

**SEASIDE GROUNDWATER BASIN WATERMASTER**

**Wednesday, December 4, 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 – Mayor Ian Oglesby
- California American Water – Director Christopher Cook
- City of Sand City – Mayor Mary Ann Carbone
- Monterey Peninsula Water Management District – Director George Riley
- Laguna Seca Subarea Landowner – Director Troy Thompson
- City of Monterey – Councilmember Dan Albert
- City of Del Rey Oaks – Councilmember John Gaglioti
- Monterey County/Monterey County Water Resources Agency – Supervisor Mary Adams, District 5

**I. CALL TO ORDER**

**II. ROLL CALL**

**III. PUBLIC COMMUNICATIONS**

Oral communications 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.

**IV. 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).

**V. MINUTES - Approve Minutes of Regular Board meeting held October 2, 2019 .....3**

**VI. CONSENT CALENDAR**

- A. Consider Approving the Board and TAC schedule of meetings for 2020.....7**
- B. Consider approval of Summary for Payments made during October - November 2019  
totaling \$23,438.16 .....9**
- C. Consider Approving Fiscal Year 2019 Financial Reports through October 31, 2019.....11**

**VII. ORAL PRESENTATION – Georgina King, Montgomery & Associates to make a presentation on the Seawater Intrusion Analysis Report (SIAR for 2019).**

**VIII. NEW BUSINESS**

- A. Consider Approving the Seawater Intrusion Analysis Report for 2019. The Executive Summary is included in the Board agenda packet. The complete SIAR is posted on the Watermaster website at <http://www.seasidebasinwatermaster.org> .....13
- B. Discussion/Consider Adopting for Water Year 2020 a Declaration regarding the Unavailability of Artificial Replenishment Water (Water Year 2020 Production Allocations and Basin Storage Allocations attached) .....17
- C. Discuss/Consider Approval of City of Seaside Application for In-lieu Storage .....21
- D. Discussion/Consider Approving the Watermaster Annual Report for Water Year 2019. The body of the Draft 2019 Annual Report is included in the Board agenda packet. The complete Draft version is posted on the Watermaster website at <http://www.seasidebasinwatermaster.org> .....29

**IX. OLD BUSINESS – None**

**X. INFORMATIONAL REPORTS (No Action Required)**

- A. Technical Advisory Committee (TAC) draft minutes from November 20, 2019 meeting.....47
- B. Watermaster report of production of the Seaside Basin through Water Year 2019 (October 1, 2018 – September 30, 2019).....59
- C. Replenishment Fund Assessment calculations and 2019 Standard Producer Assessments .....61

**XI. DIRECTOR’S REPORTS**

**XII. STAFF COMMENTS**

**XIII. NEXT REGULAR MEETING DATE – Wednesday, February 5, 2020 - 2:00 P.M.**

**XIV. ADJOURNMENT**

This agenda was forwarded via e-mail to the City Clerks of Seaside, Monterey, Sand City and Del Rey Oaks; the Clerk of the Monterey Board of Supervisors, the Clerk to the Monterey Peninsula Water Management District; the Clerk at the Monterey County Water Resources Agency, Monterey One Water and the California American Water Company for posting on November 26, 2019 per the Ralph M. Brown Act, Government Code Section 54954.2(a).

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

Monterey One Water Board Room, 5 Harris Court, Building “D”  
Ryan Ranch, Monterey, California  
*October 2, 2019*

**I. CALL TO ORDER** – The meeting was called to order at 2:00 p.m.

**II. ROLL CALL**

Coastal Subarea Landowner – Director Paul Bruno, Chair  
City of Del Rey Oaks – Council Member John Gaglioti  
City of Sand City – Mayor Mary Ann Carbone  
California American Water (CAW) – Director Christopher Cook  
City of Monterey – Council Member Dan Albert  
Monterey County/Monterey County Water Resources Agency – Supervisor Mary Adams  
Monterey Peninsula Water Management District (MPWMD) – Director George Riley  
Laguna Seca Subarea Landowner – Director Troy Thompson

**Absent:**

City of Seaside – Mayor Ian Oglesby

**Others Present**

Robert Jaques – Technical Program Manager, Watermaster  
Laura Paxton – Administrative Officer, Watermaster  
Lori Girard – Legal Counsel, CAW  
Mike McCullough – Government Affairs Administrator, M1W  
Jonathan Lear – Senior Hydrogeologist, MPWMD  
Michael Paxton – Paxton Associates

**III. PUBLIC COMMUNICATIONS:** None

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

**V. APPROVAL OF MINUTES**

**It was moved by Mayor Mary Ann Carbone, seconded by John Gaglioti and unanimously carried to approve the minutes of the Regular Board meeting held August 7, 2019.**

**VI. CONSENT CALENDAR**

- A. Consider approval of Summary for Payments made during August and September 2019 totaling \$45,821.36
- B. Consider Approving Fiscal Year 2019 Financial Reports through August 31, 2019

**Moved by Council Member Albert, seconded by Director Riley and unanimously carried to approve the consent calendar as presented.**

**VII. ORAL PRESENTATION:** None

**VIII. NEW BUSINESS**

**A. Discuss/Consider Recommendation to the Watermaster Board for Proposed Fiscal Year 2020 Annual Budgets:**

1. Proposed Fiscal Year 2020 (January – December) Administrative Budget  
Supervisor Adams noted that AB5 regarding independent contractor status would soon be made law. The bill aims to protect unskilled gig economy workers by requiring employers to hire as employees independent contractors having only one client, the employer, as a source of income and provide associated benefits. Watermaster staff is skilled with more than one client, and can afford to obtain benefits independently.

**Moved by Council Member Gaglioti, seconded by Director Riley and unanimously carried to approve the 2020 Administrative Fund Budget as presented.**

2. Proposed Fiscal Year 2020 Monitoring and Management Program; and Monitoring and Management Fund—Operations and Monitoring and Management Fund—Capital Budgets
3. Proposed 2020 Replenishment Assessment Fund Budget – No Action Required

**Moved by Director Riley, seconded by Council Member Gaglioti and unanimously carried to approve, as presented, the 2020 Monitoring and Management Work Plan; Operations Fund Budget; and Capital Fund Budget.**

**B. Consider Approving the following Professional Service Contracts for Fiscal Year 2020:**

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 \$24,130 to prepare the Seawater Intrusion Analysis Report (SIAR) for 2020
2. Two Contracts with MPWMD—one for \$54,098 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 2020
3. Two Contracts with Martin Feeney—one for \$4,000 to provide on-call/as-requested hydrogeologic consulting services and one for \$19,250.56 to perform induction logging of the Sentinel Wells for 2019
4. One Contract with Todd Groundwater—for \$4,000 to provide on-call/as-needed hydrogeologic consulting services

**Moved by Council Member Albert, seconded by Supervisor Adams and unanimously carried to approve the 2020 Professional Service Contracts as presented.**

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

**Moved by Mayor Carbone, seconded by Council Member Albert and unanimously carried to approve the Water Year October 1, 2019 through September 30, 2020 Replenishment Assessment Unit Cost of \$2,872 for Natural Safe Yield Overproduction and \$718 (25% of \$2,872) for Operating Yield Overproduction.**

- D. Resolution expressing support of the Monterey Peninsula Water Supply Project Desalination Plant and Related Facilities

Director Bruno presented the resolution to the board for consideration, stating it is consistent with the Watermaster mission and consistent with past support of the desalination plant as a water supply and basin replenishment source. The resolution would be made public, including providing it to the Coastal Commission with a listing of votes cast, to show Watermaster support of a project that assures basin replenishment through an existing agreement between Watermaster and CAW. Council Member Gaglioti stated the desalination plant is the only currently certified water supply project that replenishes the basin and therefore should be supported by Watermaster. Director Albert and Supervisor Adams inquired whether the Pure Water Monterey Expansion Project could also be supported in the resolution. Director Gaglioti stated that the Expansion Project is an idea that has not yet been fully designed or undergone an EIR, nor has it been presented to the Monterey One Water board, making it premature to resolve to support it. Lori Girard, Corporate Counsel for CAW gave her opinion that Director Cook does not have to legally recuse from the vote; if a board member disagrees they are free to file a motion with Judge O'Farrell for a determination. Supervisor Adams was uncomfortable with the resolution and felt it was unclear. Director Riley felt the resolution was of a political nature and should not be acted upon by Watermaster.

**Moved by Council Member Gaglioti, seconded by Mayor Carbone and carried to adopt Resolution 2019-01 with the addition of: *Whereas, the Monterey Peninsula Water Supply Project (Project) desalination plant and related facilities is before the Board of Directors of the Seaside Groundwater Basin Watermaster as a project that will replenish the Seaside Groundwater Basin.* Director Riley voted no. Supervisor Adams abstained.**

**IX. OLD BUSINESS:** None

**X. INFORMATIONAL REPORTS:**

- E. Technical Advisory Committee (TAC) approved minutes from meeting held August 14 and draft minutes from meeting held September 11, 2019
- F. Watermaster report of production of the Seaside Basin October 1, 2018 – June 30, 2019
- G. Watermaster letter to Court regarding City of Seaside Request for a Watermaster Storage and Recovery Agreement

- XI. DIRECTOR'S REPORTS:** Director Bruno announced a planned Christmas party at his home on Wednesday December 11, 2019.
- XII. STAFF COMMENTS:** There were no staff comments.
- XIII. NEXT MEETING DATE:** The next meeting of the Watermaster board will be held Wednesday, November 6, 2019 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 Bruno adjourned the meeting at 3:12 p.m.

DRAFT

**SEASIDE GROUNDWATER BASIN  
WATERMASTER**

**2020  
SCHEDULE OF REGULAR MEETINGS**

	<b><u>BOARD</u></b>	<b><u>TAC</u></b>
<b>JANUARY</b>	<b>NONE</b>	<b>8</b>
<b>FEBRUARY</b>	<b>5</b>	<b>12</b>
<b>MARCH</b>	<b>4</b>	<b>11</b>
<b>APRIL</b>	<b>NONE</b>	<b>NONE</b>
<b>MAY</b>	<b>NONE</b>	<b>13</b>
<b>JUNE</b>	<b>3</b>	<b>10</b>
<b>JULY</b>	<b>1</b>	<b>8</b>
<b>AUGUST</b>	<b>5</b>	<b>12</b>
<b>SEPTEMBER</b>	<b>2</b>	<b>9</b>
<b>OCTOBER</b>	<b>7</b>	<b>NONE</b>
<b>NOVEMBER</b>	<b>4</b>	<b>18</b>
<b>DECEMBER</b>	<b>2</b>	<b>9</b>

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**SEASIDE GROUNDWATER BASIN WATERMASTER**

TO: Board of Directors  
 FROM: Laura Paxton, AO  
 DATE: December 4, 2019  
 SUBJECT: Summary of Payments made during the months of October - November 2019

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**RECOMMENDATIONS:**

Consider approving payment of bills submitted and authorized to be paid October - November 2019

**Summary of Payments Made August 2019**

**Paxton Associates** (Administrative Officer (AO))

August 26, 2019 through September 25, 2019	50	\$ 5,000.00
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Responded to telephone inquiries, e-mail, and other correspondence as needed regarding the Seaside Basin. Prepare for/attend 8/7 Board meeting. Respond to multiple requests for documents and meet with Joseph Lucido regarding public records request of Bay Ridge well documents and information. Prepare for/attend water demand informational meeting w/M1W, MPWMD, MCWD & Watermaster staff. Draft Agenda; gather docs for 10/2 board meeting; assemble packet & distribute. Review Seaside In-lieu project McGlothlin motion to court. Prepare for/attend meeting with Director Riley. Prepare minutes of 8/7 board meeting. Prepare agenda and packet and attend Budget and Finance Committee meeting 9/18. Routinely picked up mail from PO Box; reconciled accounts to the City of Seaside Watermaster accounts; prepared financial reports; processed invoices; reviewed and posted items to web site.

**Robert Jaques** (Technical Program Manager)

September 5, 2019 through September 30, 2019	26.5	3,975.00
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Responded to emails, telephone inquiries, and other correspondence on a variety of Watermaster issues; TAC agenda packet/meeting prep/attend 9/11. Review SVBGSA board meeting agenda packet. Respond to multiple requests from Joseph Lucido for information on Bay Ridge & Hidden Hills wells, groundwater modeling, & water supply. Review Stoldt transmittal to MPWMD board re: water demand. Draft board memo re: recharging Basin. Prepare Board agenda Transmittals.

Total for October 2019	\$ 8,975.00
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**Summary of Payments Made November 2019**

**Paxton Associates (Administrative Officer (AO))**

September 26, 2019 through October 25, 2019 29 \$ 2,900.00

Responded to telephone inquiries, e-mail, and other correspondence as needed regarding the Seaside Basin. Prepare for/attend 10/2 Board meeting. Finalize Resolution 2019-01 and submit to Calif Coastal Commission; follow up submission to locate correct CCC staff for submission. Send cancellation of 11/6 board meeting. Respond to further requests from Mr. Lucido regarding public records request of Bay Ridge well documents and information. Update WM monthly task listing. Collect/follow up on production and quality reporting. Begin Replenishment Assessment calculations. Post production; send level data to Lear. Routinely picked up mail from PO Box; reconciled accounts to the City of Seaside Watermaster accounts; prepared financial reports; processed invoices; reviewed and posted items to web site.

**Robert Jaques (Technical Program Manager)**

October 1, 2019 through October 31, 2019 38 5,700.00

Responded to emails, telephone inquiries, and other correspondence on a variety of Watermaster issues. Prep for/attend 10/2 board meeting. Prepare TAC 11/13 meeting agenda packet. Meet w/Magretto, CAW re: LSSA wells; continue board memo re: recharging Basin. Review planned demolition of OVPS by MCWD as it pertains to Watermaster's SBWM-4 well; 10/29 site visit; 10/30 meeting with State Parks. Prepare for/attend 10/11 meeting w/Mr. Lucido and Chris Cook; respond to additional Lucido requests. Distribute/collect signed consultant contracts.

**Montgomery & Associates (Technical Consultant)**

August 1, 2019 - September 30, 2019 2.0 390.00

RFS 2019-01 General Consulting & TAC

Prepare MODFLOW files, research Bay Ridge well Basin boundary issue, review PWM ASR monitoring wells.

**Martin B. Feeney, PG, CHg - Consulting Hydrogeologist**

September through October 2019 RFS 2019-01 17.0 5,473.16

Hydrogeologic consulting & field consulting; Induction logging of Sentinel Wells

Total for November 2019	\$ 14,463.16
Grand Total October - November 2019	\$ 23,438.16

**Seaside Groundwater Basin Watermaster**  
**Budget vs. Actual Administrative Fund**  
 Fiscal Year (January 1 - December 31, 2019)  
 Balance through October 31, 2019

	<u>2019 Adopted Revised Budget</u>	<u>Contract Amount</u>	<u>Year to Date Revenue / Expenses</u>
<b>Available Balances &amp; Assessments</b>			
Dedicated Reserve	-		-
FY (Rollover)	23,000.00		12,825.52
Admin Assessments	77,000.00		77,000.00
<b>Available</b>	<u><b>100,000.00</b></u>		<u><b>89,825.52</b></u>
<b>Expenses</b>			
Contract Staff	50,000.00	50,000.00	38,625.00
Legal Advisor	25,000.00		5,002.20
Filing fees and postage			-
<b>Total Expenses</b>	<u><b>75,000.00</b></u>	<u><b>50,000.00</b></u>	<u><b>43,627.20</b></u>
<b>Total Available</b>	25,000.00		
<b>Dedicated Reserve</b>	25,000.00		25,000.00
<b>Net Available</b>	<u><u>-</u></u>		<u><u><b>21,198.32</b></u></u>

Seaside Groundwater Basin Watermaster  
**Budget vs. Actual Monitoring & Management - Operations Fund**  
 Fiscal Year (January 1 - December 31, 2019)  
 Balance through October 31, 2019

	2019 Adopted Budget	Contract Encumbrance	Year to Date Revenue/Expenses
<b>Available Balances &amp; Assessments</b>			
Operations Fund Assessment	\$ 106,921.00	\$ -	\$ 106,921.00
Pass Through	-	3,915.00	2,049.00
Cost Share Reimbursement	-	-	-
FY 2018 Rollover	100,000.00	-	222,193.80
<b>Total Available</b>	<b>\$ 206,921.00</b>	<b>\$ 3,915.00</b>	<b>\$ 331,163.80</b>
<b>Appropriations &amp; Expenses</b>			
<b>GENERAL</b>			
Technical Project Manager	\$ 50,000.00	\$ 50,000.00	\$ 49,612.50
Contingency @ 10% (not including TPM )	14,266.00	-	-
<b>Total General</b>	<b>\$ 64,266.00</b>	<b>\$ 50,000.00</b>	<b>\$ 49,612.50</b>
<b>CONSULTANTS (Montgomery; Todd Groundwater; Web Site Database)</b>			
Program Administration	\$ 21,140.00	\$ 19,400.00	\$ 11,291.61
Production/Lvl/Qlty Monitoring	2,400.00	-	-
Basin Management	30,000.00	-	-
Seawater Intrusion Analysis Report	21,550.00	21,100.00	-
<b>Total Consultants</b>	<b>\$ 75,090.00</b>	<b>\$ 40,500.00</b>	<b>\$ 11,291.61</b>
<b>MPWMD</b>			
Production/Lvl/Qlty Monitoring	\$ 48,832.00	48,832.00	20,950.00
Pass Through 2018	-	3,915.00	1,116.00
Basin Management	-	-	-
Seawater Intrusion	1,192.00	1,192.00	-
Direct Costs	-	-	2,820.00
<b>Total MPWMD</b>	<b>\$ 50,024.00</b>	<b>\$ 53,939.00</b>	<b>\$ 24,886.00</b>
<b>CONTRACTOR (Martin Feeney)</b>			
Production/Lvl/Qlty Monitoring	\$ 17,541.00	\$ 17,540.56	\$ 15,513.45
<b>Total Appropriations &amp; Expenses</b>	<b>\$ 206,921.00</b>	<b>\$ 161,979.56</b>	<b>\$ 101,303.56</b>
<b>Total Available</b>	<b>-</b>		<b>229,860.24</b>

12/4/19

**TO:** Board of Directors

**FROM:** Robert S. Jaques, Technical Program Manager

**DATE:** December 4, 2019

**SUBJECT:** Consider Approving the Seawater Intrusion Analysis Report (SIAR) for WY 2019

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**RECOMMENDATIONS:**

It is recommended that the Board approve the Seawater Intrusion Analysis Report for WY 2019.

**BACKGROUND:**

Montgomery & Associates (formerly HydroMetrics) has prepared the Seawater Intrusion Analysis Report (SIAR) for Water Year 2019. The Executive Summary from the WY 2019 SIAR is attached. The complete SIAR is lengthy, so rather than including it in this agenda packet it has been posted on the Watermaster's website so Board members and members of the public wishing to review the entire document can do so.

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. At its November 20, 2019 meeting the TAC reviewed a Draft version of the 2019 SIAR and recommended some revisions to it before it was sent to the Board for approval. The Final version that is posted on the Watermaster's website, and the Executive Summary that is attached, reflect these revisions.

**DISCUSSION**

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. In spite of these factors, the previous SIARs stated that neither the Piper nor the Stiff Diagrams nor any of the other parameters indicated the presence of seawater intrusion in the existing monitoring wells. The 2019 SIAR notes that the evaluation of the data from the sampling and monitoring program continues to indicate that seawater intrusion is not occurring. However, the 2019 SIAR stresses that both the Paso Robles and Santa Margarita aquifers, the primary water production aquifers in the basin, are at risk of seawater intrusion because portions of both of those aquifers have groundwater levels that are below sea level.

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 been declining in both the shallow and deep aquifers 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.

A representative of Montgomery & Associates, Georgina King, who was the principal author of the SIAR, will provide a Power Point presentation on the SIAR and respond to questions from the Board.

**ATTACHMENTS:**

Executive Summary of the WY 2019 Seawater Intrusion Analysis Report.

(The complete SIAR is posted on the Watermaster's website at

<http://www.seasidebasinwatermaster.org/>, for review by those who wish to examine the entire document, including all of its attachments.)

## 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 under 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 2019 and prior, no seawater intrusion has historically been or is currently observed in existing monitoring and production wells in the Seaside Groundwater Basin. Even though seawater intrusion is not occurring, there are ongoing detrimental groundwater conditions that pose a potential threat of seawater intrusion. These are summarized below:

- Both the Paso Robles and Santa Margarita aquifers in the Seaside Groundwater Basin are susceptible to seawater intrusion. The Paso Robles aquifer is in direct hydrogeologic connection with Monterey Bay, and seawater will eventually flow into it if inland groundwater levels continue to be below sea level. The Santa Margarita aquifer may not be in direct connection with Monterey Bay. If that is the case, then seawater intrusion will take longer to appear because the pathway for seawater into that aquifer will be longer as seawater would need to move through the clay rich deposits adjacent to that aquifer before entering the aquifer itself and thereafter make its way into Santa Margarita production wells. It is not if, but when, seawater intrusion into these aquifers will occur if protective water elevations are not achieved.
- Deep groundwater in the Northern Coastal subarea continues to be below sea level. The Water Year 2019 2<sup>nd</sup> quarter (winter/spring) deep aquifer coastal groundwater levels are more than 12 feet below sea level and the 4<sup>th</sup> quarter (summer/fall) levels are more than 30 feet below sea level.

- Groundwater levels remain below protective elevations in all deep target monitoring wells (MSC deep, PCA-W deep, and sentinel well SBWM-3). Currently, MSC shallow one of the three shallow wells' groundwater levels are below protective elevations. Groundwater elevations at PCA-W shallow are just above its protective elevation, after falling below its protective elevation last fall.

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

- All groundwater samples for Water Year 2019 from depth-discreet monitoring wells plot generally in a single cluster on Piper diagrams, with no water chemistry changes towards seawater.
- In some production wells, groundwater quality plot on Piper diagrams 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.
- Chloride concentration trends were stable for most monitoring wells. One monitoring well, FO-09 shallow, has sustained increased chloride concentrations in all three samples taken during Water Year 2019. The increase in concentrations from the previous year are between 20 and 30 mg/l. The increase is greater than fluctuations observed historically over the period of record. Elevated concentrations in themselves do not indicate seawater intrusion, however, this well should be carefully observed over the next year to determine if the increasing chloride concentrations are temporary or not.
- Sodium/chloride molar ratios in the monitoring wells remained constant or increased over the past year. Monitoring well FO-09 shallow experienced an increase in chloride as mentioned above, but its sodium/chloride ratio in Water Year 2019 is within the range of historical ratios and has not fallen below the 0.86 ratio that may identify seawater intrusion as the source of chloride as opposed to a domestic waste water source.
- 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 historical or recent changes over time that are indicative of seawater intrusion.

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. Although there was some stabilization in groundwater levels between Water Years 2014 and 2016, groundwater levels are continuing to decline. The rate of decline now, however, is less than 0.5 feet per year.

Native groundwater production in the Seaside Groundwater Basin for Water Year 2019 was 3,269.2 acre-feet, which is 94 acre-feet more than Water Year 2018. The amount of native groundwater pumped in Water Year 2019 is 91 acre-feet less 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 recent increases in chloride concentrations at monitoring well FO-9 shallow and its proximity to known intrusion in the Salinas Valley, it is recommended that groundwater quality results from it be reviewed after each sampling event to identify if the recent increases are part of natural fluctuations or an ongoing increasing trend. If the March 2020 sample has a greater concentration than this year's highest concentration of 80 mg/L, it is recommended that its sampling frequency be increased to quarterly as a precaution.

With the exception of FO-09 shallow, data analyzed for this report did not deviate significantly from historical data. Therefore, besides the additional precautions recommended for the FO-09 shallow monitoring well, there are no additional recommendations on sampling frequencies.

As projects that recharge and recover water in the Basin are implemented, groundwater levels and thus groundwater flow directions will change, and possibly groundwater quality too. It is therefore important that data from new monitoring wells are reported to the Watermaster and taken into consideration in future SIARs. The first such project likely to be implemented is Pure Water Monterey. Monitoring well construction is underway and the Watermaster will identify wells that would provide the most useful information to be included in future SIARs.



# 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 2019 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 2020 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:

The Club at Pasadera .....	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.....	1,922.36 acre-feet*
Seaside (Municipal) .....	146.99 acre-feet**
Granite Rock .....	235.87 acre-feet***
D.B.O. Development 30 .....	429.12 acre-feet****
Cypress (Calabrese).....	19.66 acre-feet*****

Laguna Seca Subarea Standard Producers:

California American Water.....	0.0 acre-feet
--------------------------------	---------------

- 
- \* Total is the 2020 base allocation of 1,791.62 acre-feet plus 130.75 of not free carryover. California American Water has a positive balance of 590.71 acre-feet of stored water credit at WY-end 2019 from Basin extractions exceeding injections since WY 2010 under the CAW/MPWMD ASR Program, formalized through a Storage Agreement in 2012.
  - \*\* Total is the 2020 base allocation of 146.99 acre-feet.
  - \*\*\* Total includes 194.88 acre-feet of “free” carryover and 27.12 acre-feet of “not-free” carryover credit from previous water years ***capped at the producers storage allocation of 222.0 acre-feet***, plus the 2020 base allocation of 13.87 acre-feet.
  - \*\*\*\* Total includes 364.98 acre-feet of “free” carryover plus 38.98 acre-feet of “not-free” carryover credit from previous water years ***capped at the producers storage allocation of 403.96 acre-feet***, plus the 2020 base allocation of 25.16 acre-feet.
  - \*\*\*\*\* Total includes 14.65 acre-feet of “free” carryover and 1.64 acre-feet of “not-free” carryover credit from previous water years plus the 2020 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)
<b>Coastal and Northern Inland Subareas</b>			
California American Water <sup>(3)</sup>	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
<b>SUBAREAS TOTAL</b>	<b>85.75%</b>	<b>100.00%</b>	<b>31,770</b>
<b>Laguna Seca Subarea</b>			
California American Water (3)	45.13%	100.00%	20,260
<b>SUBAREA TOTAL</b>	<b>45.13%</b>	<b>100%</b>	<b>20,260</b>
<b>BASIN TOTAL</b>		<b>100%</b>	<b>52,030</b>

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.

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**SEASIDE GROUNDWATER BASIN  
WATERMASTER**

TO: Board of Directors  
 FROM: Laura Paxton, Administrative Officer  
 DATE: December 4, 2019  
 SUBJECT: Discuss/Consider Approval Re: City of Seaside In-lieu Storage Agreement Application

**RECOMMENDATIONS:**

Consider approving City of Seaside In-lieu Storage and Recovery Agreement Application.

**BACKGROUND:**

Watermaster received from the City of Seaside (City) an application to store and recover non-native water from the Seaside Groundwater Basin (Basin). The City contact for the application is Kurt Overmeyer, Economic Development Director. A letter dated April 5, 2019 from the City's attorney Russ McGlothlin explaining the in-lieu storage program (substitution of recycled water on the Blackhorse and Bayonet Golf Courses) accompanied the application. The City seeks to store up to 2,357 acre-feet per year, the share of the City's municipal total useable storage space set forth in the Decision, using Pure Water Monterey Project recycled water purchased from Marina Coast Water District (MCWD) for irrigation of the City's golf courses in lieu of the current use of approximately 450 acre-feet per year. The stored water would be recovered at the City's Well No. 4 to be delivered to MCWD for use within its service area for anticipated projects within the City's portion of the Ord Community, and potential use within the City of Seaside service area.

The Watermaster Technical Advisory Committee reviewed the matter at its June 12 meeting and supported the project in concept however felt its consistency with the decision was a legal matter not a technical one.

At the October 2<sup>nd</sup> Board meeting the board, although supportive in concept of the City's proposal, determined that the Decision was unclear whether the City was required to convert its alternative production allocation to standard production in order for Watermaster to enter into a storage and recovery agreement. An Order on Motion (attached) dated October 25, 2019 from Judge O'Farrell determined that the proposed program is consistent with the terms of the Decision and approved the City's in-lieu storage proposal.

**DISCUSSION:**

Before the Board for consideration is the City of Seaside Storage and Recovery Agreement Application.

**FISCAL IMPACT:**

Minimal

**ATTACHMENTS:**

City of Seaside program cover letter  
 City of Seaside Application to Store and Recover Non-native Water from the Seaside Groundwater Basin  
 Order on Motion from Judge O'Farrell

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April 5, 2019

Russell M. McGlothlin  
Attorney at Law  
805.882.1418 tel  
805.965.4333 fax  
rmcglathlin@bhfs.com

**VIA EMAIL**

Laura Paxton ([watermasterseaside@sbcglobal.net](mailto:watermasterseaside@sbcglobal.net))  
Bob Jaques ([bobj83@comcast.net](mailto:bobj83@comcast.net))  
Seaside Groundwater Basin Watermaster  
P.O. Box 51502  
Pacific Grove CA 93950

**Re: Proposed City of Seaside In-Lieu Storage Program (Substitution of Recycled Water on the Blackhorse and Bayonet Golf Courses)**

Dear Laura and Bob:

I am writing to you in my capacity as special water counsel for the City of Seaside<sup>1</sup> to propose an in-lieu storage program in the Seaside Groundwater Basin as explained below. Pursuant to Section III.3.L.3.j.xx of the Amended Decision, the City submits the attached application for a storage and recovery agreement for the proposed program for Watermaster's consideration.

The proposed in-lieu storage program would result from substituting recycled water obtained from Marina Coast Water District ("MCWD") for irrigation of the City's Bayonet and Blackhorse Golf Courses in lieu of the current use of approximately 450 AFY of groundwater produced from the basin. The result of the substitution would cause the replenishment and storage of water in the basin.<sup>2</sup>

The delivery of recycled water to the golf courses would be metered and reported to Watermaster on a schedule and appropriate terms to be set forth in the storage and recovery agreement. The quantity of recycled water applied at the golf courses annually will establish the amount of water stored annually in the basin through in lieu storage.

The stored water would be recaptured by the City at its Well No. 4. Most, if not all, of the recovered water will be delivered to MCWD for use within MCWD's service area that is within the City's portion of the Ord Community (former Fort Ord). The water is necessary to serve anticipated projects for which there is presently insufficient water allocation pursuant to Fort Ord Reuse Authority's allocation

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1 As we have previously discussed, I cannot simultaneously represent the Watermaster and the City on this matter. Pursuant to our conflict waiver, my firm will only be representing the City on this matter. Should the Watermaster desire legal counsel on this matter, I will gladly provide recommendations for alternative counsel.

2 In lieu storage occurs when a foreign water supply is used in lieu of native groundwater production. The process is a common and preferred method of groundwater replenishment throughout California because it avoids the necessity of infrastructure to inject or spread water for replenishment as well as any necessary treatment prior to injection or spreading.

Laura Paxton  
April 5, 2019  
Page 2

program, particularly the Campus Town and Main Gate projects. Some portion of the recovered stored water may also be used within the City's municipal water system to cover long-term demand exceedances in excess of the City's pumping right for its municipal system.

I look forward to working with you in processing the attached application. Please contact me with any questions or instructions respecting this matter.

Sincerely,

Russell M. McGlothlin

cc: Kurt Overmeyer, Economic Development Director  
Enclosures: Application for Storage and Recovery Agreement



**APPLICATION TO STORE AND RECOVER NON-NATIVE WATER  
FROM THE SEASIDE GROUNDWATER BASIN**

**INSTRUCTIONS:** This Application form is for use by Standard Producers in the Seaside Groundwater Basin (Seaside Basin) for the purpose of obtaining approval from the Seaside Basin Watermaster (Watermaster) to store Non-Native water in, and to subsequently recover that stored water from, the Seaside Basin. The application process is as described in Section III.L.3.j.xx of the Amended Decision of the Monterey County Superior Court, Case No. M66343, filed February 9, 2007.

City of Seaside (the “City”)

Name of Standard Producer (Applicant)

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**Contact Information for Applicant:**

Contact Person: Kurt Overmeyer, Economic Development Director

Address: 440 Harcourt Ave, Seaside, CA 93955

Telephone: 831-899-6839

**Proposed quantity of non-native water Applicant seeks to store through spreading or direct injection into the Seaside Basin (acre-feet per year):**

Pursuant to Section III.3.L.3.j.xix of the Amended Decision and the Watermaster’s Declaration of Total Usable Storage Space, November 2, 2018 (“Declaration”), the City requests a storage and recovering agreement authorizing the City to store up to 2,357 acre-feet per year, which is the amount of the City’s share of the total usable storage space set forth in the Declaration.

**Proposed location(s) where the spreading or direct injection of non-native water into the Seaside Basin will occur.**

The City’s storage of water in the basin will result from substituting recycled water obtained from the Pure Water Monterey project (“Recycled Water”), obtained from the Marina Coast Water District (“MCWD”) for irrigation of the City’s Bayonet and Blackhorse Golf Courses in lieu of the current use of approximately 450 acre-feet per year of groundwater from the Seaside Basin. The result of the substitution of the Recycled Water for groundwater production to irrigate the golf courses will cause the replenishment and storage of water in the basin. The location where the Recycled Water would be delivered to the golf courses is shown in Attachment A.

**Proposed location(s) where the stored water may be recovered.**

The City will recover the stored water at City Well No. 4, located on Juarez Street in the City of Seaside, Assessor's Parcel Number 012-115-017-000, as shown in Attachment B. City Well No. 4 withdraws water from the Santa Margarita aquifer and is perforated at 390 to 420 feet below ground surface (bgs), 430 to 470 feet bgs and at 490 to 550 feet bgs. Most, if not all, of the recovered water will be delivered to MCWD for use to serve users within the City's portion of the Ord Community. Some portion may be used within the City's municipal water system to cover long-term demand exceedances in excess of the City's pumping right for its municipal system.

**Water quality characteristics of the non-native water proposed for spreading or direct injection into the Seaside Basin.**

Because the storage pursuant to this application would occur through in lieu storage procedures rather than injection or spreading, water quality should not be of concern. However, the substitution water is Recycled Water from the Pure Water Monterey Project, which is the same water that MPWMD will inject into the Seaside Basin pursuant to the California-American Water Company storage program previously approved by Watermaster. The water quality constituents in the Recycled Water will not exceed the water quality limits contained in the Waste Discharge Requirements and Water Recycling Requirements issued for the Pure Water Monterey Project issued by the Central Coast RWQCB in Order No. R3-2017-0003.

**Permits and approvals from regulatory agencies.**

The Central Coast RWQCB has issued Waste Discharge Requirements and Water Recycling Requirements for the Recycled Water under Order No. R3-2017-0003.

The City will enter into an agreement with MCWD specifying the terms of the delivery of Recycled Water to the Bayonet and Blackhorse Golf Courses and delivery of recovered stored water to MCWD.

FILED IN COURT

10-25-19  
CLERK OF THE SUPERIOR COURT

BY Carol Melber DEPUTY

Carol Melber

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6 *Attorneys for Defendant City of Seaside*

7  
8 SUPERIOR COURT OF THE STATE OF CALIFORNIA  
9 FOR THE COUNTY OF MONTEREY  
10

11 CALIFORNIA AMERICAN WATER,

12 Plaintiff,

13 v.

14 CITY OF SEASIDE, et al.,

15 Defendants.  
16

17 MONTEREY PENINSULA WATER  
MANAGEMENT DISTRICT,

18 Intervenor.  
19

20 MONTEREY COUNTY WATER  
RESOURCES AGENCY,

21 Intervenor.  
22

23 AND RELATED CROSS ACTIONS.  
24  
25  
26  
27  
28

Case No. M66343

~~PROPOSED~~ ORDER

Assigned for All Purposes to the Honorable  
Robert O'Farrell

Action Filed: August 14, 2003

[PROPOSED] ORDER

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[PROPOSED] ORDER ON MOTION


The Court, having considered the City of Seaside's Motion for Approval of In Lieu Groundwater Storage Program, in connection with all other papers submitted in this matter, and all argument or evidence presented, finds as follows:

The Program is consistent with the terms of the Decision and with California law and policy. Implementation of the in lieu groundwater storage program proposed by the City does not require the conversion of the City's alternative production allocation to standard production allocation, and is preferable to all available alternatives. The Program is financially and environmentally prudent, and promotes the highest beneficial use of the water resources available to the Monterey Peninsula.

Good cause having been shown, the Motion is **GRANTED**.

**IT IS SO ORDERED.**

Dated: 10/25/19

By:   
Hon. Robert O'Farrell  
Monterey Superior Court

SEASIDE GROUNDWATER BASIN  
WATERMASTER

TO: Board of Directors

FROM: Robert S. Jaques, Technical Program Manager

DATE: December 4, 2019

SUBJECT: Discussion/Consider Approving Watermaster Annual Report for WY 2019.

-----  
**RECOMMENDATIONS:**

It is recommended that the Board approve the Watermaster Annual Report for WY 2019.

**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 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 20, 2019 meeting. The TAC did not request any revisions to it. The TAC then recommended that the Report be forwarded to the Board for its approval. Attached is the body of the Draft 2019 Annual Report, which is the same document that the TAC reviewed. No revisions to the Draft were requested by Cal-Am. The complete Draft version is posted on the Watermaster website at <http://www.seasidebasinwatermaster.org/>.

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, 2020 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 2019 Annual Report.

# **SEASIDE BASIN WATERMASTER**

## **ANNUAL REPORT – 2019**

**January 2, 2020**

# **DRAFT**

**NOTE: ITEMS HIGHLIGHTED IN YELLOW WILL BE UPDATED FOR INCLUSION IN THE FINAL VERSION OF THE ANNUAL REPORT.**

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## SEASIDE BASIN WATERMASTER

### ANNUAL REPORT – 2019

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 2019 Annual Report is being filed on or before January 15, 2020, 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 2019 (WY 2019) 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 2019.” Water Year 2019 is defined as beginning October 1, 2018 and ending on September 30, 2019.

#### **B. Groundwater Storage**

Monterey Peninsula Water Management District (MPWMD), in cooperation with California American Water (CAWC), operates the Seaside Basin Aquifer Storage and Recovery (ASR) program. Under the ASR program, CAWC 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 CAWC distribution system for injection and storage in the Seaside Basin at the MPWMD’s Santa Margarita ASR site and CAWC’s Seaside Middle School ASR site. During WY 2019, 1,335 AF was diverted and stored in the Seaside Basin under the ASR program. Rainfall in the area was about 145% of normal, and Carmel River flow was about 217% of normal.

Based upon production reported for WY 2019, the following Standard Producers are entitled to Free and Not-Free Carryover Credits to 2020 in accordance with the Decision, Section III. H. 5:

<u>Producer</u>	<u>Free Carryover Credit</u> (Acre-feet)	<u>Not-Free Carryover Credit</u> (Acre-feet)
Granite Rock	194.88	27.12
DBO Development	364.98	38.98
Calabrese (Cypress)	14.65	1.64
CAWC	00.00	130.75
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 2019 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 2019 under the April 7, 2010 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.

However, on September 4, 2019 the City of Seaside filed a motion with the Court seeking the Court’s approval of the City’s request for a Storage and Recovery Agreement for in-lieu storage and recovery of water. On October 25, 2019 the Court approved the City’s request. Court documents pertaining to the City’s request are contained in Attachment 15. The Watermaster plans to prepare and consider approving such an agreement in early 2020.

**D. Leases or Sales of Production Allocation and Administrative Actions**

In WY2019 a transfer or assignment of water allocation was activated, as provided for in the Cypress Pacific Investors (CPI), successor to Muriel L. Calabrese 1987 Trust, front-loading delivery of water agreement that is contained in Attachment 14. Per the agreement, CPI leases to California American Water Company (CAWC) 8.0 AF of water (subject to reduction per the formulas in the Decision) for the purpose of producing such water from, or moving the production of such water to, the inland wells operated by CAWC and for delivery of such water by CAWC to one or more CPI properties. In Water Year 2016-17 CPI assigned its entire Standard Production Allocation water right to CAWC effective October 1, 2016. In Water Year 2019 CAWC began wheeling 3.17 AF to a certain CPI property.

Also, as discussed in Attachment 13 of the 2018 Annual Report, in 2019 Security National Guarantee (SNG) ultimately chose not to convert a portion of its Alternative Production allocation to Standard Allocation in order to sell that portion of its allocation to Montage Health.

During WY 2019 the Watermaster Board did not make any revisions to its *Rules and Regulations*.

During WY 2019 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
Christopher Cook	Nina Miller/Tim O'Halloran	California American Water
Director Bob Costa/Troy Thompson	N/A	Laguna Seca Subarea Landowner
Director George Riley	Director Jeanne Byrne	MPWMD
Mayor Mary Ann Carbone		City of Sand City
Supervisor Mary Adams	Supervisor Jane Parker	Monterey County (MCWRA)
Councilmember John Gaglioti	Mayor Alison Kerr	City of Del Rey Oaks
Councilmember Dan Albert	Mayor Clyde Roberson	City of Monterey
Mayor Ian Oglesby		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 CAWC/MPWMD ASR Program operated in WY 2019 and 1,335.07 acre-feet of water was injected into the Basin as Stored Water Credits and 744.36 acre-feet was extracted.

In accordance with Section III. L. 3. j. xx, CAWC 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 Watermaster Board considered approval of a Storage and Recovery Agreement between the Watermaster, CAWC, and MPWMD governing the future injection and recovery of water from PWM at its publicly noticed January 2, 2019 meeting. No member of the public present at the meeting voiced concerns about approval of the agreement or PWM. After consideration and discussion, the Watermaster Board approved the agreement. A copy of the agreement is included in Attachment 13 of this Annual Report.

**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 2019.

Total pumping for WY 2019 did not exceed the Operating Yield (OY) of the Basin, and exceeded the Natural Safe Yield (NSY) of the Basin by 269.24 acre-feet.

California American Water reported annual pumping quantities that exceeded its Standard Production NSY allocation by 284.85 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 27.82 acre-feet, and reported annual pumping quantities that exceeded its Operating Yield allocation by 31.41 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 2019 amounted to \$80,000 including a \$25,000 dedicated reserve. Costs include the Administrative Officer salary and legal counsel fees. The “Fiscal Year 2019 Administrative Fund Report” and “Fiscal Year 2019 Operations Fund Report” are provided in [Attachment 3](#). [Note: Attachment 3 will be updated and presented to the Watermaster Board at its December 2019 meeting. The updated version will be included in the Final version of this 2019 Annual Report.]

### **H. Replenishment Assessments**

At its meeting of October 2, 2019 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 2019, should remain the same for WY 2020.

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 2019, CAWC’s Replenishment Assessment for Overproduction in excess of its share of the Natural Safe Yield is \$818,097.34. CAWC had 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 \$79,892.62, and for overproduction in excess of its share of the Operating Yield is \$22,550.43. 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 2019 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**

### Water Quality Analytical Results

Groundwater quality data continued to be collected and analyzed on a quarterly basis during WY 2019 from the enhanced network of monitoring wells. The low-flow sampling method implemented in 2009 continued to be used in 2019 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 2019.

In prior years a separate water quality and water level report was prepared for the Watermaster by MPWMD, and included in the Annual Reports. Since this data is primarily used to prepare the Seawater Intrusion Analysis Report, beginning in 2019 the data was provided by MPWMD to Montgomery & Associates. Montgomery & Associates used that data to prepare the water quality and water level report and included it as an attachment to the SIAR. The SIAR is further discussed below.

### Monitoring and Management Program Work Plan for the Upcoming Year

The 2020 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 2, 2019 meeting.

Other than small changes due to changes in hourly rates for some of the consultants, the following are the principle differences between the 2019 M&MP and the 2020 M&MP, and their respective budgets:

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

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

**Task I.2.b.7 (CASGEM Data Submittal for Watermaster's Voluntary Wells):** Because of the increased time MPWMD encountered in 2019 to format and submit this data to the Department of Water Resources (DWR) to comply with the Sustainable Groundwater Management Act (SGMA) requirements for adjudicated basins, the number of hours provided for this Task in 2020 has been

significantly increased from 16 hours in 2019 to 60 hours in 2020. The hourly rate for this work is unchanged from 2019, but the additional hours resulted in an increase in cost. Therefore, the amount proposed for 2020 is increased by \$6,556 to \$8,940.

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

**Task I.3.e (Seaside Basin Geochemical Model):** The full cost of the geochemical modeling that was performed in 2019 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 2020, these same parties will 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.

In summary, the 2020 M&MP Operations Budget, including the associated \$822 increase in the 10% Contingency line item, is \$9,046 higher (\$215,967-\$206,921) than the 2019 Budget.

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

#### 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 2020.

#### 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)

The BMAP constitutes the basic plan for managing the Seaside Groundwater Basin. The BMAP identifies both short-term actions and long-term strategies intended to protect the groundwater resource while maximizing the beneficial use of groundwater in the basin. It provides the Watermaster a logical set of actions that can be undertaken to manage the basin to its Safe Yield.

The Watermaster's first BMAP was completed in 2009 and was approved by the Watermaster Board at its February 2009 meeting. The Executive Summary from that BMAP was contained in Attachment 9 of the 2009 Annual Report, and the complete document is posted on the Watermaster's website at: [http://www.seasidebasinwatermaster.org/Other/BMAP\\_FINAL\\_5-Feb-2009.pdf](http://www.seasidebasinwatermaster.org/Other/BMAP_FINAL_5-Feb-2009.pdf).

Over the nine years since the 2009 BMAP was completed, the Watermaster has collected much groundwater level and quality data, and conducted various studies to improve the understanding of the basin. This improved understanding was incorporated into a 2019 Updated BMAP to facilitate ongoing responsible management of the groundwater resource. The Watermaster Board approved the 2019 Updated BMAP at its June 5, 2019 meeting.

The 2019 Updated BMAP is quite lengthy, so only the Executive Summary from that document is contained in [Attachment 7](#). However, a full copy of the document is posted on the Watermaster's website at: [http://www.seasidebasinwatermaster.org/Other/BMAP%20Final\\_07192019.pdf](http://www.seasidebasinwatermaster.org/Other/BMAP%20Final_07192019.pdf)

One of the findings in the Updated BMAP is that the Natural Safe Yield (NSY) of the Basin is 2,370 AFY, which is lower than the Adjudication Decision's initially-established 3,000 AFY.

[Attachment 10](#) contains a Memo titled "Seaside Groundwater Basin Natural Safe Yield Allocations to Producers." The Memo describes how the Adjudication Decision allocated water rights to each of the Producers (both Standard and Alternative Producers), and the water rights that each Producer would have after all of the Adjudication Decision-required ramp-downs in pumping have been completed. The Memo also briefly describes the water rights impacts that would result from lowering the NSY of the Basin from 3,000 AFY to 2,370 AFY.

As discussed in the Memo, the approach used to make these calculations is based on the assumption that the Adjudication Decision contemplated that all of the Basin's NSY comes from the Laguna Seca and the Coastal Subareas, and that none of it comes from the Northern Inland Subarea. Two options for arriving at the water rights for each Producer are presented in the Memo. As noted in the Memo, there are some inconsistencies in the Adjudication Decision which complicate the calculation of water rights after the Adjudication Decision-mandated ramp-downs in pumping are completed.

The Memo contains a set of ramp-down calculations for a basin-wide NSY of 3,000 AFY, because 3,000 AFY had been the ramp-down figure that was developed when CAWC was sizing its Monterey Peninsula Water Supply Project. That analysis led to the conclusion that CAWC's ultimate water right in the Basin would be 1,474 AFY, based on a basin-wide Natural Safe Yield of 3,000 AFY. Therefore, it was appropriate to include the ramp-down analysis leading to CAWC's 1,474 AFY of ultimate water right. Also contained in the Memo is a set of ramp-down calculations for a basin-wide NSY of 2,913 AFY, based on a slightly different interpretation of the Adjudication Decision.

The Memo provided to the Watermaster Board all of the necessary background information and calculations for use in determining which of the two ramp-down figures (3,000 AFY or 2,913 AFY) should be used when the next (and presumably final) ramp-down occurs in WY 2021. At its meeting of June 5, 2019 the Watermaster Board determined that there should be a final ramp-down to 3,000 AFY in WY 2021 and that water allocations to each Producer should be assigned as shown in Table 7 of [Attachment 10](#) after all pumping ramp-downs have been completed. The Board reached this

decision in part because ramping-down to 3,000 AFY would cause less hardship on the Alternative Producers by not requiring them to ramp-down along with the Standard Producers, and because ramping down to 2,913 AFY would provide negligible additional benefit and would require both the Standard and Alternative Producers to ramp-down.

In conjunction with updating the BMAP, Montgomery & Associates and Todd Groundwater (a hydrogeologic consultant the Watermaster used to perform a peer review of a draft version of the Updated BMAP) recommended that at some point in the future the Watermaster change to a different approach (Sustainable Yield) rather than continuing to use the Natural Safe Yield approach that was used in the Adjudication Decision, for basin management purposes. Attachment 11 contains a discussion of the pros and cons of using the Sustainable Yield approach vs. the Natural Safe Yield approach. The Watermaster Board considered the information contained in Attachment 11 at its June 5, 2019 meeting and made the following determinations:

- A Sustainable Yield analysis should not be performed at this time.
- The concept of using the Sustainable Yield approach to replace the Natural Safe Yield approach should be revisited after the Groundwater Sustainability Plan for the Monterey Subbasin of the Salinas Valley Groundwater Basin has been completed, and its impacts on the Seaside Groundwater Basin have been determined.
- If something is learned, or events occur, that would warrant performing a Sustainable Yield analysis sooner, the Board should revisit the decision at that time.

#### 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 2019.

#### Seawater Intrusion Analysis Report

The Seawater Intrusion Analysis Report (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 freshwater 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 2019 SIAR required by the M&MP. The WY 2019 SIAR provided an analysis of data collected during that Water Year.

The 2019 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. That work was 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.

#### Geochemical Impact Assessments

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 into solution which have previously been attached to soil particles, such as arsenic or mercury, and thus into the water itself. This has been experienced in some other locations where changes in water quality occurred as a result of water being injected into an aquifer. MPWMD’s consultant (Pueblo Water Resources) has been using geochemical impact assessments to predict the effects of injecting Carmel River water into the Seaside Groundwater Basin under the ASR program.

As discussed in the 2018 Annual Report under the heading titled “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, additional ASR water (under the Monterey Peninsula Water Supply Project), and advanced wastewater treatment (AWT) water under the Pure Water Monterey Project (PWM) geochemical impact assessments have been, or will be, performed by Pueblo Water Resources for use in the areas of the Basin where injection of these new water sources will occur. A description of this work was provided in Attachment 11 of the 2018 Annual Report.

In 2019 an assessment of the geochemical impacts of injecting AWT water from the PWM was performed. A Technical Memorandum describing that work is contained in Attachment 12. The assessment found that if the quality of the PWM AWT water is maintained within the ranges set forth in the Division of Drinking Water (DDW) Operations Report, there will be no adverse geochemical impacts on the aquifers within the Seaside Basin.

#### Sustainable Groundwater Management Act (SGMA)

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 (SVBGSA) and the State Department of Water Resources’ (DWR) development of SGMA regulations with the intent to collaborate with these entities as appropriate.

##### *At the State Level:*

During 2019 DWR did not issue any new regulations, or revisions to prior regulations, that impacted the Seaside Groundwater Basin or the Watermaster. In March of 2019 the Watermaster submitted to DWR the reporting information required of it, as an adjudicated basin, under SGMA.

##### *At the Monterey County level:*

As reported in the 2018 Annual Report, the SVBGSA, the Marina Coast Water District (MCWD), and the City of Marina all submitted Notifications with DWR to serve as the GSA for overlapping portions of the Monterey and/or the 180/400 foot aquifer subbasins. The SVBGSA, MCWD, and the City of Marina embarked on processes to address and resolve these overlaps. However, those efforts were still in progress as of the date of preparation of this Annual Report, and certain issues remained unresolved.

During 2019 the SVBGSA developed a draft Groundwater Sustainability Plan (GSP) for the 180/400 foot aquifer subbasin, and toward the end of 2019 was holding a series of public meetings to publicize the GSP and solicit public input. DWR previously determined that this subbasin is critically overdrafted. The SVBGSA intends to submit its GSP for this subbasin to DWR in time to meet the January 2020 deadline for submittal of GSPs for critically overdrafted basins.

In 2019 the City of Marina developed its own GSP for approximately 400 acres that are to the north of the area that will be encompassed by MCWD's GSP, and which overlaps with a portion of the area covered by the SVBGSA's 180/400 foot aquifer subbasin GSP.

In 2020 MCWD expects to begin development of a GSP for a portion of the Monterey subbasin. DWR determined that this subbasin is not critically overdrafted and therefore has a GSP submittal deadline two years later (January 2022) than the deadline for critically overdrafted subbasins. The Watermaster has been informed by MCWD that once that entity begins development of its GSP, the Watermaster will be invited to participate in those activities.

The Watermaster is participating in the development of the SVBGSA's GSPs through its membership on the SVBGSA's Advisory Committee, and intends to participate in MCWD's development of its GSP. This will help to ensure that there is close coordination between the SVBGSA, MCWD, and the Watermaster on matters of mutual interest. Because the City of Marina's GSP only covers approximately 400 acres to the north of the area covered by MCWD's GSP and does not involve any aquifers which are directly connected with those in the Seaside Basin, the Watermaster did not participate in the development of the City's GSP.

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

This Section was added to the Annual Report beginning in 2018 year as directed by the Court in its Order Amending Judgment filed March 29, 2018. It 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 2019 the parties stipulated to the assignment of retired Monterey County Judge Robert O'Farrell, and Judge O'Farrell was subsequently assigned to Monterey County Superior Court Case No. M66343 - California American Water v. City of Seaside et al (the Adjudication Decision).

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 CAWC 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 2020 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 the 2018 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

##### MPWSP

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.

In September 2019 construction began on the Transfer Pipeline, which will carry water from the future site of the desalination treatment plant to the edge of CAWC's service territory in Seaside. The work enables CAWC to meet the State Water Board's Cease and Desist Order milestone for 2019, which required project construction to begin. This first phase of pipeline work will total just over 4,000 feet. Completion is scheduled for mid-December. Once complete, the installation of over 50,000 feet of additional transmission pipeline will begin to the north.

In late 2019 the MPWSP received environmental summary clearance for \$285 million in State Revolving Fund low interest loans from the State Water Resources Control Board. The funding will significantly reduce the long term costs of the 6.4 mgd desalination plant and decrease rate impacts to CAWC customers. While further paperwork and development of a final funding agreement with the SWRCB remains, the news from the state essentially formalizes zero percent financing for a majority of the project cost, lowering the cost per acre-foot by hundreds of dollars.

In an en banc decision the California Supreme Court denied the City of Marina and Marina Coast Water District's challenges to the California Public Utilities Commission's approval of the MPWSP, which was granted last year. The Supreme Court decision, issued in late August 2019, also denied challenges to the sufficiency of the Environmental Impact Report/ Environmental Impact Statement prepared for the long-awaited desalination plant. With the Supreme Court's decision now final, the Certificate of Public Necessity and Convenience issued by the CPUC is deemed by CAWC to be complete.

In mid-November 2019 The California Coastal Commission held a hearing on CAWC's application for a Coastal Development Permit for construction of the portions of the MPWSP located within the coastal zone. The Commission received public input at that hearing but deferred taking action on the application until early 2020. Approval by the Coastal Commission is the last major permit needed to allow construction of project to begin.

Assuming that permits are issued on the projected schedule, the desalination plant is projected to be put into service in mid-2021. Detailed quarterly update reports on the MPWSP are posted on the MPWSP website at <https://www.watersupplyproject.org>.

### PWM

Construction work is well underway on Monterey One Water's (M1W) Pure Water Monterey (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 CAWC 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 early 2020.

### Management Activities that May Bear on the Basin's Wellbeing

1. *Water Conservation.* From a water conservation standpoint, customers of CAWC are doing an exceptional job. CAWC'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. CAWC has already contracted to receive 3,500 AFY of PWM recycled water for injection into, and recovery from, the Seaside Basin. 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, and in late 2019 completed preparation of a Supplemental Environmental Impact Report (SEIR) to fulfill the CEQA requirements for such an expansion. That document was undergoing public review at the time this Annual Report was being prepared.

3. *Sustainable Groundwater Management Act*. Coordination between the Watermaster and the SVBGSA and the MCWD GSA is ongoing and is discussed in more detail above 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* in 2018 (discussed in Section J of the 2018 Annual Report) and *Basin Management Action Plan* in 2019 (discussed in Section J of this 2019 Annual Report) incorporated projected impacts from climate change and sea level rise.

5. *New Technical Issues or Activities*.

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

As reported in the 2018 Annual Report, Monterey One Water as the lead entity coordinated 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.

The purpose of the SWRP is to identify opportunities to capture stormwater that could be utilized as new water supply sources for the Monterey Peninsula and provide additional water quality and environmental benefits. Some of those projects have the potential to minimally benefit the Seaside Basin, and are discussed in the 2019 Updated Basin Management Action Plan.

## **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 2, 2019 the Board adopted the FY 2020 budgets contained in Attachment 6, which support carrying out all elements of the 2020 Seaside Groundwater Basin Monitoring and Management Program (M&MP). The M&MP is contained in Attachment 9 and describes the activities that the Watermaster plans to conduct during Fiscal Year 2020.

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 2019 Annual Report no future status conferences with the Court have 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  
**MIW** - Monterey One Water (formerly Monterey Regional Water Pollution Control Agency)  
**MCWD** - Marina Coast Water District  
**MPWMD** - Monterey Peninsula Water Management District  
**MPWSP** - Monterey Peninsula Water Supply Project  
**M&MP** - Monitoring and Management Program  
**NSY** - Natural Safe Yield  
**PWM** - Pure Water Monterey Project  
**SGMA** - Sustainable Groundwater Management Act  
**SIAR** - Seawater Intrusion Analysis Report  
**SIRP** - Seawater Intrusion Response Plan  
**SVBGSA** - Salinas Valley Basin Groundwater Sustainability Agency  
**SWRCB** - State Water Resources Control Board  
**TAC** - Technical Advisory Committee  
**USGS** - United States Geological Survey  
**WY** - Water Year

**D-R-A-F-T**  
**MINUTES**

**Seaside Groundwater Basin Watermaster  
Technical Advisory Committee Meeting  
November 20, 2019**

**Attendees: TAC Members**  
City of Seaside – Scott Ottmar (via telephone)  
California American Water – Tim O’Halloran  
City of Monterey – Tom Harty  
Laguna Seca Property Owners – Wes Leith  
MPWMD – Jon Lear  
MCWRA – Tamara Voss  
City of Del Rey Oaks – John Gaglioti  
City of Sand City – Leon Gomez (via telephone)  
Coastal Subarea Landowners – No Representative

**Watermaster**  
Technical Program Manager - Robert Jaques

**Consultants**  
None

**Others**  
MCWD – Patrick Breen  
M1W – Allison Imamura, Mike McCullough

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The meeting was convened at 1:33 p.m.

**1. Public Comments**

There were no public comments.

**2. Administrative Matters:**

**A. Approve Minutes from the September 11, 2019 Meeting**

On a motion by Ms. Voss, seconded by Mr. O’Halloran, the minutes were unanimously approved as presented.

**B. Results from Martin Feeney’s September 2019 Induction Logging of the Sentinel Wells**

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

Mr. Gaglioti to asked if this information would be included in the analysis in the Seawater Intrusion Analysis Report, and Mr. Jaques responded that it would be.

**C. Sustainable Groundwater Management Act (SGMA) Update**

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

Mr. Gaglioti asked whether a Ground Water Sustainability Plan could be approved by the Department of Water Resources even if there were overlapping jurisdictions claiming authority for the same territory. Mr. Lear and Ms. Voss said it was their understanding that only one GSP could be approved for that territory, and that this would be only on the condition that there were no unresolved issues between the jurisdictions claiming overlapping authority.

#### **D. Information Regarding Seeking Grant Assistance for Projects**

Mr. Jaques summarized the agenda packet materials for this item

Mr. Gaglioti asked if MPWMD could apply for funding under the grant program. Mr. Lear said he believed that MPWMD could apply on behalf of the Watermaster if there was a project for which the Watermaster wished to seek grant funding.

Mr. Jaques noted that the Department of Water Resources response indicated that Adjudicated Basins could not receive grant funding.

#### **E. Discuss Whether or Not to Include Pure Water Monterey Monitoring Wells in the List of Wells that are Monitored in the Watermaster's Monitoring and Management Program**

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

Mr. Lear reported that monitoring well number MW-7 had not been constructed but monitoring well number M-4 had been constructed. The figure included in the agenda packet needs to reflect this correction.

Mr. Lear also reported that the monitoring wells are currently being monitored by MPWMD under an agreement they have with M1W. He said that dataloggers have already been installed in these wells. Both water level and water quality data are already being collected. After normal Pure Water Monterey project operations commence, the dataloggers will provide continuous water level data and quarterly water quality samples will be collected for analysis.

Mr. Gaglioti asked how the Watermaster gets its monitoring data. Mr. Lear responded that the data MPWMD collects for its own monitoring wells, and the data that MPWMD collects for additional wells under its agreement with the Watermaster, provides the data the Watermaster's consultants use for preparation of the Seawater Intrusion Analysis Report. This data is in an Access database and the consultants get the data in that form.

Mr. Lear said the wells could be added to the list of monitoring wells in the Watermaster's Monitoring and Management Program without additional cost to the Watermaster.

Ms. Voss said she concurred with Ms. King's opinion that water quality data from these monitoring wells would not be helpful.

Mr. Lear reported that water levels change very rapidly when injection occurs, and said he felt that water level data from these monitoring wells would confound things because they are not static water levels but are water levels taken under injection conditions.



Mr. Jaques asked the M1W representatives when they anticipated normal operation of the Pure Water Monterey project would begin. They indicated it should be by the end of December or in early January.

Mr. Jaques will request from Mr. Lear that data from those two monitoring wells be added to the data currently being collected under the Monitoring and Management Program.

#### **F. Pure Water Monterey Project Draft Supplemental EIR**

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

#### **G. Vacancy in the Chairperson Position**

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

Mr. Lear asked for thoughts and discussion from the TAC.

After a brief discussion Mr. Lear said he would offer to serve as the Chairperson.

Mr. O'Halloran was asked if he would be willing to serve as the Vice Chairperson and he said that he would, but noted that he is new to the TAC.

Ms. Voss said she would offer to serve as the Vice Chairperson since she has been involved with the TAC for some time.

Mr. Lear asked for a vote on appointing Mr. Lear as the Chairperson and Ms. Voss as the Vice Chairperson of the TAC. All TAC members voted in favor of this.

### **3. Update on Geochemical Modeling for the Pure Water Monterey Project AWT Water**

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

Ms. Voss asked which wells the cuttings used in the geochemical analysis came from. Mr. Lear responded that Mark monitoring well number one was only used for a leaching analysis but was not used for the geochemical modeling. Other cuttings were used.

Mr. Gaglioti asked several questions of Mr. Lear about the cuttings and how they were analyzed. Mr. Lear explained that cuttings were taken from areas where there were high levels of heavy metals, and that these cuttings were exposed to the injection water to see if any leaching would occur. He noted that the Pueblo Water Resources analysis concluded that the PWM AWT water will not cause leaching if the quality of that water is kept within the range of parameters set by the Division of Drinking Water's Operating Report for the PWM AWT water.

Mr. Lear responded to Ms. Voss's questions about the aquifers covered by the geochemical testing and the upcoming tracer testing, which Mr. Lear reported has already been started and will continue after injection starts.

Mr. Jaques asked if the TAC would be interested in a presentation on the tracer study that will be conducted in the near future. Several TAC members responded that they would be interested, and Mr. Jaques said he would contact M1W to arrange such a presentation.

#### **4. Discuss and Provide Input on the Draft 2019 Seawater Intrusion Analysis Report (SIAR)**

Mr. Jaques introduced this topic and Ms. King of Montgomery and Associates made a presentation with the aid of Power Point slides, a copy of which is attached hereto.

During her presentation Ms. King pointed out that multiple methods or “lines of evidence” were used in the analysis to look for signs of potential seawater intrusion.

Only one well, FO – 9 Shallow, showed a change of potential significance, but its Piper and Stiff diagrams did not indicate the presence of seawater intrusion.

Referring to the sodium/chloride ratio slide, Mr. Gaglioti said it looked like all data was above the 0.86 level. Ms. King responded that he was correct, and that there is only concern if the level falls to 0.86 or below.

Since the deep aquifer is far below mean sea level in some areas, Mr. Gaglioti asked if the aquifer was at risk of seawater intrusion. Ms. King responded in the affirmative, but noted that thus far seawater intrusion has not been detected. She went on to explain that Protective Water Levels have to be a little above mean sea level to cause a positive gradient in the offshore direction. Mr. Jaques commented that Protective Water Levels are discussed in more detail in the Basin Management Action Plan Update.

Ms. King reported that the Seaside Groundwater Basin has not recovered from the drought several years ago, whereas some other basins, such as those in the Santa Cruz area, have shown some recovery.

Mr. Gaglioti asked whether more production wells could be put into the eastern part of the Laguna Seca Subarea to create a barrier against water flowing out of that subarea to the east. Ms. King and Mr. Lear described the Watermaster’s plans with regard to interfacing with the Salinas Valley Basin Groundwater Sustainability Agency’s Groundwater Sustainability Plan (GSP) for the Monterey Subbasin which includes the area to the east of the Laguna Seca Subarea. They noted that the GSP for the Monterey Subbasin will have to show that it is not adversely impacting adjacent basins, such as the Adjudicated Seaside Basin. There was much discussion on this general topic.

Ms. King said that she would be including an additional recommendation to the effect that, if well FO – 9’s chloride level in the spring of 2020 sampling event is found to be greater than last year’s value of 80 mg/l, monitoring of that well should be increased in frequency to quarterly.

Mr. Gaglioti commended Ms. King on the SIAR being thorough. He felt, however, that a brief review of it could leave the reader with the impression that since seawater intrusion has not yet been detected, that there is no problem. He went on the note that since groundwater levels are so far below mean sea level in some parts of the basin, there is significant concern of seawater intrusion occurring at some time in the future.

In response to Mr. Gaglioti’s concern, Mr. Jaques asked Ms. King to add a paragraph in the body of the SIAR highlighting that risk, and including in the Conclusions section of the SIAR that it is not “if” but “when” seawater intrusion will occur in the Seaside Basin aquifers if groundwater levels are not brought up to Protective Water Levels. Mr. Gagliardi said he felt this would be helpful in highlighting that risk to the Board members.

Ms. Voss noted there is very little data between the area shown in orange on one of the slides (which represents the location developed by MCWRA for the 500 mg/L chloride line, and the northerly part of the Seaside Basin. She said she would like to find out from MCWD if they have monitoring or production wells in that area, and whether data from those wells could be provided for use by the Watermaster's consultants in preparing future SIARs. There was some question as to whether the increase in chloride in the FO – 9 well might be coming from that direction. Ms. Voss went on to note that MCWRA has jurisdiction over the entire County, so it could pursue getting data from those wells if there are any inexistence in that area. Mr. Jaques said he would contact MCWD to seek information on this.

Mr. Gaglioti suggested changing the order of the bulleted items in the Conclusions section to make the first bullet be one describing the risk of seawater intrusion.

Ms. Voss pointed out a typo graphical error in Section 2.6.1.1 on page 42 of the SIAR, and Ms. King said she would correct that. Ms. King reported she was also making some other clarifying types of edits.

Mr. Gaglioti made a motion, seconded by Mr. O'Halloran, to approve the SIAR and to forward it to the Board for their approval. The motion carried unanimously.

## **5. Discuss and Provide Input on the Preliminary Draft Watermaster 2019 Annual Report**

Mr. Jaques said that in the interest of saving time, rather than going through the Preliminary Draft Annual Report he would be happy to instead simply respond to questions from TAC members on that document.

The TAC had no questions to ask about the Preliminary Draft Annual Report.

A motion was made by Ms. Voss, seconded by Mr. Gaglioti, to approve the Preliminary Draft Annual Report as presented, and the motion carried unanimously.

## **6. Schedule**

Mr. Jaques commented that there would be no need for a December TAC meeting, and that the TAC's next meeting would be on January 8, 2020. There was no other discussion.

## **7. Other Business**


There was no other business.

The meeting adjourned at 3:36 p.m.

SEASIDE GROUNDWATER BASIN

2019  
SEAWATER INTRUSION  
ANALYSIS REPORT

Presented to the Seaside Basin Technical Advisory Committee  
November 20, 2019



MONTGOMERY & ASSOCIATES

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SIAR ANALYSIS

- Chloride Distribution and Na/Cl Molar Ratio
- Cation/Anions – Piper and Stiff Diagrams
- Electric Induction Logs
- Groundwater Elevations
- Protective Groundwater Elevations
- Groundwater Production



MONTGOMERY & ASSOCIATES

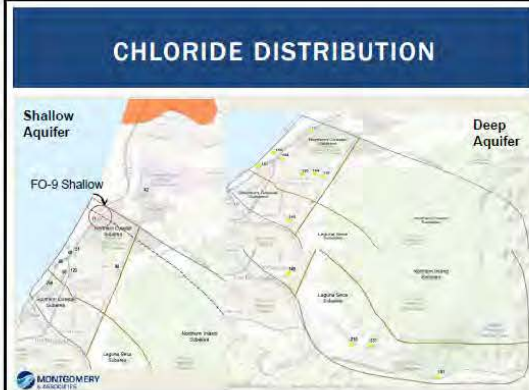
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WELL DATA INCLUDED IN SIAR

3


CHLORIDE DISTRIBUTION



Shallow Aquifer

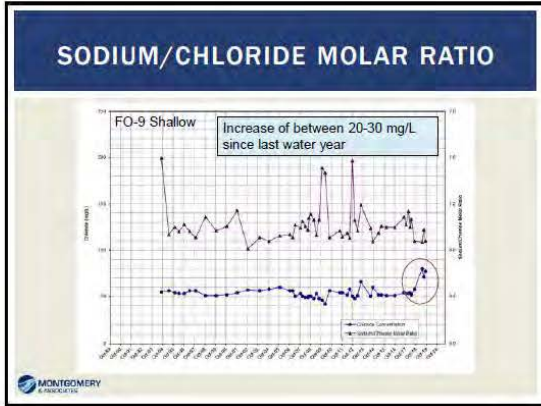
Deep Aquifer

FO-9 Shallow

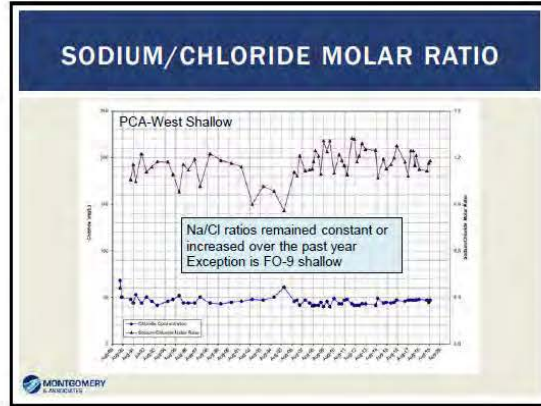


MONTGOMERY & ASSOCIATES

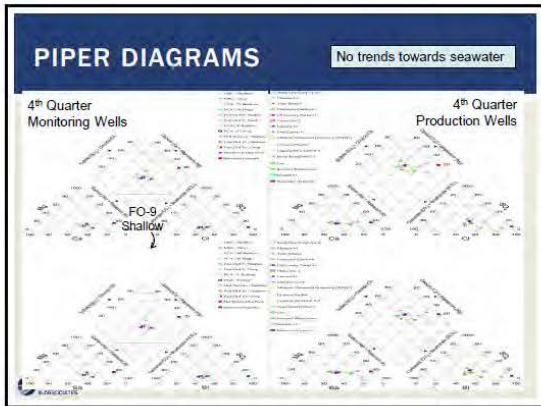
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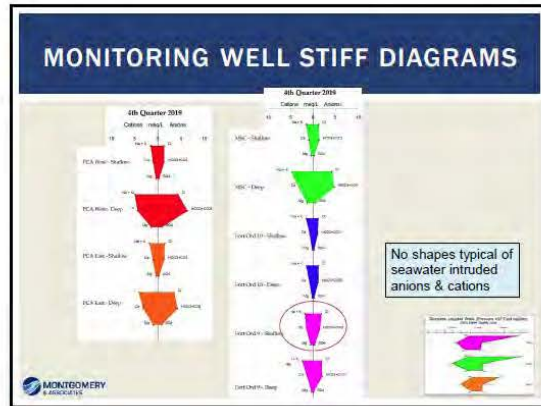
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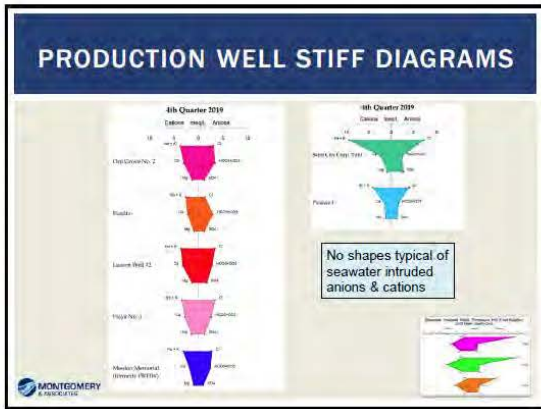
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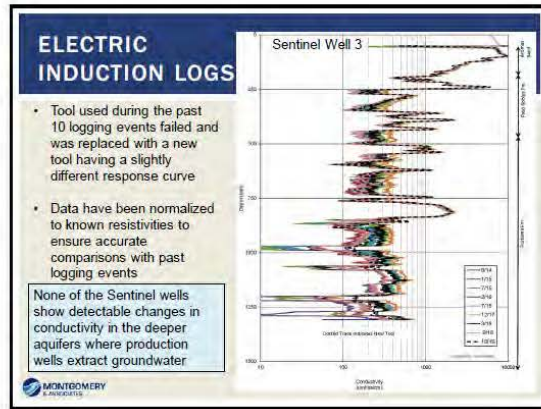
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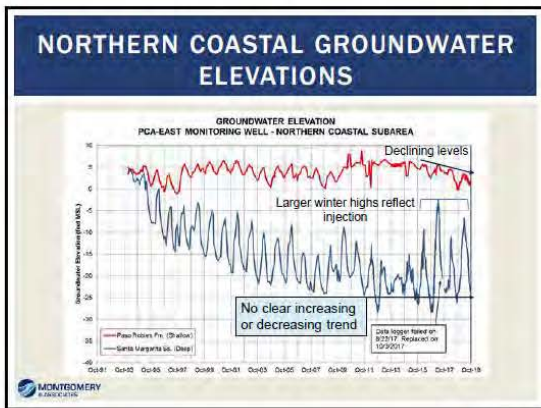
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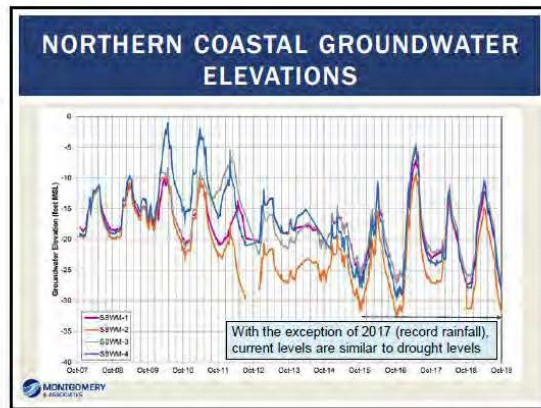
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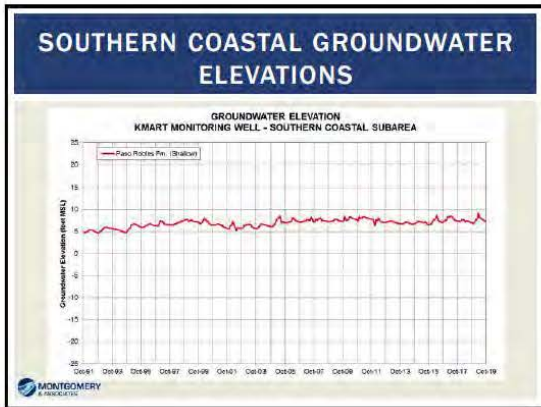


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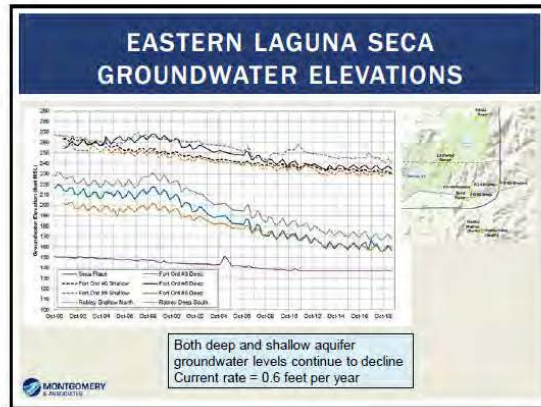


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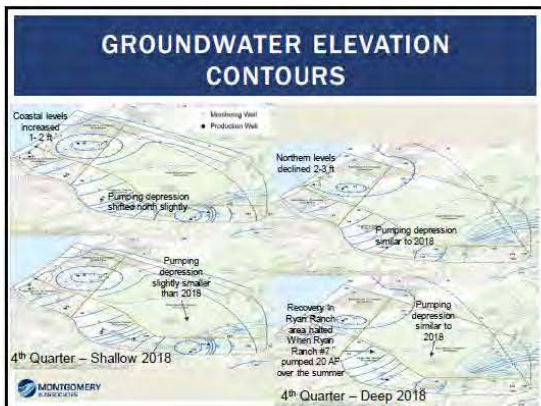




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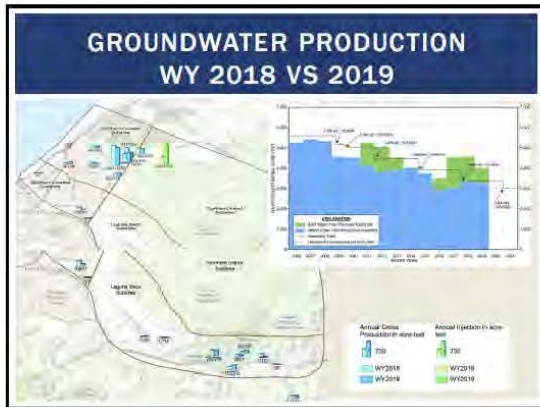
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### CONCLUSIONS

Analyses indicating seawater intrusion is NOT occurring:

- No groundwater chemistry changes towards seawater in either shallow or deep groundwater
- Overall, chloride concentration trends were stable for most monitoring wells, only one well had an increase greater than 10 mg/L
  - FO-9 shallow has a sustained increase of 20-30 mg/L over last years concentrations
- Sodium/chloride molar ratios in the monitoring wells remained constant or increased over the past year
- Induction logging data at the coastal Sentinel Wells do not show large changes over time that are indicative of seawater intrusion




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### CONCLUSIONS

Conditions in the basin that continue to provide a potential for seawater intrusion:


- All deep groundwater in the Northern Coastal subarea is below sea level
  - 2nd quarter (winter/spring) > 12 feet below sea level
  - 4th quarter (summer/fall) > 25 feet below sea level
- Groundwater levels remain below protective elevations in all deep target monitoring wells
- One of the three shallow wells' groundwater levels are below protective elevations



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### CONCLUSIONS

- There is still ongoing groundwater level declines in the Laguna Seca subarea of around 0.6 feet per year
- Native groundwater production in the Seaside Groundwater Basin for Water Year 2019 was 3,269.2 acre-feet:
  - 94 acre-feet less than Water Year 2018
  - 91 acre-feet less than the Decision-ordered Operating Yield of 3,360 acre-feet per year that is required between October 1, 2017 and September 30, 2020




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**RECOMMENDATIONS**

1. For FO-9 shallow, quality results from to be reviewed after each sampling event to identify if the recent increases are part of natural fluctuations or an ongoing increasing trend
2. Continue to Analyze and Report on Water Quality Annually
3. Include Data from New Monitoring Wells Installed as Part of Pure Water Monterey



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**QUESTIONS?**



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**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 2019**

(All Values in Acre-Feet [AF])

	Type	Oct	Nov	Dec	Oct-Dec 18	Jan	Feb	Mar	Jan-Mar 19	Apr	May	Jun	Apr-Jun 19	Jul	Aug	Sep	Jul-Sep 19	Reported Total	Yield Allocation	from WY 2018	for WY 2019
<b>Coastal Subareas</b>																					
CAW - Coastal Subareas	SPA	340.23	291.75	161.71	793.69	145.42	133.68	144.34	423.43	137.61	113.80	123.03	374.44	216.74	13.22	1.03	230.99	1,822.55	1,791.62	453.87	2,245.49
	Luzern	1.25	4.51	0.00	5.76	0.00	4.57	0.00	4.57	0.00	0.00	8.96	8.96	29.38	0.00	0.00	29.38	48.67			
	Ord Grove	123.91	118.28	118.81	361.00	116.84	103.82	113.35	334.01	105.62	105.95	98.48	310.05	98.87	94.41	89.26	282.54	1,287.60			
	Paralta	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	55.13	154.19	147.09	356.41	356.41			
	Playa	0.00	1.97	32.07	34.04	8.91	0.00	13.80	22.71	31.99	7.85	7.82	47.65	32.05	11.84	0.00	43.90	148.30			
	Plumas	0.05	0.00	0.00	0.05	19.67	25.28	17.19	62.14	0.00	0.00	7.77	7.77	1.31	0.00	0.02	1.33	71.29			
	Santa Margarita	215.02	166.99	10.83	392.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	117.26	144.55	261.81	654.65			
	ASR Recovery														-364.47	-379.89					
City of Seaside (Municipal)	SPA	15.74	14.59	11.76	42.09	6.74	17.24	14.15	38.13	13.97	15.68	15.59	45.24	17.28	18.20	17.46	52.94	178.40	146.99	0.00	146.99
Granite Rock Company	SPA	--	--	--	0.00	--	--	--	0.00	--	--	--	0.00	--	--	--	0.00	0.00	13.87	221.99	235.86
DBO Development No. 30	SPA	--	--	--	0.00	--	--	--	0.00	--	--	--	0.00	--	--	--	0.00	0.00	25.16	403.96	429.12
Calabrese (Cypress Pacific Inv.)	SPA	--	--	--	0.00	--	--	--	0.00	--	--	--	0.00	--	--	--	0.00	0.00	3.37	16.09	19.46
City of Seaside (Golf Courses)	APA	51.64	26.75	0.00	78.38	0.51	2.61	6.22	9.34	55.10	48.14	76.91	180.15	81.55	82.12	58.87	222.54	490.42	540.00		540.00
Sand City	APA	0.20	0.21	0.04	0.46	0.04	0.04	0.04	0.12	0.08	0.14	0.11	0.34	0.15	0.15	0.15	0.45	1.36	9.00		9.00
SNG (Security National Guaranty)	APA	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.16	1.86	1.47	3.50	3.51	149.00		149.00
Calabrese (Cypress Pacific Inv.)	APA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02	6.00		6.00
Mission Memorial (Alderwoods)	APA	2.51	1.49	0.00	4.00	0.03	0.00	0.00	0.03	0.32	1.51	2.11	3.93	3.20	2.48	2.43	8.12	16.07	31.00		31.00
<b>Coastal Subareas Totals</b>					<b>918.63</b>				<b>471.05</b>				<b>604.11</b>				<b>518.54</b>	<b>2,512.33</b>	<b>2,716.00</b>	<b>1,095.91</b>	<b>3,811.91</b>
<b>Laguna Seca Subarea</b>																					
CAW - Laguna Seca Subarea	SPA	28.44	24.66	17.80	70.90	14.84	14.10	16.81	45.76	19.99	26.99	31.75	78.74	33.79	34.66	33.82	102.27	297.67	0.00		0.00
	Ryan Ranch Unit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.01	3.01	5.71	5.70	5.93	17.34	20.35			
	Hidden Hills Unit	11.24	9.73	7.31	28.29	7.11	5.93	6.97	20.01	8.31	11.90	11.67	31.88	12.79	13.03	12.76	38.59	118.76			
	Bishop Unit 3	17.20	14.93	10.48	42.62	7.74	8.17	9.84	25.75	11.68	15.10	11.09	37.86	6.62	8.06	6.96	21.64	127.87			
	Bishop Unit 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.99	5.99	8.67	7.86	8.17	24.70	30.69			
The Club at Pasadera	APA	16.00	24.00	7.00	47.00	2.00	0.00	0.00	2.00	9.00	10.00	35.00	54.00	38.00	32.00	31.00	101.00	204.00	251.00		251.00
Laguna Seca Golf Resort (Bishop)	APA	16.55	12.42	0.22	29.19	0.00	0.30	0.00	0.31	16.68	16.71	34.50	67.88	37.78	39.98	31.07	108.83	206.21	320.00		320.00
York School	APA	1.33	0.49	0.00	1.81	0.03	0.00	0.00	0.03	1.69	1.47	1.78	4.94	3.25	2.66	1.51	7.43	14.20	32.00		32.00
Laguna Seca County Park	APA	3.01	1.47	0.76	5.23	1.70	0.41	1.16	3.28	1.84	2.55	2.62	7.00	8.37	4.78	6.17	19.31	34.83	41.00		41.00
<b>Laguna Seca Subarea Totals</b>					<b>154.13</b>				<b>51.37</b>				<b>212.57</b>				<b>338.83</b>	<b>756.91</b>	<b>644.00</b>	<b>0.00</b>	<b>644.00</b>
<b>Total Production by WM Producers</b>					<b>1,072.76</b>				<b>522.42</b>				<b>816.68</b>				<b>857.38</b>	<b>3,269.24</b>	<b>3,360.00</b>	<b>1,095.91</b>	<b>4,455.91</b>
																	Annual Production from APA Producers	970.62	1,379.00		
																	Annual Production from SPA Producers	2,298.62	3,076.91		

<b>City of Seaside Golf Courses In-Lieu (MCWD source water)</b>																					
MCWD 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		0.00
<b>CAW / MPWMD ASR (Carmel River Basin source water)</b>																					
Injection		0.00	0.00	0.00	0.00	269.63	306.73	372.93	949.29	282.60	103.18	0.00	385.78	0.00	0.00	0.00	0.00	0.00	1335.07		
(Recovery)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(364.47)	(379.89)	(-744.36)	(-744.36)			
<b>Net ASR</b>		0.00	0.00	0.00	0.00	269.63	306.73	372.93	949.29	282.60	103.18	0.00	385.78	0.00	(-364.47)	(-379.89)	(-744.36)	590.71			

**Notes:**

- The Water Year (WY) begins October 1 and ends September 30 of the following calendar year. For example, WY 2019 begins on October 1, 2018, and ends on September 30, 2019.
- "Type" refers to water right as described in Seaside Basin Adjudication decision as amended, signed February 9, 2007 (Monterey County Superior Court Case No. M66343).
- Values shown in the table are based on reports to the Watermaster received by October 15, 2019.
- All values are rounded to the nearest hundredth of an acre-foot. Where required, reported data were converted to acre-feet utilizing the relationships: 325,851 gallons = 43,560 cubic feet = 1 acre-foot.
- "Base Operating Yield Allocation" values are based on Seaside Basin Adjudication decision. These values are consistent with the *Watermaster Producer Allocations Water Year 2019* (see Item IX A. in 1/2/2019 Board packet).
- Any minor discrepancies in totals are attributable to rounding.
- APA = Alternative Producer Allocation; SPA = Standard Producer Allocation; CAW = California American Water.
- It should be noted that CAW/MPWMD ASR "Injection" and "Recovery" amounts are not expected to "balance" within each Water Year. This is due to the injection recovery "rules" that are part of SWRCB water rights permits and/or separate agreements with state and federal resources agencies that are associated with the water rights permits.

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**CALCULATION OF REPLENISHMENT ASSESSMENTS WATER YEAR 2019**

Using the Basin-wide methodology approved by the Court on January 12, 2007, and as shown in detail on the spreadsheet contained in this attachment, Watermaster calculated the Water Year (WY) (October 1st through September 30th) 2019 Replenishment Assessments as follows:

2019 Replenishment Assessment NSYO Unit Charge =	\$2,872.00	
2019 Replenishment Assessment OSYO Unit Charge =	\$718.00	
2019 Natural Safe Yield (NSY) Available to Standard Producers =	2,029.38	AF (3,000 AF NSY - 970.62 Alternative Producers 2018 Production)

	WY 2019 Production (AF)	% of NSY Available	Volume of NSY Available (AF)	NSY Overproduction (AF)	NSY Overproduction Assessment	Operating Yield Available (AF)	Operating Yield Overproduction (AF)	Operating Yield Overproduction Assessment	Total Assessment
<b>Standard Producers</b>									
California American Water	2,120.22	90.44%	1,835.37	284.85	\$ 818,097.34	2,250.97	-	\$ -	\$ 818,097.34
Seaside (Municipal)	178.40	7.42%	150.58	27.82	79,892.62	146.99	31.41	22,550.43	102,443.06
Granite Rock	-	0.70%	14.21	-	-	235.86	-	-	-
D.B.O. Development No. 30	-	1.27%	25.77	-	-	426.81	-	-	-
Calabrese (Cypress Pacific Inv.)	-	0.17%	3.45	-	-	16.29	-	-	-
<b>Total Production</b>	<b>2,298.62</b>	<b>100.00%</b>	<b>2,029.38</b>	<b>312.67</b>	<b>\$ 897,989.96</b>	<b>3,076.92</b>	<b>31.41</b>	<b>\$ 22,550.43</b>	<b>\$ 920,540.40</b>
	WY 2019 Production (AF)	% of NSY Available	Volume of NSY Available (AF)	NSY Overproduction (AF)	NSY Overproduction Assessment	Operating Yield Available (AF)	Operating Yield Overproduction (AF)	Operating Yield Overproduction Assessment	Total Assessment
<b>Alternative Producers</b>									
City of Seaside (Golf Courses)	490.42	N/A	540.00	0.00	\$ -	540.00	0.00	\$ -	\$0
Security National Guaranty	3.51	N/A	149.00	0.00	-	149.00	0.00	-	-
Calabrese (Cypress Pacific Inv.)	0.02	N/A	6.00	0.00	-	6.00	0.00	-	-
Mission Memorial (Alderwoods)	16.07	N/A	31.00	0.00	-	31.00	0.00	-	-
City of Sand City	1.36	N/A	9.00	0.00	-	9.00	0.00	-	-
Nicklaus Club Monterey	204.00	N/A	251.00	0.00	-	251.00	0.00	-	-
Laguna Seca Golf Resort (Bishop)	206.21	N/A	320.00	0.00	-	320.00	0.00	-	-
York School	14.20	N/A	32.00	0.00	-	32.00	0.00	-	-
Laguna Seca County Park	34.83	N/A	41.00	0.00	-	41.00	0.00	-	-
<b>Total Production</b>	<b>970.62</b>	<b>N/A</b>	<b>1,379.00</b>	<b>0.00</b>	<b>\$ -</b>	<b>1,379.00</b>	<b>0.00</b>	<b>\$ -</b>	<b>\$0</b>

**WATERMASTER PRODUCER ALLOCATIONS WATER YEAR 2019 IN ACRE-FEET (AF)**

**INCLUDING A 10% TRIENNIEL REDUCTION FOR 100% OF THIS WATER YEAR**

<b>Initial Basin-Wide Operating Yield<sup>(1)</sup></b>	<b>3360.00</b>	<b>Coastal Operating Yield<sup>(2)</sup></b>	<b>2716.00</b>					
<b>Natural Safe Yield (NSY)<sup>(3)</sup></b>	<b>3000.00</b>	<b>Laguna Seca Operating Yield<sup>(4)</sup></b>	<b>644.00</b>					
<b>ALTERNATIVE PRODUCER ALLOCATIONS</b>								
<b>Coastal Subarea<sup>(5)</sup></b>		<b>Laguna Seca Subarea<sup>(5)</sup></b>		<b>ALTERNATIVE PRODUCER AMOUNT PUMPED WY 2019</b>		<b>Laguna Seca Subarea<sup>(5)</sup></b>		<b>Total Alternative Producer WY 2019 Production</b>
	<b>AF</b>		<b>AF</b>		<b>AF</b>		<b>AF</b>	
Seaside (Golf)	540.00	Nicklaus Club Monterey	251.00	Seaside (Golf)	490.42	Nicklaus Club Monterey	204.00	
SNG	149.00	Bishop	320.00	SNG	3.51	Bishop	206.21	
Calabrese	6.00	York School	32.00	Calabrese	0.02	York School	14.20	
Mission Memorial (Alderwood)	31.00	Laguna Seca County Park	41.00	Mission Memorial (Alderwood)	16.07	Laguna Seca County Park	34.83	
Sand City	9.00			Sand City	1.36			
<b>Total<sup>(6)</sup></b>	<b>735.00</b>	<b>Total<sup>(6)</sup></b>	<b>644.00</b>	<b>Total<sup>(6)</sup></b>	<b>511.38</b>	<b>Total<sup>(6)</sup></b>	<b>459.24</b>	<b>970.62</b>

<b>STANDARD PRODUCER ALLOCATIONS</b>													
Coastal Operating Yield Available to Standard Producers (AF)			1981.00	Laguna Seca Operating Yield Available to Standard Producers (AF)			0.00						
Coastal Subarea	Standard Producer Allocations		AF Available to This Producer	Laguna Seca Subarea	Standard Producer Allocations		AF Available to This Producer						
	Base Water Right % <sup>(5)</sup>	Weighted % <sup>(5)</sup>			Base Water Right % <sup>(5)</sup>	Weighted % <sup>(5)</sup>							
California American Water (CAW)	77.55%	90.44%	1791.62	CAW	45.13%	100.00%	0.00						
Seaside (Municipal)	6.36%	7.42%	146.99										
Granite Rock	0.60%	0.70%	13.87										
D.B.O. Development No. 30	1.09%	1.27%	25.16										
Calabrese (Cypress Pacific Investors LLC)	0.15%	0.17%	3.37										
<b>Total</b>	<b>85.75%</b>	<b>100.0%</b>	<b>1981.00</b>	<b>Total</b>	<b>45.13%</b>	<b>100.0%</b>	<b>0.00</b>						
<b>Allocation of Available Operating Yield Among Standard Producers</b>													
	Base Water Right Available to this Producer (AF)	% NSY to SPA (Base Water Right / Total Water Right)	NSY Available to Producers (AF) Current Water Year	Free Carryover Credits from Prior Water Year	Not-Free Carryover Credits from Prior Water Year	Water Rights Transferred / Sold DBO to CAW 710 Amador (0.16) DBO to CAW 3 Upper Ragsdale (2.15)	Water Rights Transferred / Sold Calabrese to CAW Ryan Ranch CHOMP	Total Producer NSY (AF) (NSY Available + Free Carryover Credits)	Total Authorized Production Current WY (Base Water Right Plus All Carryover) <sup>(6)</sup>	Actual AF Pumped by Producer in WY 2019	Free Carry over Credits to WY 2019	Not-Free Carry over Credits to WY 2019	Stored Water Credits to WY 2020
			WY 2019 APA Pumped 970.62 AF										
		NSY 3000 - 970.62 AF =	2029.38										
California American Water	1791.62	90.44%	1835.37	182.91	270.96	2.31	3.17	2023.76	2250.97	2120.22	0.00	130.75	735.49
Seaside (Municipal)	146.99	7.42%	150.38	0.00	0.00	0.00	0.00	150.58	146.99	178.40	0.00	0.00	0.00
Granite Rock	13.87	0.70%	14.21	180.68	41.32	0.00	0.00	194.88	235.86	0.00	194.88	27.12	0.00
D.B.O. Development No. 30	25.16	1.27%	25.77	341.51	62.45	(2.31)	0.00	364.98	426.81	0.00	364.98	38.98	0.00
Calabrese (Cypress Pacific Investors LLC)	3.37	0.17%	3.45	14.36	1.73	0.00	(3.17)	14.65	16.29	0.00	14.65	1.64	0.00
<b>Total</b>	<b>1981.00</b>	<b>100.00%</b>	<b>2029.38</b>	<b>719.46</b>	<b>376.46</b>	<b>0.00</b>	<b>0.00</b>	<b>2748.84</b>	<b>3076.92</b>	<b>2298.62</b>	<b>574.50</b>	<b>198.49</b>	<b>735.49</b>

Footnotes:  
 (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 Table 1 on page 19 of Exhibit A (Amended Decision) of Court Order filed February 9, 2007.  
 (5) Calculated from the Base Water Right percentages in the adjacent column.  
 (6) Base Water Right plus Free and Not Free Carryover Credit = 2018 Production Allocation capped at storage allocation (see 2018 Declaration from 12/6/2017 Watermaster board meeting)  
 Note: Calabrese (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).  
 Producers carryover is capped at their storage capacity.