orion ORP/pH/Temp Probe.....	\$75/day, \$275/week
Water Level Probes (In-Situ Mini-Troll/Level Troll).....	\$100/day, \$300/week
Fuji Ultrasonic Flowmeter.....	\$200/day, \$750/week

*Regionally and seasonally specific to project.

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SEASIDE GROUNDWATER BASIN
WATERMASTER

TO: Board of Directors

FROM: Robert S. Jaques, Technical Program Manager

DATE: January 2, 2019

SUBJECT: Discussion/Consider Approving Watermaster Annual Report for WY 2018 Due to be Filed with the Court on or before January 15, 2019

RECOMMENDATIONS:

It is recommended that the Board approve the Watermaster Annual Report for WY 2018.

BACKGROUND:

The Watermaster submits an Annual Report to the Court after the end of each Water Year to fulfill one of its obligations under the Court Decision that created the Watermaster. This document summarizes and provides information on all of the Watermaster's principle activities of the year, and as required by the Decision is organized into the following Sections:

- A. **Groundwater Extractions**
- B. **Groundwater Storage**
- C. **Amount of Artificial Replenishment, if any, performed by Watermaster**
- D. **Leases or sales of Production Allocation and Administrative Actions**
- E. **Use of imported, reclaimed, or desalinated Water as a source of Water for Storage or as a water supply for lands overlying the Seaside Basin**
- F. **Violations of the Decision and any corrective actions taken**
- G. **Watermaster administrative costs**
- H. **Replenishment Assessments**
- I. **All components of the Watermaster budget**
- J. **Water Quality Monitoring and Basin Management**
- K. **Conclusions and Recommendations**

DISCUSSION:

A Preliminary Draft Annual Report was presented to the TAC for its review and input at the TAC's November 21, 2018 meeting. Attached is the body of the Draft 2018 Annual Report, which reflects the TAC's input on the Preliminary Draft Annual Report. It also reflects edits recommended by Cal Am's legal counsel. The complete Draft version is posted on the Watermaster's website at <http://www.seasidebasinwatermaster.org/>.

The 2018 Annual Report is very similar in terms of topics covered and information provided, except that Section K (*Information that the Watermaster Would Otherwise Include within a Case Status Conference Statement*) has been reformatted as directed by the Court in its Order Amending Judgement filed March 29, 2018 to contain specific topic headings and content.

The Draft version of the Annual Report will be made into a Final version, reflecting any comments or recommendations from the Board at today's meeting. The Final version will be submitted to the Court not later than the January 15, 2019 submittal deadline established by the Court.

Due to the length of the Annual Report, rather than making a presentation at today's meeting, Staff will respond to questions about the Annual Report from the Board and the Public.

ATTACHMENTS:

Body of the Draft version of the Watermaster 2018 Annual Report.

FINAL DRAFT

SEASIDE BASIN WATERMASTER

ANNUAL REPORT – 2018

December 21, 2018

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SEASIDE BASIN WATERMASTER

ANNUAL REPORT – 2018

Integral to the Superior Court Decision (Decision) rendered by Judge Roger D. Randall on March 27, 2006 is the requirement to file an Annual Report. This 2018 Annual Report is being filed on or before January 15, 2019, consistent with the provisions of the Decision, as amended by the Order Amending Judgment filed March 29, 2018.

This Annual Report addresses the specific Watermaster functions set forth in Section III. L. 3. x. of the Decision. In addition this Annual Report includes sections pertaining to:

- Water quality monitoring and Basin management
- Information that the Watermaster would otherwise include within a Case Status Conference Statement, including:
 - A summary of basin conditions and important developments concerning the management of the Basin
 - Planned near- and long-term actions of the Watermaster
 - Information concerning the status of regional water supply issues
 - Management activities that may bear on the Basin's wellbeing.

A. Groundwater Extractions

The schedule summarizing the Water Year 2018 (WY 2018) groundwater production from all the producers allocated a Production Allocation in the Seaside Groundwater Basin is provided in Attachment 1, “Seaside Groundwater Basin Watermaster, Reported Quarterly and Annual Water Production from the Seaside Groundwater Basin for all Producers Included in the Seaside Basin Adjudication During Water Year 2018.” For the purposes of this Annual Report Water Year 2018 is defined as beginning October 1, 2017 and ending on September 30, 2018.

B. Groundwater Storage

Monterey Peninsula Water Management District (MPWMD), in cooperation with California American Water (CAW), operates the Seaside Basin Aquifer Storage and Recovery (ASR) program. Under the ASR program, CAW diverts water from its Carmel River sources during periods of flow in excess of NOAA-Fisheries’ bypass flow requirements, and transports the water through the existing CAW distribution system for injection and storage in the Seaside Basin at the MPWMD’s Santa Margarita ASR site and CAW’s Seaside Middle School ASR site. During WY 2018, 530 AF was diverted and stored in the Seaside Basin under the ASR program. Rainfall in the area was about 64% of normal, Carmel River flow was 67% of normal. WY 2018 was classified as “Below Normal” by MPWMD.

Based upon production reported for WY 2018, the following Standard Producers are entitled to Free and Not-Free Carryover Credits to 2018 in accordance with the Decision, Section III. H. 5:

<u>Producer</u>	<u>Free Carryover Credit</u> <u>(Acre-feet)</u>	<u>Not-Free Carryover Credit</u> <u>(Acre-feet)</u>
Granite Rock	180.68	41.32
DBO Development	341.51	62.45
Calabrese (Cypress)	14.36	1.73
CAW	182.91	270.96
City of Seaside Muni	00.00	00.00

C. Amount of Artificial Replenishment, If Any, Performed by Watermaster

Per the Decision, “Artificial Replenishment” means the act of the Watermaster, directly or indirectly, engaging in contracting for Non-Native Water to be added to the Groundwater supply of the Seaside Basin through Spreading or Direct Injection to offset the cumulative Over-Production from the Seaside Basin in any particular Water Year pursuant to Section III.L.3.j.iii. It also includes programs in which Producers agree to refrain, in whole or in part, from exercising their right to produce their full Production Allocation where the intent is to cause the replenishment of the Seaside Basin through forbearance in lieu of the injection or spreading of Non-Native Water (referred to herein as “In-lieu Replenishment”).

During Water Year 2018 the Watermaster did not indirectly engage in In-lieu Replenishment of the Basin. No non-native water was made available to the Basin during Water Year 2018 under the Memorandum of Understanding and Agreement entered into by Watermaster with the City of Seaside for its golf course irrigation program creating in-lieu replenishment water.

D. Leases or Sales of Production Allocation and Administrative Actions

In WY2018 there were no transfers or assignments of water allocations. However, as documented in Attachment 13, in 2019 Security National Guarantee (SNG) intends to convert a portion of its Alternative Production allocation to Standard Allocation in order to sell that portion of its allocation to Montage Health. If that transaction is accomplished in 2019 it will be reported upon in the 2019 Annual Report.

A Status Conference with the Court was held on March 23, 2018. The transcript of the Status Conference Hearing is available for viewing on the Watermaster web site at <http://www.seasidebasinwatermaster.org/> under Postings and Records on the March 17, 2017 date line in the Court Docs column.

During WY 2018 the Watermaster Board did not make any revisions to its *Rules and Regulations*. However, the mailing address for the Watermaster changed to: Seaside Basin Watermaster, P.O. Box 51502, Pacific Grove, CA 93950.

During WY 2018 the Watermaster Board was comprised of the following Members and Alternates:

<u>MEMBER</u>	<u>ALTERNATE</u>	<u>REPRESENTING</u>
Director Paul Bruno	N/A	Coastal Subarea Landowner
Eric Sabolsice/Christopher Cook	Nina Miller	California American Water
Director Bob Costa	N/A	Laguna Seca Subarea Landowner
Director Jeanne Byrne	Andrew Clarke	MPWMD
Mayor Mary Ann Carbone	Todd Bodem	City of Sand City
Supervisor Mary Adams	Jane Parker	Monterey County (MCWRA)
Mayor Jerry Edelen	Kristin Clark	City of Del Rey Oaks
Councilmember Dan Albert	Mayor Clyde Roberson	City of Monterey
Mayor Ralph Rubio	Dennis Alexander	City of Seaside

E. Use of Imported, Reclaimed, or Desalinated Water as a Source of Water for Storage or as a Water Supply for Lands Overlying the Seaside Basin

The CAW/MPWMD ASR Program operated in WY 2018 and accordingly 530 acre-feet of water was injected into the Basin as Stored Water Credits and 1,210 acre-feet was extracted.

In accordance with Section III. L. 3. j. xx, CAW and MPWMD applied to the Watermaster for Storage in the Seaside Basin of water from the Pure Water Monterey Project (PWM). The application was considered by the Watermaster at its publicly noticed October 3, 2018 meeting. No member of the public present at the meeting voiced concerns about approval of the application or PWM. After consideration and discussion, the Watermaster Board approved the application.

The next step in the process will be for the Watermaster Board to consider approval of a Storage and Recovery Agreement between the Watermaster, CAW, and MPWMD governing the future injection and recovery of water from PWM which is expected to be presented to the Board at its January 2, 2019 regular meeting. A copy of the proposed agreement is included in Attachment 12 of this Annual Report.

It is noted that in August of 2018, the Watermaster filed a *Notice of Lodging of Correspondence Received re Pure Water Monterey Project* with the court. The correspondence lodged contained concerns expressed by a member of the public regarding the injection of PWM water into the Basin. As noted above, none of those concerns were expressed to the Watermaster during its October 3, 2018 meeting when it considered approving the storage and recovery application submitted by CAW and MPWMD.

F. Violations of the Decision and Any Corrective Actions Taken

Section III. D. of the Decision enjoins all Producers from any Over-Production beyond the Operating Yield in any Water Year in which the Watermaster declares that Artificial Replenishment is not available or possible. Section III. L. 3. j. iii. requires that the Watermaster declare the unavailability of Artificial Replenishment in December of each year, so that the Producers are informed of the prohibition against pumping in excess of the Operating Yield.

Because the December 5, 2018 Board meeting was canceled, the Watermaster made its declaration regarding the availability of Artificial Replenishment for WY 2019 at its Board meeting of January 2, 2019. A copy of this declaration is contained in Attachment 2. In WY 2018 the Watermaster implemented another 10% water production reduction required under Section III.B.2 of the Decision. No additional water production reductions were implemented in WY 2018.

Total pumping for WY 2018 did not exceed the Operating Yield (OY) of the Basin, and exceeded the Natural Safe Yield (NSY) of the Basin by 363.21 acre-feet.

California American Water reported annual pumping quantities that exceeded its Standard Production NSY allocation by 374.64 acre-feet, and reported annual pumping quantities that did not exceed its Operating Yield allocation. The Watermaster will assess California American Water a Replenishment Assessment for this over production, as further described in Section H, below.

The City of Seaside reported annual pumping quantities that exceeded its Standard Production NSY allocation by 32.46 acre-feet, and reported annual pumping quantities that exceeded its Operating Yield allocation by 33.89 acre-feet. The City of Seaside did not exceed its Alternative Production NSY. The Watermaster will assess the City of Seaside a Replenishment Assessment for these over productions, as further described in Section H, below.

G. Watermaster Administrative Costs

The total estimated Administrative costs through the end of Fiscal Year 2018 amounted to \$80,000 including an \$18,000 dedicated reserve. Costs include the Administrative Officer salary and legal counsel fees. The “Fiscal Year 2018 Administrative Fund Report” and “Fiscal Year 2018 Operations Fund Report” are provided as Attachment 3.

H. Replenishment Assessments

At its meeting of October 3, 2018 the Watermaster Board determined that the Natural Safe Yield Replenishment Assessment unit cost of \$2,872 per acre-foot, and the Operating Yield Replenishment Assessment unit cost of \$718 per acre-foot, which are the unit costs that were used in WY 2018, should remain the same for WY 2019.

Alternative and Standard Producers report their production amounts from the Basin to the Watermaster on a quarterly basis. Based upon the reported production for WY 2018, California American Water's Replenishment Assessment for Overproduction in excess of its share of the Natural Safe Yield is \$1,075,994.80, and no overproduction in excess of its share of the Operating Yield.

The City of Seaside's Replenishment Assessment for its Municipal System for Overproduction in excess of its share of the Natural Safe Yield is \$93,225.12, and for overproduction in excess of its share of the Operating Yield is \$27,025.66. The City of Seaside did not exceed its Alternative Production Allocation for its Golf Course System production. A summary of the calculations for Replenishment Assessments for WY 2018 is contained in Attachment 5.

I. All Components of the Watermaster Budget

The Watermaster budget has four separate funds: Administrative Fund; Monitoring & Management–Operations; Monitoring and Management–Capital Fund and; Replenishment Fund. Copies of the budgets for Fiscal Year 2018 are contained in Attachment 6.

The Watermaster Board is provided monthly financial status reports on all financial activities for each month with year-to-date totals.

J. Water Quality Monitoring and Basin Management

Change in Watermaster's Primary Hydrogeological Consultant

Much of the Watermaster's work is performed through contracts with hydrogeological consultants. The primary hydrogeological consultant the Watermaster has used for many years, HydroMetrics LLC, was purchased in July 2018 by the hydrogeological consulting firm of Errol L. Montgomery & Associates (Montgomery & Associates) of Tucson, Arizona.

Mr. Derrick Williams, President of the former HydroMetrics WRI, explained that he had known and worked with many of the principles of Montgomery & Associates for over 30 years, and that they are a groundwater focused company. He reported that he found Montgomery & Associates to have a highly qualified staff who have the same technical expertise and commitment to both clients and employees as HydroMetrics WRI.

The Watermaster was assured that it would continue to receive the same or better level and quality of services from Montgomery & Associates that it had been receiving from HydroMetrics WRI and that Derrick Williams (President of HydroMetrics) and Georgina King (a Senior Hydrogeologist at HydroMetrics), both of whom have performed and/or

directed all of the work previously performed for the Watermaster, would continue to be the staff with whom the Watermaster would normally interact.

Based on those assurances, the Watermaster's Technical Advisory Committee and Board of Directors were comfortable with the change in ownership. Effective July 1, 2018, the Watermaster entered into a contract with Montgomery & Associates for the hydrogeological services formerly provided by HydroMetrics WRI.

Water Quality Analytical Results

Groundwater quality data continued to be collected and analyzed on a quarterly basis during WY 2018 from the enhanced network of monitoring wells. The low-flow sampling method implemented in 2009 continued to be used in 2018 and is expected to continue to be used in the future to improve the efficiency of sample collection. As discussed in the 2013 Annual Report, the Watermaster reduced the frequency of water quality sampling at SBWM-MW5 to once every 3 years.

No modifications to the quarterly data collection frequency from the enhanced network of monitoring wells were made during WY 2018.

Up until WY 2010 quarterly geophysical (induction) logging was performed at the four coastal Watermaster Sentinel wells that were installed in 2007. The induction logging results showed very little variations and trends were steady since that monitoring began, indicating that the coastal water quality conditions were not changing at this sample frequency. Therefore, beginning in WY 2010 the Court approved reducing the induction logging frequency to semi-annually at these wells.

The expanded water quality analyses begun in WY 2012 were continued in WY 2018. However, as discussed and recommended in the 2017 Annual Report (refer to Attachments 8 and 13 of the 2017 Annual Report), in WY 2018 water quality sampling was discontinued in the Watermaster's Sentinel Wells located along the coast (wells SBWM-1, SBWM-2, SBWM-3, and SBWM-4), because those water quality samples were found to not be representative of the water quality in the aquifers in which these wells were completed. Water quality sampling was continued for the 3 most coastal MPWMD monitoring wells (MSC, PCA, and FO-09).

Copies of the sampling results are contained in the report in Attachment 7.

Monitoring and Management Program Work Plan for the Upcoming Year

The 2019 Monitoring and Management Program (M&MP) Work Plan contained in Attachment 9 includes the types of basin management activities conducted in prior years as well as revisions approved by the Board at its October 3, 2018 meeting.

Other than small changes due to changes in hourly rates for some of the consultants, the following are the principle differences between the 2018 M&MP and the proposed 2019 M&MP, and their respective budgets:

Task I.2.b.3 (Collect Quarterly Water Quality Samples): In 2018 the total amount budgeted for this Task was \$51,128. That cost included collecting and analyzing water quality samples from the Watermaster's Sentinel Wells. In early 2018 it was determined that water quality samples that have historically been collected from the Sentinel Wells were not representative of the quality of the water in the aquifers. Therefore, the decision was made to discontinue collecting and analyzing samples from these wells. This led to the reduction in cost for this Task to \$42,083 in 2019.

Task I.3.a.1 (Update the Existing Model): \$54,370 was included in the 2018 budget for this Task to have HydroMetrics update the existing groundwater model of the Seaside Basin. That work was completed in 2018 and therefore does not need to be included in the M&MP budget for 2019. This led to the reduction in cost for this Task to \$0 in 2019.

Task I.3.c (Refine and/or Update the Basin Management Action Plan): \$45,260 was included in the 2018 budget for this Task to have HydroMetrics update the existing Basin Management Action Plan. That work has been completed and therefore does not need to be included in the M&MP budget for 2019. This led to the reduction in cost for this Task to \$0 in 2019.

Task I.3.e (Seaside Basin Geochemical Model): This was a new Task for 2018, and the amount for this Task in the 2018 budget was \$50,000. The Task is being performed by MPWMD's Consultant, Pueblo Water Resources, Inc., and is expected to be completed in 2019. However, Montgomery & Associates (formerly HydroMetrics) may need to work on this task if the initial modeling results find that there could be adverse water quality impacts in the aquifers due to the introduction of water from the Monterey Peninsula Water Supply Project (desalinated water), the Pure Water Monterey Project (advance treated wastewater) and/or Aquifer Storage and Recovery Water (Carmel Basin water). If the modeling results in this finding, Montgomery & Associates may need to use the Seaside Basin groundwater model to help Pueblo Water Resources develop means/measures to mitigate such impacts. A \$10,000 amount is included in the 2019 budget to cover the costs of Montgomery & Associates' work, if such work needs to be done.

The full cost of the geochemical modeling is being borne by the three proponents of the projects that intend to inject new sources of water into the Basin. These are California American Water, MPWMD, and Monterey One Water (formerly MRWPCA).

It is anticipated that if Montgomery & Associates needs to perform work on this Task in 2019, one or more of the project proponents will either pay for or reimburse the Watermaster for all of the costs to perform this work. Therefore, there should be no net cost to the Watermaster for the work of this Task.

No new monitoring wells are planned for installation in 2019. Consequently, no monies are budgeted in the M&MP Capital Budget for 2019.

Basin Management Database

Pertinent groundwater resource data obtained from a number of sources has been consolidated into the Watermaster's database to allow more efficient organization and data retrieval. No modifications or enhancements to the database are planned in FY 2018.

Enhanced Monitoring Well Network

The Seaside Basin M&MP uses an Enhanced Monitoring Well Network to fill in data gaps in the previous monitoring well network used by the Monterey Peninsula Water Management District (MPWMD), and others, in order to improve the Basin management capabilities of the Watermaster. The Enhanced Monitoring Well Network has been described in detail in previous Watermaster Annual Reports. It continues to be used to obtain additional data that is useful to the Watermaster in managing the Basin.

Basin Management Action Plan (BMAP)

HydroMetrics LLC was hired by the Watermaster to prepare the original BMAP which contains these Sections:

- Executive Summary
- The Background and Purpose of the Plan
- The State of the Basin
- Supplemental Water Supplies (long-term water supply solutions)
- Groundwater Management Actions (to be taken as interim measures while long-term supplies are being developed)
- Recommended Management Strategies
- References

The Final BMAP was approved by the Watermaster Board at its February 2009 meeting, and the Executive Summary from the BMAP was contained in Attachment 9 of the 2009 Annual Report. That complete document may be viewed and downloaded from the Watermaster's website at: <http://www.seasidebasinwatermaster.org/>.

The Watermaster was having the BMAP updated in 2018, and it was initially expected that the work would be completed in time for inclusion in this Annual Report. However, the work was still ongoing at the time this Annual Report was completed, so the results of it will be included in next year's Annual Report.

Seawater Intrusion Response Plan

HydroMetrics LLC was hired by the Watermaster to prepare a long-term Seawater Intrusion Response Plan (SIRP), as required in the M&MP.

The Final SIRP was approved by the Watermaster Board in 2009 and a summary of the Seawater Intrusion Contingency Actions from the SIRP were contained in Attachment 10 of the 2009 Annual Report. The complete document may be viewed and downloaded from the Watermaster's website at: <http://www.seasidebasinwatermaster.org/>. No modifications to the SIRP were made in 2018.

Seawater Intrusion Analysis Report

The SIAR examines the “health” of the Basin with regard to whether or not there are any indications that seawater intrusion is either occurring or is imminent. Previous SIARs have stated that depressed groundwater levels, continued pumping in excess of recharge and fresh water inflows, and ongoing seawater intrusion in the nearby Salinas Valley all suggest that seawater intrusion could occur in the Seaside Groundwater Basin.

The Watermaster retained Montgomery & Associates to prepare the WY 2018 Seawater Intrusion Analysis Report (SIAR) required by the M&MP. The WY 2018 SIAR provided an analysis of data collected during that Water Year.

The 2018 SIAR reported that the evaluation of the data from the sampling and monitoring program continued to indicate that seawater intrusion was not occurring.

The SIAR is lengthy, but the full *Executive Summary Section* from it is provided in Attachment 8. A complete copy of the document is posted for viewing and downloading from the Watermaster’s website at: <http://www.seasidebasinwatermaster.org/>. All recommendations contained in the SIAR are being or will be carried out and are included in the budgeted activities contained in Attachment 6 and described in Attachment 9.

The Watermaster continues to analyze the data that is being gathered at the various monitoring sites in order to keep a close watch on the conditions within the Basin, as discussed under the “Enhanced Monitoring Well Network” heading above. Because none of the data indicates the presence of seawater intrusion, the Watermaster does not at this time plan to move forward with the Work Plan to investigate sources of fluctuating chlorides in the Sentinel Wells, as described in Attachment 12 of the 2017 Annual Report. However, should future data warrant it, the Watermaster may reconsider undertaking the initial phase of that Work Plan.

Groundwater Modeling

As projected in the 2017 Annual Report the Seaside Basin Groundwater Model, which had been updated in 2009, was again updated in 2018. The 2018 updated model was prepared by HydroMetrics LLC, and a Technical Memorandum describing the work that was performed is contained in Attachment 10. The cost of updating the model was shared through an agreement between the Watermaster, MPWMD, and Monterey One Water, with the Watermaster paying 50% of the cost, and those two other entities paying the other 50% of the cost.

Principle Findings from Updating the Seaside Basin Groundwater Model.

1. Simulated groundwater levels are sensitive to the specified heads along the northeastern boundary with the Salinas Valley. The behavior of the boundary was found to impact the calibration of areas of the model at some distance from the boundary. It was found that in the absence of the most recent Salinas Valley Integrated Hydraulic Model (SVIHM), currently being developed by the USGS, assigning boundary head elevations that match the general observed average groundwater levels along the boundary is more important than capturing smaller scale seasonal fluctuations along the boundary. It is recommended that when the SVIHM has been completed, an assessment

of how well it simulates historical groundwater conditions in the Seaside Basin be conducted. If it is concluded that the new data improves simulation of groundwater level in the Seaside Basin, the boundary condition can be revised using parts of the SVIHM that improve model calibration of the Seaside Basin model.

2. The model recalibration improved calibration statistics over the original 2009 model calibration. As a result, simulated groundwater levels throughout the model, as a whole, better match observed groundwater levels.

3. The groundwater model should be updated in a maximum of five years and its calibration reevaluated at that time. However, if groundwater related projects are implemented in the basin before that time, the update and calibration reevaluation may need to be performed sooner.

Coordination of Watermaster's Seaside Groundwater Model with Salinas River Basin Model

As reported in the 2017 Annual Report the Monterey County Water Resources Agency (MCWRA) is having its hydrologic model of the Salinas Valley Groundwater Basin updated. That model is referred to as the SVIHM. In 2017 the MCWRA determined that the Technical Advisory Committee (TAC) it had convened to assist in the preparation of the updated model had fulfilled its purpose, and there have not been any subsequent meetings of that TAC since then. However, if the MCWRA reconvenes its TAC, the Watermaster will participate in future meetings of that TAC in order to ensure that the SVIHM coordinates well with the Watermaster's Seaside Basin model.

Geochemical Modeling

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 consultant (Pueblo Water Resources) has been using geochemical modeling to predict the effects of injecting Carmel River water into the Seaside Groundwater Basin under the ASR program.

As mentioned above in the heading entitled *Monitoring and Management Program Work Plan for the Upcoming Year*, 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 wastewater (under the Pure Water Monterey Project) a geochemical model is being developed by Pueblo Water Resources for use in the areas of the Basin where injection of these new water sources will occur. The geochemical modeling work is described in Attachment 11. The plan is to perform the geochemical modeling work in the following manner:

Step 1: Pueblo Water Resources will use the water quality and water delivery schedule data provided by each of the project proponents to develop and run the geochemical model. If the geochemical modeling indicated there will be no water chemistry problems then there would be no need perform Step 2.

Step 2 (if needed): If the geochemical modeling in Step 1 indicates the potential for problems to occur, then Montgomery & Associates will use the Watermaster's Seaside Basin 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/or delivery quantities. The effect of these changes would be evaluated by Pueblo Water Resources using the geochemical model. Implementing these mitigation measures would be done under a separate task that would be created for that purpose, when and if necessary.

Work on the geochemical modeling started in May 2018. Through an agreement between the Watermaster, MPWMD, California American Water, and Monterey One Water, the work is funded entirely by the three parties that are the sponsors of the aquifer recharge projects described above, at no cost to the Watermaster.

As of the date of preparation of this 2018 Annual Report, progress on this work has been as follows:

- Initial review of the available data from these aquifer recharge projects indicated that less-than-adequate information existed for purposes of performing the geochemical modeling work. Initial work has therefore focused on filling data gaps and obtaining complete mineralogical data on the Santa Margarita formation. Data compilation to date includes the following:
- Sample collection and analysis of the effluent from the PWM pilot facility is being analyzed for both base water quality constituents and bench-scale testing for leaching potential with Santa Margarita formation mineral samples obtained in September 2018 from the construction of one of the PWM injection wells.
- The bench scale protocol described above is also being repeated using treated, potable Carmel River water from Cal-Am's Begonia Iron Removal Plant (which provides water for the ASR project and is located in Carmel Valley) to further assess findings from 2009 testing of the water supplies from that plant. This data will also be used in the overall geochemical assessment.
- Santa Margarita formation cuttings collected from the PWM injection well are being analyzed by X-Ray Diffraction (XRD) which is used to determine mineralogy by shining X-Rays at a solid and measuring the diffraction pattern, as well as by conventional mineralogy assessment. The samples are being further analyzed via complete acid digestion to quantify the presence and composition of trace metals within the Santa Margarita formation matrix. Results of this assessment may lead to further analysis via Dynamic Secondary Ion Mass

Spectrometry (SIMS) to further identify mineral compositions prior to geochemical interaction modeling. SIMS uses an ion stream to pulse at a surface and then measures the cast-off ions in a mass spectrometer to determine the elemental state of minerals.

It is anticipated that results from these tests will be available by the end of January 2019, at which time it will be possible to proceed with the modeling work itself. As noted in Section 6 of the Storage and Recovery Agreement contained in Attachment 12, the initial modeling work will only evaluate the impacts of introducing advance-treated wastewater from the PWM Project into the Basin. The impacts of introducing water from the other recharge projects will be separately evaluated in conjunction with developing the Storage and Recovery Agreements for those projects, in a manner similar to that described in the paragraphs below.

The planned schedule once the modeling work itself begins is as follows:

- Develop the geochemical model – estimated task duration 3 weeks
- Model mixing ratios – estimated task duration 6 weeks

After these tasks have been completed on the PWM Project water (expected before the end of the first quarter of 2019) Pueblo Water Resources will provide a Technical Memorandum summarizing the results of the modeling and recommendations for additional model scenarios, if any, based on the initial output runs.

If the initial modeling work identifies mixture simulations that show undesirable geochemical reactions (i.e. mineral precipitation or gas evolution) Pueblo Water Resources will rerun those model simulations under various modifications of mix ratios and/or aquifer conditions to identify methods of mitigating the observed adverse reactions and to identify potential operational scenarios which would prevent such adverse geochemical reactions from occurring. If this work is needed, it is estimated that this phase (described above as Step 2) will have a duration of 4 to 6 weeks. Following that Pueblo Water Resources would develop an overall summary report and recommendations for process and/or operational changes to reduce or avoid adverse geochemical reactions.

A procedure similar to that described above will be used in conjunction with evaluating the impacts of introducing water from the other recharge projects into the Basin.

Sustainable Groundwater Management Act

As reported in the 2015 Annual Report the Watermaster Board determined that the Watermaster should monitor the development of the Salinas Valley Basin Groundwater Sustainability Agency and the State Department of Water Resources' (DWR) development of regulations pertaining to requesting boundary revisions, with the intent to collaborate with these entities as appropriate.

At the State Level

In late 2016 DWR released the final 2016 modifications to California's groundwater basin boundaries. The boundary modification request submitted by the Monterey Peninsula Water Management District (MPWMD) to remove some areas near Monterey from the Salinas Valley Groundwater Basin, and to recognize the boundaries of the Adjudicated Seaside Basin, was approved. These modifications are reflected in the basin boundary map that is now posted on the DWR website.

DWR has included new basin boundaries in its interim update of Bulletin 118, which came out in 2017. It includes the boundary of the Adjudicated Seaside Basin, as requested in the boundary modification request submitted in 2016 by the Monterey Peninsula Water Management District (MPWMD).

During 2018 DWR did not issue any new regulations, or revisions to prior regulations, that impacted the Seaside Groundwater Basin or the Watermaster. In March of 2018 the Watermaster submitted to DWR the reporting information required of it, as an adjudicated basin, under SGMA.

At the Monterey County level:

The Salinas Valley Basin Groundwater Sustainability Agency (SVBGSA) (a joint powers authority) and the Marina Coast Water District (MCWD) submitted Notifications with DWR to serve as the GSA for portions of the Monterey and the 180/400 foot aquifer Subbasins that overlapped. Subsequently, the City of Marina submitted an untimely notice to also serve as the GSA over the overlapping areas. The SVBGSA, MCWD, and the City of Marina have embarked on a process to address and resolve the overlaps. The process envisions that MCWD will carry out the Groundwater Sustainability Plan (GSP) activities within its Marina and Ord Community service areas, regardless of whether MCWD or the SVBGSA is ultimately determined by the Department of Water Resources to be the appropriate party to serve as the GSA for those areas, and either MCWD or the SVBGSA will look out for the interests of the City of Marina.

- During 2018 the administrative structure of the SVBGSA was developed, and the SVBGSA continued moving ahead with GSP development. An initial conclusion was that it would be preferable for the SVBGSA to prepare separate GSPs for each subbasin, and work began in late 2018 on the preparation of those GSPs. The Watermaster is participating in the development of those GSPs through its membership on the SVBGSA's Advisory Committee, which will help ensure that there is close coordination between that agency and the Watermaster on matters of mutual interest.

K. Information that the Watermaster Would Otherwise Include within a Case Status Conference Statement

This Section was added to the Annual Report beginning this year as directed by the Court in its Order Amending Judgment filed March 29, 2018. It replaces the Section that was added to the 2017 Annual Report titled “Updates to the Court” and is formatted to contain the topic headings below, which were requested by the Court in its March 29, 2018 Order.

By email dated August 13, 2018, Judge Nichols, who replaced Judge Randall on this matter effective January 27, 2016, informed the Parties that he would soon be withdrawing as judge on the case as a result of changes to the Assigned Judges Program which caps the total number of days an assigned judge may serve. In response to an inquiry by Judge Nichols, the parties declined to stipulate to an in-county replacement judge, and indicated a preference for assignment of an out-of-county judge. Subsequently, in November of 2016, the parties learned that due to an apparent miscommunication, a Monterey County judge had been assigned to the case. The parties have now been asked to stipulate to the assignment of retired Monterey County Judge Robert O’Farrell. As of the date of preparation of this Annual Report a stipulation has not yet been signed all parties.

Summary of Basin Conditions and Important Developments Concerning the Management of the Basin

The condition of the Basin is discussed in the *Water Quality, Seawater Intrusion Analysis Report*, and *Basin Management Action Plan* subheadings in Section J of this Annual Report.

In summary, the *Seawater Intrusion Analysis Report*, which analyzes the water quality data collected under the Watermaster’s sampling program, found that no seawater intrusion is being detected within the Basin. The updated *Basin Management Action Plan* found that in spite of recent pumping at levels less than the Decision-established Natural Safe Yield of 3,000 AFY, water levels in some portions of the Basin are continuing to drop. It is expected that once the MPWSP becomes operational and CAW is able to further reduce its pumping from the Basin by 700 AFY through its 25-year overpumping repayment program, the rate of drop in groundwater levels will be at least partially mitigated.

Planned Near and Long-term Actions of the Watermaster

Near-term actions are described in the 2019 Monitoring and Management Program discussed in Section J and Attachment 9 of this Annual Report.

Long-term actions will include:

- Continuing to carry out the duties and responsibilities assigned to the Watermaster by the Decision
- Continuing to coordinate with the Monterey County Water Resources Agency in their development of an updated hydrogeologic model of the Salinas Valley Basin, as discussed under the *Coordination of Watermaster’s Seaside Groundwater Model with Salinas River Basin Model* subheading in Section J of this Annual Report

- Continuing to coordinate with the Salinas Valley Basin Groundwater Sustainability Agency to develop measures to aid in groundwater management of the Laguna Seca Subarea, as discussed under the *Sustainable Groundwater Management Act* subheading in Section J of this Annual Report.

Information Concerning the Status of Regional Water Supply Issues

Implementation of the Monterey Peninsula Water Supply Project (MPWSP) continues to be vigorously pursued by California American Water.

On September 13, 2018 the CPUC approved a modified MPWSP consisting principally of a reduced-size 6.4 mgd desalination plant (size originally proposed was 9.6 mgd with no reclaimed water), 3,500 AFY of PWM reclaimed water (previously and separately approved by the CPUC in 2017), and increased ASR water; adopting settlement agreements to resolve conflicts relating to the desalination project; issued a Certificate of Public Convenience and Necessity; and certified the combined EIR/EIS for that Project. California American Water is in the process of seeking necessary approvals from the California Coastal Commission and other permitting agencies.

Construction of the first major element of the MPWSP, the Monterey Pipeline and Pump Station (MPPS), was completed in December 2018. . The MPPS will carry PWM water that is recovered after storage in the Basin, desalination water, and expanded Aquifer Storage and Recovery (ASR) water between the northern portions of the California American Water system overlying the Seaside Basin to southern portions of the system. The pipeline extends about 7 miles from the City of Seaside to the City of Pacific Grove.

Construction work is well underway on Monterey One Water’s (M1W) PWM recycled water project in Marina. This project will produce approximately 3,500 AFY of advanced treated recycled water that will be delivered to the Seaside Basin for injection into the Basin and subsequent recovery and service to California American Water customers. M1W has also executed an agreement with Marina Coast Water District (MCWD) to use a MCWD pipeline that will convey the water from the PWM advanced water treatment plant to the Seaside Basin. The PWM component of the MPWSP is currently projected to become operational in late 2019. Construction of the desalination plant is currently scheduled to begin in late 2019. The desalination plant and the expanded ASR system are expected to become operational in late 2021. Detailed quarterly update reports on the MPWSP are posted on the MPWSP website at <https://www.watersupplyproject.org>.

On October 12, 2018, the City of Marina and the MCWD each filed petitions for writ of review before the California Supreme Court challenging the CPUC’s certification of the Final EIR/EIS and issuance of the Certificate of Public Convenience and Necessity for the MPWSP. On December 12, 2018, the Petitions for Review were denied without prejudice to the filing of renewed submissions upon completion of the rehearing proceedings pending before the CPUC. A copy of the Supreme Court docket in the proceeding can be found at:

http://appellatecases.courtinfo.ca.gov/search/case/dockets.cfm?dist=0&doc_id=2266655

[&doc_no=S251935&request_token=NiIwLSIkXkg9WyApSCI9XE1IQDg0UDxTJiJOIzlSICAgCg%3D%3D](#) .

Management Activities that May Bear on the Basin's Wellbeing

1. *Water Conservation.* From a water conservation standpoint, customers of Cal-Am are doing an exceptional job. California American Water's Monterey system has one of the highest levels of voluntary conservation in the state. There has essentially been no back-off in conservation following the end of mandatory conservation that occurred after the wet winter of 2016-2017.

2. *Storm Water and Recycled Water.* Storm water and recycled water are both components of the Pure Water Monterey (PWM) project that is being implemented by Monterey One Water (formerly Monterey Regional Water Pollution Control Agency). Cal-Am has already contracted to receive 3,500 AFY of PWM recycled water for injection into, and recovery from, the Seaside Basin by Cal-Am. Monterey One Water, in coordination with others, is looking at the potential to expand the delivery capacity of the PWM project by using additional sources of recycled water and storm water.

3. *Sustainable Groundwater Management Act.* Coordination between the Watermaster and the Salinas Valley Groundwater Basin Sustainability Agency is ongoing and is discussed in more detail under Section J of this Annual Report. That coordination will aid in groundwater management of the Laguna Seca and Corral de Tierra subareas.

4. *Climate Change.* Higher seawater levels could exacerbate seawater intrusion concerns, which punctuates the importance of monitoring and long-term management to avoid seawater intrusion. From a water supply perspective, reliance on groundwater with sustainable management is ideal because the resource is a reservoir and therefore not subject to sharp fluctuations in availability resulting from year-to-year precipitation amounts as is the case with surface water supplies. Updating of the Watermaster's *Groundwater Model* and *Basin Management Action Plan* in 2018 (discussed in Section J) incorporated projected impacts from climate change and sea level rise.

5. *Potential Replenishment of the Basin with Water Purchased from Marina Coast Water District (MCWD).* As mentioned in the 2017 Annual Report and in the March 2018 Status Conference Statement, the Watermaster received an initial proposal, and later a revised proposal, from Marina Coast Water District (MCWD) (not a party to the Decision) to sell replenishment water to the Watermaster. The Watermaster Board and its Technical Advisory Committee studied the proposals but found that insufficient information was provided to determine whether they were viable. Then, in May of 2018 Watermaster staff was informed by MCWD that the revised proposal was "on hold." In September of 2018 the CPUC found that the proposal was not shown to be a reliable, secure supply at a reasonable price. Therefore, the Watermaster does not plan to take any further action on the MCWD proposal.

6. *New Technical Issues or Activities.* This is a new Section added beginning with this 2018 Annual Report, in response to the Court's request during the March 2017 Status Conference that it be updated on any new technical issues of interest to the Watermaster.

- *Electrical Resistivity Tomography in the Monterey Bay Area.*

The Watermaster has researched whether electrical resistivity tomography, which was discussed in Sections 8.2.9.1 and 8.9.2.2 of the FEIR/FEIS for the MPWSP, could be used to help detect the location of the seawater intrusion front offshore of the Seaside Groundwater Basin. The Watermaster's Technical Program Manager contacted Ms. Rosemary Knight and Mr. Adam Pidlisecky, who were authors of the reference reports cited in the FEIR/FEIS for the ERT/AEM work described in Section 8.2.9.1.

Ms. Knight responded that she was dealing with a family medical issue and was not in a position to respond to questions at that time.

Mr. Pidlisecky had made a presentation to the Watermaster's Technical Advisory Committee on this technology several years ago, and at that time reported that the technology could not be used to locate the seawater intrusion front offshore, because the aquifers were deep and the overlying seawater in the Bay would prevent the front from being detected. When contacted again in April 2018 he responded that the technique used in the 2017 survey is not well suited to offshore work, because saltwater attenuates the signal. Having 100% saltwater overlying the seafloor, beneath which lie the aquifers, severely attenuates the signal and greatly limits the depth of investigation. He said that although people have used the technique over water, it has usually been done on a much smaller scale, only over a length of a few hundred meters as opposed to kilometers such as was done in the 2017 survey.

Based on the findings of the FEIR/FEIS and Mr. Pidlisecky's response, it continues to appear that the use of ERT/AEM technology to locate the seawater intrusion front offshore of the Seaside Groundwater Basin is not feasible.

- *Stormwater Projects Being Evaluated in the Monterey Peninsula Stormwater Resource Plan (SWRP).*

Monterey One Water (M1W), formerly the Monterey Regional Water Pollution Control Agency (MRWPCA), was the lead entity in the development of a Stormwater Resource Plan (SWRP) for the Monterey Peninsula, Carmel Bay, and South Monterey Bay (Monterey Peninsula) Integrated Regional Water Management (IRWM) Planning Area. A Consultant Project Team consisting of Geosyntec Consultants, Inc. (Geosyntec), EOA, Inc. (EOA), and Denise Duffy & Associates, Inc. (DD&A) prepared the SWRP and conducted associated analyses. Preparation of the Monterey Peninsula SWRP was funded by a Proposition 1 Planning Grant and local match funds, including the locally funded Monterey Peninsula Water Recovery Study Report, the results of which are integrated into the SWRP.

The purpose of the SWRP is to identify stormwater capture project opportunities that could be utilized as new water supply sources for the Monterey Peninsula and provide

additional water quality and environmental benefits. The purpose of the Monterey Peninsula Water Recovery Study, which was conducted as part of the development of this Monterey Peninsula Region SWRP, was to examine the feasibility of establishing a Peninsula-wide water recovery and reclamation system, including identifying and evaluating potential projects that could capture sources of wet and dry weather runoff within the Monterey Peninsula IRWM Planning Area for water recovery and use. The water recovery projects were specifically identified based on their potential to reduce the Peninsula's dependence on the Carmel River, Carmel Valley Alluvial Aquifer, and adjudicated Seaside Groundwater Basin. The study considered how to store, treat, and transport potential sources of runoff prior to entering existing water and wastewater infrastructure for use, but did not identify projects that expand existing water distribution and wastewater storage, treatment, and conveyance system capacities, or determine if this will be needed.

Seven projects were selected for conceptual design in the SWRP. Six of the seven projects would have the potential to slightly increase flows to the M1W reclamation facilities, and thus have the potential of modestly augmenting wastewater flows to the M1W reclamation facilities. This could help enable the PWM project to produce a small amount of additional water for use in recharging, or reducing pumping from, the Seaside Groundwater Basin. Since these projects are in the early planning stages and are not currently funded or otherwise being pursued by project sponsors, they are considered only to be potential sources of water that M1W could use to increase the capacity of its PWM project. Thus, no specific quantities of water that would be used for the benefit of the Seaside Groundwater Basin can currently be identified for these projects. However, none of these six projects would have the capability of capturing more than a few acre-feet of stormwater per year.

The seventh project lies within the watershed of the City of Carmel-by-the-Sea and would not be of benefit to the Seaside Basin.

L. Conclusions and Recommendations

The Seaside Basin Watermaster Board has worked diligently to meet all of the Court's established deadline dates. All of the Phase 1 Scope of Work activities, which are described in the "Implementation Plan for the Seaside Basin Monitoring and Management Program" dated March 7, 2007, have been completed. At the Watermaster Board meeting held on October 3, 2018 the Board adopted the FY 2019 budgets contained in Attachment 6, which support carrying out all elements of the "Seaside Groundwater Basin Monitoring and Management Program 2019 Work Plan." That Work Plan describes the M&MP activities that will be conducted during Fiscal Year 2019. A copy of this Work Plan is contained in Attachment 9.

As described in Section J above, information from the Enhanced Monitoring Well Network is being utilized to detect any seawater intrusion. The response actions described in the Watermaster's Seawater Intrusion Response Plan, which was contained in the 2009 Annual Report, will be implemented if seawater intrusion is detected within the Basin.

As of the date of preparation of this 2018 Annual Report no future status conferences with the Court to provide an update on certain of the Watermaster's activities has been scheduled.

LISTING OF ACRONYMS USED IN THIS ANNUAL REPORT

AF - acre-feet
ASR - Seaside Basin Aquifer Storage and Recovery program
Basin - The adjudicated Seaside Groundwater Basin
BLM - Bureau of Land Management
BMAP - Basin Management Action Plan
CASGEM - California Statewide Groundwater Elevation Monitoring
CAWC - California American Water Company
Decision - Decision filed February 9, 2007 by the Superior Court in Monterey County under Case No. M66343 - California American Water v. City of Seaside et al.
DWR - California State Department of Water Resources
GSA - Groundwater Sustainability Agency
GSP - Groundwater Sustainability Plan
LSSA - Laguna Seca Subarea
MCWD - Marina Coast Water District
MPWMD - Monterey Peninsula Water Management District
M&MP - Monitoring and Management Program
NSY - Natural Safe Yield
SGMA - Sustainable Groundwater Management Act
SIAR - Seawater Intrusion Analysis Report
SIRP - Seawater Intrusion Response Plan
SVBGSA - Salinas Valley Basin Groundwater Sustainability Agency
TAC - Technical Advisory Committee
USGS - United States Geological Survey
WY - Water Year

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D-R-A-F-T
MINUTES

**Seaside Groundwater Basin Watermaster
Technical Advisory Committee Meeting
November 21, 2018**

Attendees: TAC Members

City of Seaside – No Representative
California American Water – Nina Miller
City of Monterey – Max Rieser
Laguna Seca Property Owners – No Representative
MPWMD – Jon Lear
MCWRA – Howard Franklin (via telephone)
City of Del Rey Oaks – No Representative
City of Sand City – Leon Gomez (via telephone)
Coastal Subarea Landowners – No Representative

Watermaster

Technical Program Manager - Robert Jaques

Consultants

Montgomery & Associates - Georgina King (via telephone)

Others

None

The meeting was convened at 1:36 p.m. after a quorum had been established.

1. Public Comments

There were no public comments.

2. Administrative Matters:

A. Approve Minutes from the August 15, 2018 Meeting

On a motion by Mr. Lear, seconded by Mr. Rieser, the minutes were unanimously approved as presented.

B. Well Completion Logs for the Pure Water Monterey Groundwater Replenishment Project

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

Mr. Lear commented that the Number Two well is being developed now, and should be completed in the January-February 2019 timeframe.

C. Sustainable Groundwater Management Act (SGMA) Update

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

Mr. Lear reported that the Department of Water Resources is now developing a program with grant funds to help entities achieve sustainability goals. He said the Department of Water Resources suggested that the Watermaster (Mr. Jaques) contact them to seek information about whether such funds would be available for Adjudicated Basins to help them achieve their objectives. Mr. Jaques said that he would contact the Department of Water Resources to follow up on this.

D. Update on Potential Expansion of the Pure Water Monterey (PWM) Project

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

Ms. Miller commented that California American Water is trying to get a larger water profile to better serve its customers, and noted that the nominal 10,000 acre-foot-per-year level that would be achieved through the Monterey Peninsula Water Supply Project is not up to the amount California American Water would like to achieve. Mr. Lear said he concurred with that.

E. Results from Martin Feeney's September 2018 Induction Logging of the Sentinel Wells

Mr. Jaques summarized the agenda packet materials for this item. There was no other discussion.

F. Update on Geochemical Modeling

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

Mr. Lear reported that fresh soil samples from the Santa Margarita aquifer have now been obtained. These well cuttings are now being tested in the laboratory to obtain needed data. The timing for the start of geochemical modeling will depend on when the lab data is received, and a determination can be made as to whether performing additional lab work will be necessary. He went on to say that if the lab tests do not detect the presence of any heavy metals following the acid digestion analytical process, then no modeling would be necessary. This is because the acid digestion process would be the most severe means of releasing heavy metals that might be bound in the soil matrix. If the acid digestion process does not release any heavy metals, then it would not be possible for combinations of injected nonnative waters to release heavy metals.

G. Change in Monitoring Well

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

Mr. Lear commented that it should be the Producer doing the sampling, not the Monterey Peninsula Water Management District. The Watermaster should therefore ask SNG to start doing the required sampling since it is now operating a production well. He also commented that there was a discrepancy in the production data that had been provided to the Monterey Peninsula Water Management District by SNG for its well compared to the data that had been provided to the Watermaster. He provided Mr. Jaques a copy of the data that had been received by the Monterey Peninsula Water Management District. Mr. Jaques will provide that data to Ms. Dadiw-Paxton for her use.

3. Approve Initial RFSs for MPWMD, Montgomery & Associates, Todd Groundwater, and Martin Feeney for 2019

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

Mr. Gomez commented that he was comfortable approving the contracts.

On a motion by Mr. Gomez, seconded by Mr. Franklin, all seven of the contracts were unanimously approved.

4. Discuss and Provide Input on the Draft 2018 Seawater Intrusion Analysis Report (SIAR)

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

Mr. Franklin reported that Tamara Voss, the usual TAC representative from the Monterey County Water Resources Agency, had provided him with a significant number of suggested edits. He will email these to Mr. Jaques who will in turn send them onto Ms. King so she can address them in a final version of the Report. He said that none of these were substantive comments, they were all editorial in nature.

Ms. King then provided a PowerPoint presentation describing the Report. Copies of the slides she used in her presentation are attached. (Slides can be viewed at <http://www.seasidebasinwatermaster.org>)

Mr. Lear noted that two wells had been converted from production wells to monitoring wells. Ms. King will make that correction in her report.

Mr. Franklin pointed out that a correction needed to be made in the fourth bulleted item from the top on page 2 of the Executive Summary of the Report, inserting the word “not” before the word “indicative” in the final sentence of that bulleted item. This same correction needs to be made in the Conclusions section of the report.

On a motion by Mr. Franklin, seconded by Mr. Lear, the Seawater Intrusion Analysis Report as-presented was unanimously approved, with the qualification that the editorial revisions suggested by Ms. Voss be addressed in a final version of the Report.

5. Discuss and Provide Input on the Preliminary Draft Watermaster 2018 Annual Report

Mr. Jaques summarized the agenda packet materials for this item. Rather than going through each section of the document, Ms. Miller asked if TAC members had any sections that they wished to discuss or have described by Mr. Jaques, and there were none.

Mr. Franklin noted that there appeared to be an incorrect citation at the bottom of page 84 of the agenda packet where the referenced Section number of 8.2.9.2 should apparently be 8.9.2.2.

On a motion by Mr. Lear, seconded by Mr. Gomez, the Preliminary Draft Annual Report was unanimously approved, with a correction if necessary, to be made on page 84 of the agenda packet as pointed out by Mr. Franklin.

6. Draft Agreement with Cal Am and MPWMD for Storage and Recovery of Water from the Pure Water Monterey Project

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

Mr. Lear noted that the list of recovery locations in Section 4 of the proposed Agreement did not include ASR No. 5 or ASR No. 6 wells. He said these are currently out-to-bid for construction, and should become operational in early 2019. He said that including them would provide additional operational flexibility, if some of the other listed wells had to be temporarily taken out of service.

Mr. Franklin asked if these two new wells were both funded and shovel-ready. Mr. Lear responded that they were.

Following some discussion, there was a motion by Mr. Lear, seconded by Mr. Franklin to approve the proposed Agreement either with or without the two additional wells being added, with California American Water to make that decision. The motion passed unanimously. Ms. Miller said she would get back to Mr. Jaques with California American Water's desires in this regard in the near future.

7. Information from AquaTronic Solutions Regarding Technology for Locating the Seawater Intrusion Interface Offshore in Monterey Bay

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

Mr. Franklin commented that the use of acoustic-seismic technology in the Monterey Bay National Marine Sanctuary would require multiple permits that could be difficult to obtain.

Mr. Lear reported that some work has been done in the Santa Cruz County area using other technology which would be much less expensive.

Following a brief discussion there was consensus to drop this topic from further consideration.

8. Set Next Meeting Date

Mr. Jaques explained that it would be necessary to have a TAC meeting in December to discuss the update to the Basin Management Action Plan. The meeting will be at the usual time of 1:30 PM on Wednesday, December 12.

9. Schedule

Mr. Jaques highlighted some of the information under this agenda item. There was no other discussion.

10. Other Business

Mr. Lear reported that SNG's well has been reactivated for the new Eco-Resort project. The PCA-West well, which in the past has been used to obtain data in this vicinity, would be adversely impacted by SNG's proposed grading plan.

Mr. Gomez commented that the vesting tentative map for this project did not appear to show existing wells, and he did not see this well on that map. He asked Mr. Lear to send him an email describing his concerns so he could have this addressed in the approval documents for the SNG project. Mr. Lear said he would do so.

The meeting adjourned at 3:10 p.m.

D-R-A-F-T
MINUTES

**Seaside Groundwater Basin Watermaster
Technical Advisory Committee Meeting
December 12, 2018**

Attendees: **TAC Members**
City of Seaside – Rick Riedl
California American Water – Nina Miller
City of Monterey – Max Rieser (via telephone)
Laguna Seca Property Owners – Bob Costa
MPWMD – Jon Lear (via telephone)
MCWRA – Tamara Voss)
City of Del Rey Oaks – No Representative
City of Sand City – Leon Gomez
Coastal Subarea Landowners – No Representative

Watermaster Technical Program Manager - Robert Jaques

Consultants Montgomery & Associates - Georgina King

Others None

The meeting was convened at 1:36 p.m. after a quorum had been established.

1. Public Comments

There were no public comments.

2. Administrative Matters:

A. Approve Minutes from the November 21, 2018 Meeting

Mr. Gomez requested that the first sentence in the second paragraph under “Other Business” of the minutes be advised to read as follows: “Mr. Gomez commented that the vesting tentative map for this project did not appear to show existing wells, and he did not see this well on that map.”

On a motion by Mr. Gomez, seconded by Ms. Miller, the minutes were unanimously approved with Mr. Gomez’s requested edit.

Mr. Lear asked Mr. Gomez if the information he had provided to him after the last TAC meeting with regard to this well was sufficient. Mr. Gomez said that the information was helpful and that he would be contacting Mr. Lear in the near future for a follow-up discussion.

B. Update on Draft Agreement with Cal Am and MPWMD for Storage and Recovery of Water from the Pure Water Monterey Project

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

On a motion by Ms. Voss, seconded by Mr. Lear, the TAC unanimously approved the proposed language revisions to the Storage and Recovery Agreement, as described in the agenda packet.

3. Basin Management Action Plan Update

Mr. Jaques provided some introductory remarks and summarized the agenda packet transmittal for this item.

Ms. King provided a presentation using the attached PowerPoint slides. (Slides can be viewed at <http://www.seasidebasinwatermaster.org>)

Mr. Jaques suggested that in order to provide time to review Mr. Yates' comments and recommendations prior to presenting the BMAP Update to the Board, it would likely be February before the item would be put on the Board's agenda, rather than trying to put it on their January 2, 2019 agenda. This would allow time for further TAC discussion on this topic at its January 9 meeting.

During her presentation Ms. King noted that water levels in the Northern Coastal Subarea have been declining from 1 to 1.5 feet per year on average near the coastline. Mr. Costa asked if this was a significant rate of decline. Ms. King responded that it is the long-term effect of this ongoing decline that is significant, and that such a rate of decline is not sustainable without adverse impacts to the aquifers. She went on to say that only the Southern Coastal Subarea wells remain above protective water levels.

During her presentation she explained that there is a large amount of available storage space because so much water has been drawn out of storage over the years. She pointed out that optimizing storage efficiency is necessary in order to make as much of the stored groundwater available for beneficial use.

The bulk of the inflow from the ocean is into the Aromas Sands, but there is some inflow into the Santa Margarita aquifer. However, this is non-saline water that was stored in the Santa Margarita aquifer offshore under the ocean.

Over the time period examined in the BMAP Update, on average about 1,450 acre-feet of water has been lost out of the Basin each year. This amounts to approximately 43,500 acre-feet of water being lost over the last 30 years. Within the Basin most of the inter-subarea flows go into the Northern Coastal Subarea due to the pumping cone of depression there.

The Decision set the Natural Safe Yield at 3,000 acre-feet per year. Using data over the period 1988 through 2017, the total basinwide Natural Safe Yield is calculated as being 2,310 acre-feet per year.

In the Laguna Seca Subarea even if all pumping were to be stopped, water levels in the eastern portion of that subarea would continue to fall. Historically, water has flowed into the Laguna Seca Subarea from the Corral de Tierra subbasin. In the future, however, when water levels in the Laguna Seca Subarea rise as a result of reducing pumping in that subarea, there will be flow out of the Laguna Seca Subarea into the Corral de Tierra subbasin.

Ms. King summarized the Basin management objectives to be raising water levels, optimizing recharge and storage capacity, and managing and reducing the threat of seawater intrusion.

Mr. Jaques commented that a change in the Natural Safe Yield from 3,000 acre-feet per year to 2,310 acre-feet per year would impact Standard Producers, because they would have to further reduce pumping beyond the currently scheduled ramp-downs in pumping in order to reduce pumping to fall within the lower Natural Safe Yield.

Mr. Jaques said he would agendize this topic for further discussion at the January TAC meeting.

4. Other Business

There was no other business.

The meeting adjourned at 2:35 PM

**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 2018**
(All Values in Acre-Feet (AF))

	Type	Oct	Nov	Dec	Oct-Dec 17	Jan	Feb	Mar	Jan-Mar 18	Apr	May	Jun	Apr-Jun 18	Jul	Aug	Sep	Jul-Sep 18	Reported Total	Yield Allocation	from WY 2017	for WY 2018	
Coastal Subareas																						
CAW - Coastal Subareas	SPA	367.69	307.12	315.00	989.81	245.45	241.90	170.36	657.71	71.12	85.16	122.41	278.69	0.00	0.00	0.00	0.00	1,926.21	1,791.62	708.80	2,500.41	
City of Seaside (Municipal)	SPA	16.46	13.37	14.39	44.22	13.05	13.64	13.31	39.99	16.11	16.97	16.83	49.91	17.39	16.23	16.89	50.50	184.63	146.99	0.00	146.99	
Granite Rock Company	SPA	..	..	..	0.00	..	..	..	0.00	..	..	..	0.00	..	..	..	0.00	0.00	1.87	232.77	266.65
DBD Development No. 30	SPA	..	..	..	0.00	..	..	..	0.00	..	..	..	0.00	..	..	..	0.00	0.00	3.37	481.76	506.92
Calabrese (Cypress Pacific Inv.)	SPA	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	540.00	12.72	1,609	
City of Seaside (Golf Courses)	APA	45.04	6.11	15.49	66.64	1.94	26.13	8.92	36.99	34.42	83.58	67.24	185.24	88.06	71.86	63.12	223.03	511.90	9.00	31.00	540.00	
Stand City	APA	0.02	0.10	0.02	0.14	0.08	0.19	0.15	0.41	0.10	0.13	0.09	0.32	0.09	0.06	0.06	0.22	1.09	9.00	0.00	9.00	
SNG (Security National Guaranty)	APA	..	..	..	0.00	0.00	0.00	0.58	0.04	..	..	..	0.02	..	..	..	0.00	0.00	149.00	0.00	149.00
Calabrese (Cypress Pacific Inv.)	APA	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.07	6.00	0.00	6.00	
Mission Memorial (Alderwoods)	APA	2.31	0.46	1.02	3.79	0.64	0.44	0.12	1.20	0.22	1.86	1.25	3.33	3.01	2.53	0.57	6.11	14.43	31.00	0.00	31.00	
Coastal Subareas Totals																						
					1,104.60				736.33				517.51				279.87	2,638.31	2,276.00	1,456.04	4,172.04	
Laguna Seva Subarea																						
CAW - Laguna Seva Subarea	SPA	24.00	18.60	23.59	66.19	19.19	21.63	18.47	59.29	19.66	27.54	31.26	78.46	33.52	35.04	30.74	99.30	303.24	0.00	0.00	0.00	
Ryan Ranch Unit		2.29	3.97	4.20	10.46	3.66	0.93	0.00	4.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.05			
Hidden Hills Unit		10.24	5.63	9.87	25.74	7.75	8.80	7.82	24.37	8.29	10.88	12.23	31.40	13.60	14.61	12.26	40.47	121.98				
Bishop Unit		11.47	9.00	9.52	29.99	7.78	11.90	10.65	30.33	11.37	16.66	19.03	47.06	19.92	20.43	18.48	58.83	166.21				
Nicklaus Club Monterey	APA	23.00	0.00	0.00	23.00	0.00	2.00	0.00	2.00	7.00	18.00	27.00	52.00	35.00	22.00	9.00	66.00	143.00	251.00		251.00	
Laguna Seva Golf Resort (Bishop)	APA	30.81	0.00	0.00	30.81	5.68	2.24	0.17	8.10	6.21	29.52	42.09	77.82	43.22	43.86	36.06	123.13	239.87	320.00		320.00	
York School	APA	2.24	0.08	0.71	3.02	0.01	0.54	0.01	0.56	0.85	2.05	1.58	4.48	4.64	2.31	1.81	8.76	16.83	32.00		32.00	
Laguna Seva County Park	APA	1.01	0.65	0.97	2.63	1.15	1.18	0.60	2.93	1.36	1.56	2.06	4.99	1.30	4.04	6.08	11.42	21.96	41.00		41.00	
Laguna Seva Subarea Totals																						
					125.65				72.87				217.75				308.62	724.89	644.00	0.00	644.00	
Total Production by WMI Producers																						
					1,230.26				809.20				735.26				588.49	3,363.21	3,360.00	1,456.04	4,816.04	
Annual Production from APA Producers																						
					949.13				949.13				949.13				949.13	3,363.21	3,360.00	1,456.04	4,816.04	
Annual Production from SPA Producers																						
					2,414.08				2,414.08				2,414.08				2,414.08	3,363.21	3,360.00	1,456.04	4,816.04	
					3,565.2				3,565.2				3,565.2				3,565.2	3,363.21	3,360.00	1,456.04	4,816.04	
City of Seaside Golf Courses In-Lieu (MCWMD source water)																						
MCWMD delivery		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	
CAW/MPWMD ASR (Carnel River Basin source water)																						
Injection (Recovery)		0.00	0.00	0.00	0.00	0.00	0.00	341.23	341.23	189.26	0.00	0.00	189.26	0.00	0.00	0.00	0.00	189.26	530.49		530.49	
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(43.15)	(43.15)	0.00	0.00	0.00	0.00	(43.15)	-1209.72		-1209.72	
		0.00	0.00	0.00	0.00	0.00	0.00	341.23	341.23	189.26	0.00	-43.15	146.11	-360.11	-414.34	-392.12	-1166.57	-679.23			-679.23	

- Notes:**
1. The Water Year (WY) begins October 1 and ends September 30 of the following calendar year. For example, WY 2018 begins on October 1, 2017, and ends on September 30, 2018.
 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. M66G343).
 3. Values shown in the table are based on reports to the Watermaster received by July 15, 2018.
 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's Producer Allocations Water Year 2018 (see Item IX B. in 12/6/2017 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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**WATERMASTER PRODUCER ALLOCATIONS WATER YEAR 2018 IN ACRE-FEET (AF)
INCLUDING A 10% TRIENNIAL REDUCTION FOR 100% OF THIS WATER YEAR**

Initial Basis Water Operating Yield ⁽¹⁾ Natural State Yield (NSY) ⁽²⁾	35000	Current Operating Yield ⁽³⁾ 30000	Current Operating Yield ⁽³⁾ Laguna Sea Operating Yields	37100
ALTERNATIVE PRODUCER ALLOCATIONS				
Central Subarea⁽⁴⁾	AF		Laguna Sea Subarea⁽⁵⁾	AF
Seaside (Gold)	540.00	Nicklaus Club Monterey	351.00	Seaside (Gold)
SNYC	140.00	Y. Bishop	30.00	SNYC
Chalabrese	600.00	Laguna Sea County Park	3200	Chalabrese
Mission Memorial (Alderwood)	600.00		4100	Mission Memorial (Alderwood)
Sand City	900.00			Sand City
Total⁽⁶⁾	28500	Total⁽⁶⁾	6400	Total⁽⁶⁾
				57247
ALTERNATIVE PRODUCER AMOUNT PUMPED WY 2018				
Central Subarea⁽⁴⁾	AF		Laguna Sea Subarea⁽⁵⁾	AF
Seaside (Gold)	511.90	Nicklaus Club Monterey	143.00	Seaside (Gold)
SNYC	0.00	Y. Bishop	208.87	SNYC
Chalabrese	0.07	Laguna Sea County Park	20.98	Chalabrese
Mission Memorial (Alderwood)	1.99		21.98	Mission Memorial (Alderwood)
Sand City	1.99			Sand City
Total⁽⁶⁾	514.93	Total⁽⁶⁾	495.83	Total⁽⁶⁾

Standard Producer Allocations		AF Available to This Producer	Laguna Sea Operating Yield Available to Standard Producers (AF)	Standard Producer Allocations		AF Available to This Producer
Central Subarea	Base Water Right %⁽⁷⁾	Weighted %⁽⁸⁾	1991.62	Laguna Sea Subarea	Base Water Right %⁽⁷⁾	Weighted %⁽⁸⁾
California American Water (CAW)	77.55%	90.44%	146.99	CAW	45.13%	100.00%
Seaside (Municipal)	63.6%	7.42%	13.87			
Granite Rock	0.80%	0.20%	3.51			
D.R.O. Development No. 30	1.09%	1.27%	23.16			
Chalabrese Cypress Pacific Investors LLC	0.27%	0.00%	0.00			
Total	85.25%	100.00%	1991.62	Total	45.13%	100.00%

Allocation of Available Operating Yield Among Standard Producers	Base Water Right Available to this Producer (AF)	% NSY to 824 (Base Water Right) Total Water Right)	NSY Available to Producers (AF) Current Water Year	Base Carryover Credits from Prior Water Year		Not-Free Carryover Credits from Prior Water Year		Water Rights Transferred / Sold DBO to CAW 710 Aumador	Water Rights Transferred / Sold DBO to CAW 3 Upper Bagdale	Total Producer NSY (AF) NSY Available + Base Carryover Credits)	Total Authorized Producers Current Right Thus All Carryover⁽⁹⁾	Actual AF Pumped by Producer in WY 2018	Base Carry over Credits to WY 2019	Not-Free Carry over Credits to WY 2019	Served Water Credits to WY 2019
				Free Carryover	Not-Free Carryover										
California American Water	1791.62	90.44%	180.60	0.00	706.49	0.16	2.15	188.51	2500.41	2229.45	183.91	270.96	144.78		
Seaside (Municipal)	14.99	7.42%	15.17	0.00	0.00	0.00	0.00	15.17	146.99	146.99	0.00	0.00	0.00		
D.R.O. Development No. 30	42.16	1.27%	40.55	0.00	86.50	(0.16)	(2.15)	34.51	506.92	506.92	0.00	34.51	62.45		
Chalabrese Cypress Pacific Investors LLC	3.37	0.17%	3.40	0.00	1.85	0.00	0.00	14.35	16.09	16.09	0.00	14.35	0.00		
Total	1981.00	100.00%	1975.72	0.00	814.97	0.00	0.00	871.53	3457.04	3444.03	719.46	376.46	144.78		

Footnote:
 (1) From page 17 of Exhibit A (Amended Decision) of Court Order filed February 9, 2007.
 (2) From page 14 of Exhibit A (Amended Decision) of Court Order filed February 9, 2007.
 (3) From page 21 of Exhibit A (Amended Decision) of Court Order filed February 9, 2007.
 (4) From page 19 of Exhibit A (Amended Decision) of Court Order filed February 9, 2007.
 (5) From page 21 of Exhibit A (Amended Decision) of Court Order filed February 9, 2007.
 (6) Base Water Right plus Free and Not-Free Carryover Credits from Prior Water Year.
 (7) Base Water Right plus Free and Not-Free Carryover Credits from Prior Water Year.
 (8) Note: Chalabrese Cypress Pacific Investors LLC opted to convert 8AF of its 14AF Alternative Production Allocation to Standard Production Allocation on January 22, 2015 (notice filed by Cypress with Superior Court).

ANTHONY LOMBARDO & ASSOCIATES
A PROFESSIONAL CORPORATION

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December 4, 2018

File No.: 5008.000

Via email only
Laura Dadiw
Administrative Officer
Seaside Groundwater Basin Watermaster
PO Box 51502
Pacific Grove, CA 93950

Re: SNG/Montage Health

Dear Mr. Evans:

Our office represents Montage Health, who has contracted with Security National Guaranty, LLC (SNG) to purchase 5.07 acre feet of SNG's adjudicated water right in the Seaside Basin. SNG holds an Alternative Production Allocation (APA) water right of 149 acre feet annually (afa) per Table 2 of the amended decision. In order for Montage Health to purchase the desired 5.07 acre feet from SNG, 11 acre feet of SNG's APA must be converted to a Standard Production Allocation.

We are contacting you to inform you that our client has recently submitted an application to Monterey Peninsula Water Management District amending the distribution limit for an existing Cal-Am water system within the City of Monterey (Ryan Ranch subunit). Should they be successful in obtaining the amendment, they intend to proceed with the aforementioned partial conversion of the APA to Standard Production Allocation.

While it is necessary for the Watermaster to record such a conversion for basin accounting purposes, our understanding is that no discretionary permit from the Board would be required to proceed with the conversion.

We therefore respectfully request confirmation that no action by the Watermaster Board is necessary to effectuate this transaction, and that the parties may proceed with the conversion as proposed.

Please contact me with any questions.

Sincerely,



Anthony L. Lombardo
ALL/CP

SEASIDE GROUNDWATER BASIN WATERMASTER

P.O. Box 51502, Pacific Grove, CA 93950

(831) 641-0113

December 13, 2018

Anthony L. Lombardo
144 W. Gabilan Street
Salinas, CA 93901

Re: SNG/Montage Health

Dear Mr. Lombardo,

The Seaside Groundwater Basin Watermaster (Watermaster) is in receipt of your letter dated December 4, 2018. Your letter informs us that Montage Health will be purchasing 5.07 acre-feet of Security National Guaranty, LLC (SNG) adjudicated water right in the Seaside Basin. Montage Health has submitted an application to the Monterey Peninsula Water Management District amending the distribution limit for an existing California American water system within the City of Monterey (Ryan Ranch subunit) and within the boundaries of the Seaside Groundwater Basin.

As you are aware, the Seaside Groundwater Basin is adjudicated by the Amended Decision (Decision) entered in the case California American Water Company v. City of Seaside et al., Monterey Superior Court Case No. GNM166343. SNG holds a 149 acre-foot Alternative Production Allocation (APA) water right per Table 2 of the Decision. Watermaster confirms SNG has the right to convert all or part of the APA right to a Standard Production Allocation (SPA) right; in this case 11 acre-feet APA converted to 5.07 acre-feet SPA. The option to convert from an APA to SPA can be exercised by filing a declaration with the Court and serving said declaration on all other parties to the Decision. Once SNG Coastal Subarea APA is converted to SPA, the water can be used in any area of the Seaside Groundwater Basin.

No action by the Watermaster board is necessary to proceed with the conversion from APA to SPA water right. Accordingly, there is no need for this matter to be put on the January 2, 2019 Watermaster board meeting agenda.

Thank you for your inquiry into this matter.

Sincerely,



Laura Dadiw
Administrative Officer