

**SEASIDE BASIN
WATERMASTER
ANNUAL REPORT – 2025**

January 10, 2025

Table of Contents

Seaside Basin Watermaster Annual Report - 2025.....	3
Groundwater Extractions	3
Groundwater Storage	3
Amount of Artificial Replenishment, If Any, Performed by Watermaster.....	4
Leases or Sales of Production Allocation and Administrative Actions.....	4
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	5
Violations of the Decision and Any Corrective Actions Taken	6
Watermaster Administrative Costs.....	6
Replenishment Assessments.....	6
All Components of the Watermaster Budget	6
Water Quality Monitoring and Basin Management.....	7
Water Quality Analytical Results	7
Monitoring and Management Program Work Plan for the Upcoming Year.....	7
Basin Management Database	9
Enhanced Monitoring Well Network.....	9
Basin Management Action Plan (BMAP).....	10
Seawater Intrusion Response Plan	10
Seawater Intrusion Analysis Report.....	11
Geochemical Impact Assessments	12
Sustainable Groundwater Management Act.....	12
Information that the Watermaster Would Otherwise Include within a Case Status	
Conference Statement	13
Summary of Basin Conditions and Important Developments Concerning the Management of the Basin	13
Planned Near and Long-term Actions of the Watermaster	14
Information Concerning the Status of Regional Water Supply Issues.....	14
Management Activities that May Bear on the Basin’s Wellbeing.....	17
Conclusions and Recommendations.....	22
Listing of Acronyms Used in this Annual Report.....	24
ATTACHMENT 1 - Groundwater Extractions	25
ATTACHMENT 2 - Watermaster Declaration of Non-Availability of Artificial Replenishment Water.....	28
ATTACHMENT 3 - Watermaster Administrative and Operations Costs for WY 2025	32
ATTACHMENT 4 - Updated Replenishment Assessment Unit Costs	35
ATTACHMENT 5 - Replenishment Assessment Calculations for WY 2025.....	37
ATTACHMENT 6 - Watermaster Budgets for 2026.....	40
ATTACHMENT 7 - Executive Summary from the WY 2025 Seawater Intrusion Analysis Report.....	46
ATTACHMENT 8 - Seaside Groundwater Basin 2026 Monitoring and Management Program	52
ATTACHMENT 9 -Updated Seawater Intrusion Response Plan (Body Only).....	61
ATTACHMENT 10 -Monterey County Health Department Letter to the Owner of the Security National Guarantee Well	93

SEASIDE BASIN WATERMASTER

ANNUAL REPORT – 2025

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 2025 Annual Report is being filed on or before January 15, 2026, 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.

Effective January 1, 2026 the Watermaster will have a new Administrative Officer, Toni Gibbs, and the new contact information for the Watermaster will be:

Mailing Address: P.O. Box 1271, Seaside, CA 93955-9998

Telephone: 831-649-9916

A. Groundwater Extractions

The schedule summarizing the Water Year 2025 (WY 2025) 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 2025.” Water Year 2025 is defined as beginning October 1, 2024 and ending on September 30, 2025.

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 2025 716 acre-feet was diverted and stored in the Seaside Basin under the ASR program. Rainfall in the area was about 79% of normal, and Carmel River flow was about 50% of normal.

Based upon production reported for WY 2025, the following Standard Producers are entitled to Carryover Credits to WY 2025 in accordance with the Decision, Section III. H. 5:

<u>Producer</u>	<u>Carryover Credit</u> (Acre-feet)
Granite Rock	301.96
DBO Development	532.21 (includes -5.29 transfer)
Calabrese (Cypress)	16.91 (includes -3.17 transfer)
CAWC	2,084.82 (includes +8.46 transfer)
City of Seaside Muni	32.32

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 2025 the Watermaster did not indirectly engage in In-lieu Replenishment of the Basin.

As reported in the 2019 Annual Report, 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 were contained in Attachment 15 of the 2019 Annual Report. On February 5, 2020 the Watermaster executed a Storage and Recovery Agreement with the City of Seaside, a copy of which was included in Attachment 7 of the 2020 Annual Report. 422.72 AF of non-native water was made available to the Basin during Water Year 2025 under this Storage and Recovery Agreement. The 422.72 AF accrues as a storage credit for any future City of Seaside Municipal or Golf Course use per the agreement.

D. Leases or Sales of Production Allocation and Administrative Actions

As reported in the 2017 Annual Report, on April 7, 2017, D.B.O Development No. 30 transferred/assigned 0.16 acre-feet (AF) of its Standard Production Allocation within the Seaside Groundwater Basin to California American Water for the Water Year ending 2017 applied to Water Year 2017. This transfer of water allocation was the first assignment of water pursuant to MPWMD Ordinance No. 166 and the Front-Loading Agreement between D.B.O and California American Water contained in Attachment 10 of the 2017 Annual Report.

As reported in the 2017 Annual Report, on June 15, 2017, D.B.O Development No. 30 transferred/assigned 2.15 acre-feet (AF) of its Standard Production Allocation within the

Seaside Groundwater Basin to California American Water for the Water Year ending 2017 applied to Water Year 2017. This transfer of water allocation was the second assignment of water pursuant to MPWMD Ordinance No. 166 and the Front-Loading Agreement between D.B.O and California American Water contained in Attachment 10 of the 2017 Annual Report.

As reported in the 2019 Annual Report, 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 was contained in Attachment 14 of the 2019 Annual Report. 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 WY 2017 CPI assigned its entire Standard Production Allocation water right to CAWC effective October 1, 2016.

As discussed in Attachment 13 of the 2018 Annual Report, in 2019 Security National Guarantee (SNG) indicated it intended to convert a portion of its Alternative Production Allocation to Standard Production. However, SNG subsequently decided not to make such a conversion.

During WY 2025 the Watermaster Board did not make any changes to the *Rules and Regulations*.

During WY 2025 the Watermaster Board was comprised of the following Members and Alternates:

<u>MEMBER</u>	<u>ALTERNATE</u>	<u>REPRESENTING</u>
Director Paul Bruno	Director John Gaglioti	Coastal Subarea Landowner
Tim O'Halloran	David Pezzini	California American Water
Director John Gaglioti	Director Paul Bruno	Laguna Seca Subarea Landowner
Director Alvin Edwards	Director George Riley	MPWMD
Mayor Mary Ann Carbone	City Manager Vibeke Norgaard	City of Sand City
Supervisor Wendy Askew	Kate Daniels	Monterey County (MCWRA)
Councilmember Kim Shirley	Councilmember Mike Burger	City of Del Rey Oaks
Councilmember Kim Barber	Mayor Tyller Williamson	City of Monterey
Mayor Ian Oglesby	Mayor Pro Tem David R. Pacheco	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 2025 and 715.64 acre-feet of water was injected into the Basin as Stored Water Credits and 0 acre-feet was extracted.

As reported in the 2019 Annual Report, the Watermaster issued a Storage and Recovery Agreement to CAWC and MPWMD governing the injection and recovery of water from the Pure Water Monterey (PWM) Project. A copy of the agreement was included in Attachment 13 of the 2019 Annual Report. The quantities of water that were stored and recovered in accordance with that Agreement during WY 2025 are reported in the lower portion of the spreadsheet in [Attachment 1](#).

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.

In WY 2021 the Watermaster implemented a final ramp-down in production to achieve the Basin's Decision-established Natural Safe Yield of 3,000 AFY. The Watermaster made its declaration regarding the availability of Artificial Replenishment Water, and the Total Usable Storage Space of the Basin, for WY 2025 at its Board meeting of November 6, 2024. Copies of these documents are contained in [Attachment 2](#).

Total pumping for WY 2025 did not exceed the Operating Yield (OY) of the Basin, and did not exceed the Natural Safe Yield (NSY) of the Basin.

G. Watermaster Administrative Costs

The total estimated administrative costs through the end of Fiscal Year 2025 amounted to \$100,000 including a \$25,000 dedicated reserve. Costs include fees for one Administrative Officer and legal counsel. The "Fiscal Year 2025 Administrative Fund Report" and "Fiscal Year 2025 Operations Fund Report" are provided in [Attachment 3](#).

H. Replenishment Assessments

At its meeting of October 1, 2025 the Watermaster Board determined that beginning with WY 2026 the Natural Safe Yield Replenishment Assessment unit cost should be updated to \$4,962 per acre-foot, and the Operating Yield Replenishment Assessment unit cost should be updated to \$1,241 per acre-foot. The spreadsheet that was included with the agenda transmittal for the October 1, 2025 meeting, and which explains the basis of calculation for these new unit costs, is contained in [Attachment 4](#).

Alternative and Standard Producers report their production amounts from the Basin to the Watermaster on a quarterly basis. Based upon the reported productions for WY 2025, no replenishment assessments were made.

A summary of the calculations for Replenishment Assessments for WY 2025 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. At its meeting of October 1, 2025 the Watermaster Board approved these budgets for Fiscal Year 2026, and copies of these budgets 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 2025 from the enhanced network of monitoring wells. The low-flow sampling method implemented in 2009 continued to be used in 2025 and is expected to continue to be used in the future to improve the efficiency of sample collection.

Monitoring and Management Program for the Upcoming Year

The 2026 Monitoring and Management Program (M&MP) contained in Attachment 8 includes the same types of basin management activities that have been conducted in prior years.

Most of the proposed revisions between the 2025 and 2026 Monitoring and Management Programs are relatively minor, but:

- A new Task I.4.e.1 has been added to begin implementing the recommendations in the Updated Seawater Intrusion Response Plan (Updated SIRP).
- Tasks I.2.b.1, I.2.b.5, and I.4.e.1 all include the potential for installing additional monitoring wells starting in 2026. If new wells are to be installed, the costs of constructing the wells would be included in the M&MP Capital Budget, not the M&MP Operations Budget, but the locations of those wells would be identified through work under Task I.4.e.1. The need to install those wells will not be known until after the groundwater model has been updated under Task I.3.a.1. This is expected to occur in late 2026. So no new wells would be installed, if any are needed, until at least 2027 or later.
- Task I.3.a.1 includes the potential updating or replacement of the Watermaster's Seaside Basin Ground Water Model in 2026, in order for it to coordinate more closely with the updated models being prepared for the Salinas Valley Basin (which includes the adjacent Monterey Subbasin). The scope and cost of that work will not be known until the evaluation of the most cost-effective means of either modifying or replacing the existing Seaside Basin model has been completed. That evaluation is expected to be completed in early to mid-2026.
- Task I.3.a.3 has been updated to reflect Cal Am's updated schedule for the Monterey Peninsula Water Supply Project's desalination plant.

The following are comments and/or principal revisions from the 2025 M&MP Budget:

- Technical Program Manager: The Groundwater Sustainability Plan (GSP) for the adjacent Monterey Subbasin was completed and submitted in early 2022 by the Salinas Valley Basin and the Marina Coast Water District Groundwater Sustainability Agencies, and the Salinas Valley Basin Groundwater Sustainability Agency completed and submitted GSPs for the other subbasins. There will continue to be regular meetings of their GSP-related committees that I either serve on representing the Watermaster, or monitor to keep the Watermaster informed on the topics discussed at those meetings. Also, there will likely be further work related to obtaining replenishment water for the

Basin. Therefore, I anticipate that the 2026 workload will be similar to that of 2025, so the proposed line-item budget amount has been maintained at \$75,000 in 2026.

- Tasks Involving MPWMD and Montgomery & Associates: The scopes-of-work for both MPWMD and Montgomery & Associates are essentially unchanged from 2025. However, both will have hourly-rate increases in 2026, so the costs of the Tasks in which they are involved reflect somewhat higher dollar amounts in 2026 compared to 2025.
- Tasks I.2.b.1, I.2.b.5, and I.4.e.1: All of these Tasks include the potential for installing additional monitoring wells. The need to install those wells will not be known until the Revised Final Draft *Update of the Seawater Intrusion Response Plan*, which the Board approved at its October 1, 2025 meeting, is further revised once the Seaside Basin Groundwater Model has been updated or replaced with a new model developed under Task I.3.a.1. Updating or replacing the Model is not expected to be completed until late in 2026. The location of additional monitoring wells, if any are needed, would not be determined until after that work has been completed. Therefore, no new monitoring wells are expected to be installed in 2026.
- Task I.2.b.8: This Task, which was added in 2025, has been carried on into 2026 to perform additional subsurface electromagnetic imaging in the vicinity of Sentinel Well No. 4, if the work performed in 2025 was found to be useful and beneficial in helping to determine if seawater is beginning to intrude inland in this location.
- Task I.3.a.1: This is to update the groundwater modeling of the Seaside Basin, and was originally included in the 2025 M&MP. However, completion of the modeling work being performed in the adjacent Salinas Valley Basin has taken longer than originally expected, so this Task could not be performed in 2025 and has been moved to 2026. Significant changes in the understanding of the hydrogeology of the Monterey Subbasin, which abuts the Seaside Basin, have been identified through work being conducted by the Salinas Valley Basin and Marina Coast Groundwater Sustainability Agencies. The Salinas Valley Integrated Hydrogeologic Model (SVIHM) and the Seawater Intrusion Model are now expected to be completed in late 2025. In order for the Watermaster to have a model to incorporate that new information and to more closely coordinate with the groundwater models in the adjacent subbasins, it may be desirable to update the Watermaster's modeling work in 2026. The existing Seaside Basin Model was last updated in 2018 at a cost of approximately \$55K. However, that update only consisted of inputting more recent groundwater measurements (water level, production, etc.) but no changes to the actual model itself were made. The 2026 proposed updating work would be a much more complex and vigorous undertaking, with a commensurate significantly higher cost. The consultant (Montgomery & Associates) has provided a ballpark cost range of \$100K to \$150K to update the existing Seaside Basin Model. However, discussions with Montgomery and Associates and the TAC may lead to the conclusion that rather than simply updating the existing Seaside Basin Model, there may be a more useful and cost-effective way to prepare a model that incorporates the newer information and data and better integrates with the modeling being done in the other subbasins of the Salinas Valley Basin. The Budget includes \$125K for this Task (midpoint of ballpark cost range). In the 2018 Model update, the cost was shared between the Watermaster, MPWMD, and M1W. The Watermaster paid 50% of the cost and the two other agencies collectively paid the other 50%. If this model updating work is undertaken in 2026, efforts will be made to again cost-share as was done with the 2018 update.
- Task I.4.e.1: This new Task has been added to begin implementing the recommendations in the Updated Seawater Intrusion Response Plan (Updated SIRP).

The recommendations to be implemented will not be known until the Revised Final Draft *Update of the Seawater Intrusion Response Plan* has been further revised following updating or replacing the Seaside Basin Groundwater Model as discussed above. That is expected to occur in late 2026. Following discussions with Montgomery & Associates it does not appear that any significant work under this Task should be performed until the Groundwater Modeling update work of Task I.3.a.1 has been completed. Therefore, a place-holder amount to only perform preliminary work on Task I.4.e.1 has been included in the 2026 M&MP Operations Budget.

As a result of the changes described above, as indicated by the right-hand column titled “Comparative Costs from 2025 Budget” in the M&MP Operations Budget for 2026 contained in Attachment 6, the proposed 2026 Budget is \$12,367 higher (\$491,606 - \$479,239) than the 2025 Budget.

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 2026.

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. In response to concerns that induction logging of the Sentinel Wells, and in particular Sentinel Well No.4, might be showing the start of an increasing trend in conductivity, beginning in 2024 two additional wells were added for induction logging. These are wells PCA-W Deep and PCA-E Deep. The induction logging results are discussed in the Seawater Intrusion Analysis Report.

As discussed in the 2023 Annual Report, the Security National Guaranty (SNG) well located in the dunes area in the northern portion of Sand City is suspected to have a casing leak that is allowing salty water from a shallow aquifer to flow downward into the Paso Robles aquifer. The well owner reported that the development project on this property was in the midst of litigation and he was prevented by the Court from doing any work on the well until the litigation was concluded. In late 2024 the Watermaster’s legal counsel reported that the attorney representing the development project had contacted them. A teleconference with that attorney and the SNG representative was held, with SNG offering some assurances that they were working with Craig Evans Pump Testing Services to investigate the well and determine next steps. However, as of the date of preparation of this Annual Report the well remained unrepaired. In April 2025 the Monterey County Health Department, Environmental Health Bureau, sent a letter to the well owner directing him to have the well destroyed. A copy of that letter is contained in Attachment 10. In September 2025 the Monterey County Health Department, Environmental Health Bureau, reported that they had not received any response to their April 2025 letter, and were working with County Counsel to issue a Notice of Violation giving the well owner 30 days to comply. In November 2025 the County Health Department reported that they had spoken with the well owner, and explained to him that if he did not

comply, then the County would issue a citation, fine, and recordation. He subsequently submitted an application to destroy the well and an application to replace it with a new well.

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 the Executive Summary from that BMAP was contained in Attachment 9 of the 2009 Annual Report. The BMAP was updated in 2019 and the Executive Summary from the updated BMAP was contained in Attachment 7 of the 2019 Annual Report. These complete documents are posted on the Watermaster's website.

In the 2024 Annual Report there is a discussion regarding the Natural Safe Yield (NSY) of the Basin, and whether the Watermaster should 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. At its September 1, 2021 meeting the Watermaster Board discussed this topic, and concluded the following:

- Sustainable Yield (SY) is a technically superior Basin management approach compared to the Natural Safe Yield (NSY) approach used in the Decision, and an SY analysis should be performed at some point in time.
- Because of the historical over pumping from the Basin, regardless of the approach that is used for Basin management, be it NSY or SY, even reducing pumping levels to match either the NSY or SY pumping levels will not achieve protective groundwater elevations. This is because these approaches only seek to stabilize groundwater levels and do not take into account that the Basin would still be at risk of seawater intrusion at some time in the future. An additional source(s) of water (replenishment water) that can be injected into the Basin to raise groundwater levels, and to maintain them at protective water levels, will be necessary regardless of which approach is used for Basin management.
- In view of the expense and complexity of changing to the SY approach, the Board concluded that making this change would not be justified until a source for this replenishment water has been secured.

As discussed below in Section K under the subheading titled "*Obtaining Replenishment Water*" efforts are underway by the Watermaster to obtain replenishment water. At such time as a firm plan to accomplish this has been developed, the Watermaster will revisit the issue of changing to the Sustainable Yield approach.

Seawater Intrusion Response Plan

HydroMetrics LLC (now Montgomery and Associates) 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/>.

Due to the observation of increasing conductivity in the 2023 induction logging in some of the shallower formations near the coastline, it was determined that in 2025 it would be appropriate to update the 2009 SIRP. At its October 1, 2025 meeting the Watermaster Board of Directors approved an *Updated Seawater Intrusion Response Plan* dated October 1, 2025, the body of which is contained in Appendix 9. The full document with its appendices can be accessed on the Watermaster's website at:

<https://seasidegroundwaterbasinwatermaster.wpcomstaging.com/wp-content/uploads/2025/10/25-1001-Updated-Seawater-Intrusion-Response-Plan-with-Appendices.pdf>.

The update incorporates data that has been obtained since 2009, examined technology and techniques that make the SIRP more practical and useful, and includes updated seawater intrusion indicators, triggers, and contingency actions.

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 2022 Annual Report included a discussion of two monitoring wells which have experienced increased chloride concentrations. One of these, monitoring well FO-10 Shallow, is north of and outside of the Seaside Basin, and the other, monitoring well FO-9 Shallow, was just inside the northern boundary of the Northern Coastal Subarea of the Seaside Basin. As reported in the 2023 Annual Report, the original monitoring well FO-9 Shallow was destroyed and was replaced with a new FO-9 Shallow monitoring well in late 2023. Also as reported in the 2023 Annual Report, further investigation of Well FO-10 Shallow led to the conclusion that it might be allowing leakage to occur from the shallower Aromas or Dunes Sands formation into the Paso Robles aquifer below. In late 2024 MCWD video inspected monitoring wells FO-10 and FO-11, in an effort to determine why higher chloride levels were being detected in the groundwater samples from the deep aquifer at this location. As a result of that inspection MCWD confirmed that Well FO-10 was leaking. Since the well is owned by MPWMD, MPWMD budgeted to have the well destroyed, and in October 2025 the MPWMD Board approved a contract with a firm to perform the destruction.

The Watermaster retained Montgomery & Associates to prepare the WY 2025 SIAR required by the M&MP. The WY 2025 SIAR provided an analysis of data collected during that Water Year. There continue to be ongoing detrimental groundwater conditions within the Basin that pose a potential threat of seawater intrusion. Although in recent years pumping from the Basin has been reduced to less than the Basin's Natural Safe Yield of 3,000 AFY, groundwater levels in some parts of the Basin continue to be below sea level. This, coupled with the ongoing seawater intrusion in the nearby Salinas Valley, suggests that seawater intrusion has the potential to occur in the Seaside Groundwater Basin. In the 2025 data, some of the Sentinel Wells are showing a trend of increasing conductivity, and a few wells now have Piper diagrams that may be starting to show a trend toward seawater. Both of these are indications that seawater may be starting to mix with the native water in those wells. However, the 2025

SIAR reports that the evaluation of the data from the sampling and monitoring program continues to indicate that seawater intrusion is not occurring.

The SIAR is lengthy, but the full *Executive Summary Section* from it is provided in [Attachment 7](#). A complete copy of the document will be posted for viewing and downloading from the Watermaster's website. All of the 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 8](#).

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.

The 2022 Annual Report includes a discussion of geochemical impact assessments pertaining to the introduction of desalinated water, additional ASR water, and advanced wastewater treatment (AWT) water under the Pure Water Monterey Project (PWM).

In 2025 no additional geochemical impact assessments needed to be performed, since the desalination plant component of the Monterey Peninsula Water Supply Project was still in the process of complying with permit conditions necessary to move forward.

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 2025 DWR did not issue any new regulations, or revisions to prior regulations, that impacted the Seaside Groundwater Basin or the Watermaster. In March of 2025 the Watermaster submitted to DWR the reporting information required of it, as an adjudicated basin, under SGMA.

At the Monterey County level:

The 2022 Annual Report includes a discussion of the formation of the Groundwater Sustainability Agencies (GSAs) involved in the development and implementation of the GSP for the Monterey Subbasin. The Watermaster participated in the development of the Monterey Subbasin GSP and continued monitoring the implementation of that GSP in 2023. In late 2024 the Watermaster's request to the SVBGSA to become a member of the Monterey Subbasin GSP Implementation Committee was approved, and starting with the October 16, 2024 meeting of that Committee the Watermaster became an active member of it. The Watermaster also continued monitoring the implementation of the GSP for the 180/400-Foot Aquifer Subbasin GSP, since that subbasin has a direct impact on groundwater conditions in the Monterey Subbasin. Its participation as a member of the SVBGSA's Advisory Committee, the MCWDGSA's Stakeholder Group, and the Monterey Subbasin GSP Implementation

Committee has helped to ensure that there is close coordination between the SVBGSA, MCWDGSA, and the Watermaster on matters of mutual interest. Monthly summary reports of meetings of those groups are provided to the Watermaster’s Technical Advisory Committee and Board by the Watermaster’s Technical Program Manager.

In 2025 the SVBGSA Board revised the membership of its Advisory Committee, and limited membership on that committee such that the Watermaster, and many other parties, could no longer be members. However, the Watermaster continues to serve on the Monterey Subbasin GSP Implementation Committee, thereby ensuring its continued close involvement on matters affecting the Seaside Basin.

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.

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 *2025 Seawater Intrusion Analysis Report*, which analyzes the water quality data collected under the Watermaster’s sampling program, reported that while conditions exist within the Basin that pose a risk of seawater intrusion, the data collected in WY 2025 indicate that seawater intrusion has not yet actually occurred.

The 2019 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 desalination plant component of the MPWSP becomes operational, or if that plant is not constructed but an expansion of the PWM project is constructed, 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. However, unless the Basin is replenished to raise groundwater levels to protective elevations, the Basin will remain vulnerable to seawater intrusion.

As the Groundwater Sustainability Plans (GSPs) were developed under the State’s Sustainable Groundwater Management Act (SGMA), the Watermaster became more aware of the impact of adjacent groundwater basins on the Seaside Groundwater Basin. In the context of the Salinas Valley Groundwater Basin, as recognized and defined by the DWR, each basin within that larger Basin is referred to as a “subbasin”. Therefore, in this section of this Annual Report the Seaside Basin is referred to as the “Seaside Subbasin.” The GSP for the Monterey Subbasin (which abuts the Seaside Subbasin to the north and east) made it clear that:

- The portion of the Monterey Subbasin to the east of the Seaside Subbasin (referred to as the Corral de Tierra/Toro Subarea) will not be able to achieve sustainability as defined under the SGMA without the importation of additional sources of water supply.
- The portion of the Monterey Subbasin to the north of the Seaside Subbasin (referred to as the Marina-Ord Subarea) will not be able to achieve sustainability unless the subarea

- immediately to the north (the 180/400-foot Aquifer Subbasin) raises its groundwater levels high enough to stop seawater from intruding that subbasin.
- There is significant loss of groundwater from the Seaside Subbasin to the Monterey Subbasin because the groundwater levels in the Monterey Subbasin are lower than those in the Seaside Subbasin.

During 2024 the SVBGSA obtained new and more accurate data on the stratigraphy of the Monterey Subbasin as it developed its Hydrogeologic Conceptual Model (HCM) for the Salinas Valley Basin. Development of that model, and of a Seawater Intrusion Model, was nearing completion in late 2025. The new data will provide a better understanding of the hydrogeology of the Corral de Tierra/Toro Subarea, and will be useful in better understanding the hydrogeologic interactions between these parts of the Monterey Subbasin and the Seaside Subbasin.

Planned Near and Long-term Actions of the Watermaster

Near-term actions are described in the 2026 Monitoring and Management Program discussed in Section J and Attachment 8 of this Annual Report.

Near-term actions (to be carried out in 2026) include updating the Watermaster’s Seaside Basin Groundwater Model.

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, the SVBGSA, and the MCWDGSA:
 - In their development of updated hydrogeologic models to ensure that there is hydrogeologic agreement between those models and the Watermaster’ Seaside Basin model, and
 - Continuing to coordinate with the SVBGSA to develop measures to aid in groundwater management of the Laguna Seca Subarea.
- Conducting meetings of the ad hoc “Replenishment Ad Hoc Committee” of the Watermaster Board to:
 - Develop information about potential sources and quantities of replenishment water
 - Identify potential funding mechanism options for the purchase of replenishment water

Information Concerning the Status of Regional Water Supply Issues

MPWSP

1. Implementation of the Monterey Peninsula Water Supply Project (MPWSP) continues to be actively pursued by CAWC. CAWC received approval of the project from the Coastal Commission in November 2022. The MPWSP 4.8 MGD desalination plant is currently anticipated to be operational in 2028.
2. In 2025 the California Public Utilities Commission (CPUC) completed its deliberations on CAWC’s request to update supply and demand estimates for the MPWSP. On August 14, 2025 the CPUC unanimously approved the *Phase 2 Decision Approving Demand and Supply Estimates for the Monterey Peninsula Water Supply Project*. In

this Decision, the CPUC ruled that CAW faces a water supply deficit on the Monterey Peninsula and approved CAW's updated demand and supply estimates, which concluded a deficit of approximately 815 million gallons per year. The CPUC approved a CAW projected demand of 13,732 acre-feet per year by 2050, a number lower than CAW's initial request but still higher than many opponents' estimates, and approved a current water supply of 11,114 acre-feet per year. A minor correction to the supply figure in the Decision, raising the figure from 11,114 to 11,204, was subsequently made by the CPUC to correct an error in the calculations, but the result did not alter the outcome of the Decision. Below is a direct excerpt from the Decision:

Summary

This Phase 2 decision approves the updated water demand and supply estimates for the Monterey Peninsula Water Supply Project. This decision uses the baseline water demand amount calculated by California-American Water Company (Cal-Am) using the same forecasting methodology that produced the water demand forecast approved in Decision 18-09-017. This decision adds additional forecasted water demand from legal lots of record, tourism rebound, and Pebble Beach entitlements. This decision also adopts:

(a) Cal-Am's water supply estimates for the Carmel River, the Seaside Groundwater Basin, the Sand City Desalination Project, and Pure Water Monterey;

(b) Revised supply estimates for Aquifer Storage and Recovery and the Pure Water Monterey Expansion; and

(c) Projected 2050 water demand of 13,732 acre-feet per year and current water supply of 11,114 acre-feet per year.

This proceeding is closed.

This ruling supports CAW's plan to build a desalination plant as part of the MPWSP. Construction of that plant is expected to begin in January 2026.

PWM

1. Construction work on the Monterey One Water (M1W) and Marina Coast Water District (MCWD) Pure Water Monterey (PWM) recycled water project in Marina was completed in late 2019, and the Advanced Water Treatment (AWT) plant began producing water in early 2020. Water began being injected into the Seaside Groundwater Basin in February 2020. In WY 2025 a total of 3,843.33 acre-feet of water was injected. Of this amount, 3,679.57 acre-feet was available to CAWC for extraction and 163.76 acre-feet was added to the operating reserve. Cal Am extracted 3,679.57 acre-feet.
2. As reported in the 2024 Annual Report, in September 2021 the State Division of Drinking Water (DDW) issued a letter to CAWC stating that "the drinking water source designation of ASR Well 01 (ASR-1) had been changed from active to inactive." DDW issued this letter because tracer studies indicated that the minimum retention time requirement for water injected by the PWM project was likely not being met for this well. That inactive status remains in effect today since no changes were made in the operation of the PWM project that would enable the status to revert to "active."
3. During WY 2024-25 CAWC continued to work on getting well ASR-4 permitted for use so it could be used in place of ASR-1 as a supply well. Because ASR-4 had been

found to have a mercury concentration level above the drinking water standard, CAWC installed a mercury removal treatment unit so it could be permitted for use as a supply well. The Mercury Treatment system has been approved by DDW. However, the well supply has also experienced significant odor issues that CAWC is working to rectify. CAWC is currently working on startup and commissioning of the well and treatment system.

4. CAWC is in the process of constructing EW-1 and EW-2 as part of the Pure Water Monterey Expansion Project. EW-1 and EW-2 have been drilled and CAWC is currently working with PG&E on establishing power to the site. Both EW-1 and EW-2 site work and piping construction is anticipated to be performed in 2026. These wells are anticipated to be complete and online in late 2026.

Public Buyout of CAWC's Water System

- As discussed in the 2022 Annual Report, the Local Agency Formation Commission (LAFCO) passed a resolution denying MPWMD's application to activate its latent powers in order to acquire CAWC's Monterey Water System. MPWMD filed an Application for Reconsideration of LAFCO's disapproval, and LAFCO denied MPWMD's Application.
- MPWMD initiated litigation against LAFCO on April 1, 2022 as set forth in Monterey County Superior Court Case No. 22CV000925. Numerous filings were made by the parties involved in the litigation, and the case was heard in late September 2023. A "Statement of Intended Decision" was issued by the Court on October 25, 2023 which essentially ruled in favor of MPWMD and reversed LAFCO's earlier disapproval. LAFCO has appealed that decision, and Appeal briefings will be filed in coming months. A hearing schedule will be set in 2026. In addition LAFCO has entered into an indemnification agreement with CAWC.
- At its meeting on October 10, 2023 the MPWMD Board voted to approve a "resolution of necessity" authorizing MPWMD to move ahead with the forced acquisition of the CAWC system and convert it to government ownership. On December 15, 2023 the MPWMD filed an eminent domain complaint in Monterey County Superior Court to first determine the District's "right to take" and then ultimately the value of CAWC, and to acquire it. As of the date of preparation of this Annual Report a trial date had not been set.
- On February 26, 2024, Cal Am filed a demurrer motion asking the Monterey County Superior Court to dismiss the MPWMD lawsuit seeking a government takeover of CAWC's Monterey Peninsula water system through eminent domain. The motion argued that MPWMD's lawsuit fails to meet fundamental legal requirements necessary to proceed with such a significant action and should be dismissed. CAWC's motion asserts that MPWMD lacks legal authorization from both the California Legislature and the Monterey County LAFCO to become the retail water service provider on the Monterey Peninsula. In addition, CAWC asserts that MPWMD's lawsuit improperly seeks to take property outside the boundaries of MPWMD's territory.
- The Court heard initial argument on May 3, 2024 and again on August 23, 2024. On November 14, 2024 the demurrer was overruled.
- On August 20, 2025 CAWC filed a motion for summary judgment on the grounds that there is no triable issue as to any material fact and that CAWC is entitled to judgment as a matter of law. CAWC asserted summary judgment is warranted because MPWMD is not authorized to acquire CAWC's property for the purpose of the Project alleged in the

Complaint because MPWMD is not legally authorized to provide retail potable water service. On the same day MPWMD filed a motion for summary adjudication in MPWMD's favor on the grounds that, as a matter of law, MPWMD does not need approval from the Monterey County Local Agency Formation Commission because MPWMD does not propose to exercise a "new or different function or class of services" under the Cortese-Knox-Hertzberg Act, Government Code section 56000 et seq. Because no triable issue of fact exists regarding this affirmative defense, MPWMD is entitled to judgment on the defense as a matter of law. Both motions are to be heard in Superior Court on December 12, 2025.

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 has been implemented by M1W and MCWD. CAWC has already contracted to receive 3,500 AFY of PWM recycled water for injection into, and recovery from, the Seaside Basin. M1W has completed construction of the PWMX project to expand the delivery capacity of the PWM project by using additional sources of recycled water and storm water. The project became operational on October 22, 2025, and is expected to deliver an additional 2,250 AFY of recycled water.
3. *Sustainable Groundwater Management Act.* Coordination between the Watermaster and the SVBGSA and the MCWDGSA 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 Seaside Basin.
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 the 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 Plan (IRWMP) area.

Subsequently a Greater Monterey County SWRP (GMCSWRP) was prepared to cover a larger geographic area and fulfill the SWRCB's requirements for being eligible to receive grant funds for stormwater-related projects. The GMCSWRP was prepared by *Coastal Conservation and*

Research, Inc. with funding support from a State Water Resources Control Board Proposition 1 Storm Water Planning Grant. *Coastal Conservation and Research* worked collaboratively with the Monterey Regional SWRP planning team to ensure consistency between the two plans and to explore possibilities for coordination and partnerships. The GMCSWRP can be accessed at https://www.greatermontereyirwmp.org/wp-content/uploads/2023/02/Greater-Monterey-County-SWRP_Final-Plan_2023_01_20_low-res.pdf.

Some of the projects discussed in the 2018 SWRP have the potential to minimally benefit the Seaside Basin. These are described below.

City of Seaside: The Del Monte Manor project in the City of Seaside was completed in 2023. This project diverts portions of the stormwater that is captured in this area into an infiltration structure.

City of Sand City:

West End Stormwater Improvement Project

The West End Stormwater Improvement Project is a retrofit of two existing collector streets, Contra Costa Street and Catalina Street, to incorporate Low Impact Development (LID) best management practices (BMPs) to improve stormwater runoff quality, augment local groundwater supplies, mitigate flooding, provide urban green space, and reduce pollutant load discharges to the Monterey Bay National Marine Sanctuary. The project proposes to install bioretention facilities (i.e., urban rain gardens), trash capture devices, permeable pavement, drought tolerant landscaping and trees, and subsurface infiltration chambers. The project will construct new curb, gutter, sidewalks, curb extensions, crosswalks, and it will improve pedestrian access throughout the corridor. The project will install traffic calming measures to improve safety for users.

Both projects are designed to capture, treat, and infiltrate urban storm water runoff to reduce pollutants such as metals, bacteria, nutrients, and trash that are currently being discharged into Monterey Bay. Both projects will increase the reliability of the Seaside Groundwater Basin through infiltration of treated storm water and will incorporate City and regional objectives for economic vitality, community livability, and environmental equity. In addition, the projects will improve regional water self-reliance and strengthen collaborative efforts between local agencies to provide sustainable water resources. The City obtained community input regarding storm water management priorities which influenced the design of the projects.

The Contra Costa Street portion is funded by an SWRCB Proposition 1 Stormwater Grant (technical assistance and implementation) and the Catalina Street portion is funded by a DWR Proposition 1 Integrated Regional Water Management Program (IRWMP) Grant. The projects have encountered some challenges with utility relocations, coordination with adjacent businesses, and implementing parking solutions. At the time of preparation of this 2025 Annual Report, both projects are in final design with construction anticipated in early 2026.

City of Monterey:

Oliver Street Stormwater Diversion Project

In October 2022, the City of Monterey received a \$25,000 Local Agency MPWMD grant to help with the costs of survey work for the Olivier Street Stormwater Diversion Project (previously known as the Tunnel Diversion Project). The Project will divert urban stormwater drainage from an existing storm drain, currently discharging untreated into

the Harbor/Monterey Bay, to an existing City sanitary sewer utility for treatment at M1W's Regional Wastewater Treatment Plant. This diversion is estimated to provide 10-12 acre-feet of dry-weather source water for water recycling at the time of year when source water is not abundant, and reduce the discharge into the Bay. In October 2023, the City secured an additional \$500,000 Proposition 1 funding award through MPWMD to assist with the design and construction of the project. The project has currently completed a Basis of Design Report and 30% Civil plans, and is currently evaluating its CEQA needs. Planning, Design, and Environmental documentation is anticipated to be completed by 6/30/26. Construction and implementation is tentatively scheduled for 7/1/26 through 6/30/27.

Lake El Estero Urban Diversion Project

In September 2022, the City of Monterey received State funding in the amount of \$1M for this project and is working on the design and environmental permitting for it. The City has completed 100% plans and specifications and has updated the EIR for the Pure Water Monterey Ground Water Replenishment Project to include the Lake El Estero project site. Permit applications have been submitted for Lake and Streambed Alteration Agreement (CDFW), 401 Water Quality Certification (SWRCB), 404 Dredge & Fill (ACOE), and Water Rights Appropriation, which are all under review. Upon permit approval the City is ready to advertise for construction. The current funding agreement uses AB 179 funds which are set to expire June 2026, which may not be enough time to complete permitting, award construction contract, procure materials, and complete the project. The City is currently working with State Water Board and State Legislators to pursue a legislative extension in the 2025-26 Budget Act to extend the current funding deadline.

These diversion projects will increase the amount of water that can be recycled for beneficial reuse.

One project described in the GMCSWRP pertinent to this Annual Report identifies an opportunity to capture stormwater and/or industrial wastewater from the City of Salinas that could be utilized as new water supply source for the PWM. This is referred to as the *Salinas Project to Enhance Regional Stormwater Supply (SPERSS) Design Project*. The City of Salinas provided a description and status report on the SPERSS that is included in the 2024 Annual Report. Also in the 2024 Annual Report was a description by Kevin Dayton in the *Salinas Valley Chamber of Commerce Business Journal* providing amplifying background information related to this topic. In the fall of 2025 the City provided this update on the status of this project:

The SPERSS project is for the purpose of constructing stormwater improvements at existing facilities to increase water supply reliability and reduce nonpoint source pollution in the Salinas region and the Monterey Peninsula.

The project was bid twice. Phase 2B, the electrical improvements at the Industrial Wastewater Treatment Facility (IWTF), was opened on October 15, 2024 and the bids exceeded the grant amount. The plans were repackaged to include 2A and 2B and the scope reduced to fit within the grant amount. On February 27, 2025 one bid was received, which again was above the grant amount. Since there was only one bidder the City negotiated with the bidder for a project that fit within the grant. The contract was awarded to Mountain Cascade Inc. in the amount of \$7,050,000.

The modified scope of work includes:

- Stormwater Pump Station at TP-1
- Pipelines A and B (required to connect)
- Rehabilitation of 33-Inch Industrial Waste Water Pipeline
- Electrical/Instrumentation Work at TP-1
- Structural/Electrical/Instrumentation work at IWTF

The notice to proceed was issued on August 20, 2025 with 600 calendar days for completion. The contractor is in the submittal process and has ordered long lead time items. The contractor expects to start actual construction in April 2026 and complete by April 2027.

Regional Urban Water Program

Under its 1989 annexation agreement with MCWD, M1W provides recycled water for MCWD's Regional Urban Water Augmentation Program (RUWAP). RUWAP is intended to provide recycled water for landscape irrigation, including California State University Monterey Bay playing fields. In 2023 MCWD began delivering recycled water for irrigation of the Bayonet and Blackhorse golf courses in the City of Seaside. In the fall of 2025 MCWD reported that it was in the process of connecting more users to its recycled water distribution system within the former Fort Ord area.

Castroville Seawater Intrusion Project

Source water for this project is supplied subject to the terms and conditions of the Amended and Restated Water Recycling Agreement (ARWRA) between the Monterey County Water Resources Agency (MCWRA) and M1W.

As discussed in the 2024 Annual Report, in June 2022 MCWRA notified M1W that the conditions precedent to share new source waters for PWM groundwater replenishment and the Castroville Seawater Intrusion Project (CSIP) could not be met and therefore the two agencies will split the source waters, as described in the ARWRA. The two agencies have been working on a long-term agreement between themselves and the City of Salinas, to utilize the Industrial Wastewater. The ARWRA states that MCWRA is the recipient of that water but also contemplates various ways for the parties to share resources when deemed excess or unwanted.

As of October 2025 MCWRA reported that the ARWRA with M1W is still active and the water allocations remain the same. In terms of water rights under the ARWRA, MCWRA has first right to most water supplies available and M1W may use them when MCWRA is not. The feasibility studies referenced last year are still underway and have some preliminary results.

6. Reduction in Pumping in the Laguna Seca Subarea

As mentioned in the 2022 Annual Report, in 2020 CAWC completed construction of an intertie pipeline that enabled it to serve the customers in its Bishop and Ryan Ranch Units in the Laguna Seca Subarea with water from its Main System. With the completion of this pipeline, CAWC has been able to discontinue pumping from the Laguna Seca Subarea to serve those customers. This is expected to reduce total pumping from the Laguna Seca Subarea by about 28%.

7. Obtaining Replenishment Water.

As described in the 2024 Annual Report in Section J under the subheading “Basin Management Action Plan,” and in the subsection of this Section titled “Summary of Basin Conditions and Important Developments Concerning the Management of the Basin,” portions of the Seaside Basin have groundwater levels below sea level. Therefore, even with the pumping reductions achieved to date the Basin will remain vulnerable to seawater intrusion. Replenishing the Basin by injecting water and leaving it in the Basin, rather than withdrawing it as is done in the ASR and PWM projects, could help to raise groundwater levels high enough to protect the Basin against seawater intrusion.

Potential sources of replenishment water include the MPWSP’s desalination plant and the PWMX project during their initial years of operation when projected water demands will be less than the production capacities of either of these projects. The replenishment water would be obtained by operating either of these projects at their full capacities and injecting the excess water into the Basin. Doing this would increase the operational costs of those projects, and funds to cover those costs would be needed. Other potential sources being evaluated by MCWD include a Phase II PWM project to deliver recycled water to areas in the former Fort Ord, MCWD’s Reservation Road desalination project, and pumping groundwater from MCWD’s wells for injection into the Seaside Basin.

As reported in the 2022 Annual Report, it was found that there are no State or Federal funding programs that could provide money to purchase replenishment water. All of those programs only provide funding for planning, design, and construction of projects, but not for operational costs once the projects are constructed. Discussions involving the Watermaster, MPWMD, MIW, and CAWC led to the conclusion that MPWMD had the legal authority to levy fees to help pay for replenishment of the Basin. In 2023 the Watermaster formed an ad hoc committee to develop concepts and/or funding mechanisms for replenishing the Seaside Basin, once replenishment water becomes available. On October 7, 2024 the ad hoc committee received a presentation from MCWD regarding the potential replenishment water sources described in the preceding paragraph. A meeting of that ad hoc committee was held on July 23, 2025 at which a potential four-point strategy to raise groundwater levels toward preventing seawater intrusion into the Seaside Basin was discussed. However, as of the date of preparation of this 2025 Annual Report no action on this strategy had been recommended to the Board for its consideration.

Studies performed for the Watermaster in 2022 pertaining to the need for replenishment water to raise ground water levels in the Seaside Subbasin to protect it against seawater intrusion concluded:

- Under a “best case” scenario based on future water demand projections, Aquifer Storage and Recovery (ASR) injection rates, and Pure Water Monterey Expansion (PWMX) injection rates prepared by MPWMD, 1,000 acre-feet-per-year (AFY) of water would need to be injected into the Seaside Basin every year to replenish it and raise groundwater levels high enough to prevent seawater intrusion from occurring.
- Under a more “conservative” scenario based on future water demand projections and the timing of start-up of CAWC’s desalination plant contained in CAWC’s 2020 Urban Water Management Plan, ASR and PWMX injection rates with a built-in margin of safety, and revised water demands for the City of Seaside’s golf courses proposed by Cal Am and the City of Seaside, the amount needed would be 3,600 AFY every year.

- Unless replenishment water in these quantities is added annually, the Seaside Basin will be at risk of seawater intrusion, and that risk will increase each year that groundwater levels continue to fall and remain below sea level.
- Implementation of the PWMX project alone does not accomplish this, and an additional source of replenishment water will be needed.

A summary of the Technical Memorandum describing the work that led to these conclusions was contained in Attachment 9 of the 2022 Annual Report.

As reported in the 2023 Annual Report, studies performed for the Watermaster pertaining to the directions and inland velocities that seawater intrusion into the Seaside Subbasin would move, if intrusion should occur, concluded:

- Under current conditions inland seawater intrusion encroachment of 250 ft/yr could occur.
- Periods of prolonged drought with no ASR injection increases inland travel rates and the risk of seawater intrusion.
- The number of critically dry rainfall years has greatly increased in the last 50 years compared to the prior 50 years of data. Critically dry years now exceed the number of “normal rainfall” years thus becoming the “new norm”.

These studies highlight the vulnerability of the Seaside Subbasin to seawater intrusion, and the need for replenishment water to raise groundwater levels within the Seaside Subbasin to prevent that from occurring. A summary of this work was contained in Attachment 9 of the 2023 Annual Report.

The Watermaster considered performing additional analyses to reflect the impacts from more severe climatic conditions of reduced rainfall and longer periods of drought. However, it was concluded that such additional analyses would be unlikely to provide any further information that would be useful in Basin management. A Memorandum summarizing this work and the basis for not conducting additional analyses was contained in Attachment 10 of the 2023 Annual Report.

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. The FY 2026 budgets contained in Attachment 6 support carrying out all elements of the 2026 Seaside Groundwater Basin Monitoring and Management Program (M&MP). The M&MP is contained in Attachment 8 and describes the activities that the Watermaster plans to conduct during Fiscal Year 2026.

As described in Section J above, information from the Enhanced Monitoring Well Network is being utilized to detect seawater intrusion. The response actions described in the Watermaster’s Seawater Intrusion Response Plan, which was contained in the 2009 Annual Report and which was updated in 2025, will be implemented if seawater intrusion is detected within the Basin.

The Watermaster acknowledges that as an adjudicated basin the Seaside Basin is not required under the Sustainable Groundwater Management Act to prepare and carry out a Groundwater

Sustainability Plan. However, the Watermaster takes seriously its responsibility to ensure the sustainability of the Seaside Basin. Seawater intrusion remains a threat to the Basin and is a regular topic of conversation for our body. The Watermaster recognizes its responsibility to monitor sea water intrusion to prevent harm to the Basin. The Watermaster's Board is engaged in discussion about actions necessary to bring the Seaside Basin into sustainability and expects to continue providing future updates to the Court regarding this issue.

As of the date of preparation of this 2025 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
CCRWQCB – Central Coast Regional Water Quality Control Board
DDW – State Water Resources Control Board Division of Drinking Water
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
GMCSWRP - Greater Monterey County Storm Water Resources Plan
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
MCWDGSA - Marina Coast Water District Groundwater Sustainability Agency
MCWRA - Monterey County Water Resources Agency
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
PWMX – Pure Water Monterey Expansion Project
RUWAP - Regional Urban Water Augmentation Program
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
SWRP - Storm Water Resources Plan
TAC - Technical Advisory Committee
USGS - United States Geological Survey
WY - Water Year

ATTACHMENT 1

GROUNDWATER EXTRACTIONS

SEASIDE GROUNDWATER BASIN WATERMASTER
Reported Quarterly and Annual Water Production From the Seaside Groundwater Basin

(All Values in Acre-Feet [AF])

Type	Oct	Nov	Dec	Oct-Dec	Jan	Feb	Mar	Jan-Mar	Apr	May	Jun	Apr-Jun	Jul	Aug	Sep	Jul-Sep	Reported Total	Yield Allocation	from WY 2024	for WY 2025	
Coastal Subareas																					
CAW - Coastal Subareas	SPA	240.17	27.59	32.10	299.86	201.99	(72.94)	101.00	230.05	70.86	10.90	171.52	253.27	102.14	182.23	275.00	559.37	1,342.55	1,466.03	556.66	2,022.69
Luzern		53.64	6.91	(0.00)	60.55	0.00	9.79	0.00	9.79	0.00	0.00	24.26	24.26	16.50	0.00	51.95	68.45	163.05			
Ord Grove		132.32	117.05	87.89	337.26	124.28	113.48	126.73	364.49	94.91	55.34	125.42	275.67	129.14	123.65	120.21	373.00	1,350.42			
Paralta		162.68	95.25	87.02	344.95	152.20	145.89	159.32	457.41	120.00	135.51	166.97	422.48	211.38	210.67	176.40	598.45	1,823.28			
Playa		7.30	0.00	28.35	35.65	41.37	35.90	39.30	116.56	16.41	4.86	36.70	57.97	36.62	36.36	34.14	107.12	317.30			
Plumas		21.59	2.52	18.19	42.29	29.06	26.13	28.50	83.69	12.03	12.33	27.76	52.11	27.13	27.45	22.30	76.88	254.98			
Santa Margarita		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			
Seaside Middle School Well #3		132.19	90.87	88.66	311.72	97.58	116.37	120.16	334.10	89.69	101.69	121.85	313.23	127.64	132.88	114.44	374.96	1,334.01			
ASR Recovery		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
PWM Recovery		(269.55)	(285.00)	(278.00)	(832.55)	(242.50)	(520.50)	(373.00)	(1,136.00)	(262.18)	(298.83)	(331.44)	(892.45)	(446.27)	(348.78)	(244.44)	(1,039.49)	(3,900.49)			
Seaside Municipal	SPA	15.34	12.62	12.12	40.08	12.69	14.31	16.61	43.61	17.89	18.38	18.16	54.42	19.51	19.23	17.60	56.33	194.44	120.28	(0.00)	120.28
Inlieu Extraction					0.00				0.00				0.00				0.00				
Granite Rock Company	SPA	--	--	--	0.00	--	--	--	0.00	--	--	--	0.00	--	--	--	0.00	0.00	11.35	279.69	291.04
DBO Development No. 30	SPA	--	--	--	0.00	--	--	--	0.00	--	--	--	0.00	--	--	--	0.00	0.00	20.59	499.39	519.98
Calabrese (Cypress Pacific Inv.)	SPA	--	--	--	0.00	--	--	--	0.00	--	--	--	0.00	--	--	--	0.00	0.00	2.76	17.84	20.60
City of Seaside (Golf Courses)	APA	0.00	0.00	0.00	0.00	0.21	0.00	0.07	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.91	0.91	1.19	540.00		540.00
Sand City	APA	0.11	0.09	0.08	0.29	0.07	0.09	0.08	0.23	0.08	0.09	0.11	0.28	0.10	0.10	0.00	0.20	1.00	9.00		9.00
SNG (Security National Guaranty) /	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	0.00	0.00	0.00	90.00		90.00
MLDC (Mountain Lake Dev. Corp.)	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	0.00	0.00	0.00	59.00		59.00
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	0.00	0.00	0.00	6.00		6.00
Mission Memorial (Alderwoods)	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	0.00	0.00	0.00	31.00		31.00
Coastal Subareas Totals				340.23				274.17				307.97				616.81	1,539.18	2,356.01	1,353.56	3,709.57	
Laguna Seca Subarea																					
CAW - Laguna Seca Subarea	SPA																		0.00		0.00
06/21/21: Ryan Ranch Wells #7, #8, and #11 physically disconnected from the distribution system.																					
Hidden Hills Unit/Bay Ridge		12.43	10.37	9.53	32.33	9.47	6.65	7.72	23.84	8.12	13.79	9.93	31.85	10.48	11.21	10.17	31.86	119.88			
Bishop Unit 3																					
Bishop Unit 1																					
The Club at Pasadera	APA	22.00	4.00	0.00	26.00	1.00	3.00	0.00	4.00	23.00	38.00	42.00	103.00	36.00	42.00	40.00	118.00	251.00	251.00		251.00
Laguna Seca Golf Resort (Bishop)	APA	18.40	24.26	0.00	42.66	0.00	0.00	4.86	4.86	30.19	32.19	40.78	103.16	39.90	43.67	40.09	123.66	274.34	320.00		320.00
York School	APA	2.33	1.36	0.01	3.70	0.27	0.01	0.03	0.31	2.20	2.43	2.49	7.12	3.02	3.24	1.48	7.74	18.87	32.00		32.00
Laguna Seca County Park	APA	3.41	2.18	1.57	7.16	0.59	2.59	2.95	6.13	4.07	2.83	0.93	7.83	5.72	0.82	0.70	7.24	28.36	41.00		41.00
Laguna Seca Subarea Totals				79.52				15.30				221.11				256.64	572.57	644.00	0.00	644.00	
Total Production by WM Producers				419.74				289.47				529.08				873.45	2,111.75	3,000.01	1,353.56	4,353.57	
																	Annual Production from APA Producers	574.76		1,379.00	
																	Annual Production from SPA Producers	1,656.88		2,974.57	
CAW / MPWMD ASR (Carmel River Basin source water)																		Previous	Total		
Injection		0.00	0.00	0.00	0.00	0.00	301.80	335.33	637.13	78.51	0.00	0.00	78.51	0.00	0.00	0.00	0.00	715.64			
(Recovery)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Net ASR		0.00	0.00	0.00	0.00	0.00	301.80	335.33	637.13	78.51	0.00	0.00	78.51	0.00	0.00	0.00	0.00	715.64	3,241.44	3,957.08	
Pure Water Monterey (PWM) Injection and Cal-Am Recovery																					
Delivery to Basin (Injection)		269.55	328.83	342.22	940.61	377.95	345.81	379.18	1102.94	262.18	298.83	331.44	892.45	314.12	348.78	244.44	907.33	3843.33			
CAW (Recovery)		(269.55)	(285.00)	(278.00)	(832.55)	(242.50)	(520.50)	(373.00)	(1136.00)	(237.00)	(204.00)	(402.00)	(843.00)	(446.27)	(348.78)	(244.44)	(1039.49)	(3851.04)			
Net PWM		0.00	43.83	64.22	108.06	135.45	(174.69)	6.18	(33.06)	25.18	94.83	(70.56)	49.45	(132.15)	(0.00)	(0.00)	(132.16)	(7.71)	1,157.48	1,149.77	
Injection Operating Reserve		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	163.76	163.76	0.00	0.00	0.00	0.00	163.76	2,189.19	2,352.95	
Injection Drought Reserve		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
																		6,588.11	7,459.80		
City of Seaside Golf Course Recycled Water Use/Municipal Potable Water Recovery 2.361AF Max																		Previous	Total		
In-lieu Storage/Recycled Water Use		38.77	10.25	1.24	50.26	5.72	4.19	4.31	14.22	46.65	67.02	71.14	184.81	68.75	55.37	49.31	173.43	422.72			
City of Seaside Municipal Extraction		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	45.86	45.86	45.86			
Net In-lieu		38.77	10.25	1.24	50.26	5.72	4.19	4.31	14.22	46.65	67.02	71.14	184.81	68.75	55.37	3.45	127.57	468.58	771.63	1,240.21	

Notes:

1. The Water Year (WY) begins October 1 and ends September 30 of the following calendar year. For example, WY 2025 begins on October 1, 2024, and ends on September 30, 2025.
2. "Type" refers to water right as described in Seaside Basin Adjudication decision as amended, signed February 9, 2007 (Monterey County Superior Court Case No. M66343).
3. Values shown in the table are based on reports to the Watermaster received by October 15, 2025.
4. All values are rounded to the nearest hundredth of an acre-foot. Where required, reported data were converted to acre-feet utilizing the relationships: 325,851 gallons = 43,560 cubic feet = 1 acre-foot.
5. "Base Operating Yield Allocation" values are based on Seaside Basin Adjudication decision. These values are consistent with the *Watermaster Producer Allocations Water Year 2025* (see Item IX.B. in 11/6/2024 Board packet).
6. Any minor discrepancies in totals are attributable to rounding.
7. APA = Alternative Producer Allocation; SPA = Standard Producer Allocation; CAW = California American Water.
8. CAW/MPWMD ASR "Injection" and "Recovery" amounts are not expected to "balance" within each Water Year 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.
9. Cal-Am Toro Well #3 Destroyed 09/30/21
10. Ryan Ranch and Bishop systems fed by Monterey Main System as of December 2020 -- those wells eliminated from Cal-Am reporting as of January 15, 2025

ATTACHMENT 2

**WATERMASTER DECLARATION
OF
NON-AVAILABILITY
OF
ARTIFICIAL REPLENISHMENT WATER**

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 2025 Artificial Replenishment Water is not available to offset Operating Yield Over-Production and producers are limited in production to the following quantities of water ⁽¹⁾:

Coastal Subarea Alternative Producers:

Seaside (Golf)	540.00 acre-feet
SNG.....	90.00 acre-feet
Mountain Lake Development Corp	59.00 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.....	2,811.44 acre-feet*
Seaside (Municipal).....	167.09 acre-feet**
Granite Rock	296.34 acre-feet***
D.B.O. Development 30	527.29 acre-feet****
Cypress (Calabrese).....	18.72 acre-feet*****

Laguna Seca Subarea Standard Producers:

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

-
- (1) "Free" and "Not-free" carryover was a function of ramp down in production; now that ramp down is complete and NSY = Operating Yield, carryover is no longer divided into "Free and Not-free" (NSY and Operating Yield) carryover.
 - * Total is the 2025 base allocation of 1,466.03 acre-feet, plus transferred credits of 3.17 & 2.31 acre-feet plus 1,339.93 acre-feet of carryover. California American Water has a positive balance of 4,398.92 acre-feet of stored water credit at WY-end 2024 from Basin injections exceeding extractions since WY 2010 under the CAW/MPWMD ASR Program, formalized through a Storage Agreement in 2012; and under the CAW/MIW Pure Water Monterey Program formalized through a storage agreement in 2019.
 - ** Total is the 2025 base allocation of 120.28 acre-feet plus 46.81 acre-feet of carryover.
 - *** Total is the 2025 base allocation of 11.35 acre-feet plus 284.99 acre-feet of carryover credit from previous water years.
 - **** Total is the 2025 base allocation of 20.59 acre-feet plus 509.01 acre-feet of carryover credit from previous water years, minus 2.31 in transferred water rights.
 - ***** Total is the 2025 base allocation of 2.76 acre-feet plus 19.13 acre-feet of carryover credit from previous water years, minus 3.17 acre-feet in transferred water rights.

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 75,610 acre-feet.
 Total Usable Storage Space in the Laguna Seca Subarea is 28,560 acre-feet.
 Total Usable Storage Space in the entire Seaside Groundwater Basin is 104,170 acre-feet.

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

Producer	Current Allocation (Using Table 1 of the Decision)		
	Operating Yield Allocation Percentage (1)	Usable Storage Allocation Percentage (2)	Useable Storage Allocation Acre-Feet
Coastal and Northern Inland Subareas			
California American Water (3)	77.55%	90.44%	68,382
City of Seaside (Municipal)	6.36%	7.42%	5,610
Granite Rock Company	0.60%	0.70%	529
DBO Development No. 27	1.09%	1.27%	960
Calabrese (Cypress Pacific Investors LLC)	0.15%	0.17%	129
SUBAREAS TOTAL	85.75%	100.00%	75,610
Laguna Seca Subarea			
California American Water (3)	45.13%	100.00%	28,560
SUBAREA TOTAL	45.13%	100%	28,560
BASIN TOTAL		100%	104,170

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. Nov 2, 2019

ATTACHMENT 3

**WATERMASTER ADMINISTRATIVE AND OPERATIONS COSTS
FOR
WY 2025**

Seaside Groundwater Basin Watermaster
Budget vs. Actual Administrative Fund
 Fiscal Year (January 1 - December 31, 2025)
 Balance through November 30, 2025

	2025 Adopted Budget	Contract Amount	Year to Date Revenue / Expenses
Available Balances & Assessments			
Other Assessments	-		
FY (Rollover)	2,500.00		30,000.00
Admin Assessments	113,000.00		113,000.00
Replenishment Assessments	10,474.00		10,474.00
Available	125,974.00		153,474.00
Expenses			
Contract Staff	78,000.00	78,000.00	63,734.06
Legal Counsel		12,500.00	
General	12,500.00		4,444.50
Replenishment	10,474.00 *		2,670.00
			7,114.50
Filing fees and postage			-
Total Expenses	100,974.00	90,500.00	70,848.56
Total Available	25,000.00		
Dedicated Reserve	25,000.00		-
Net Available	-		82,625.44

* \$10,474 Replenishment related legal and administrative costs will be covered by funds transferred into the Administrative Fund from the Replenishment Assessment Fund

Seaside Groundwater Basin Watermaster
Budget vs. Actual Monitoring & Management - Operations Fund
 Fiscal Year (January 1 - December 31, 2025)
 Balance through November 30, 2025

	2025 Adopted Budget Adjusted 10/1/25	Contract Encumbrance	Year to Date Revenue/Expenses
Available Balances & Assessments			
Operations Fund Assessment	\$ 335,000.00	\$ -	\$ 335,000.00
Pass Through		-	4,902.00
FY 2022 Rollover (estimated)	143,973.00	-	188,000.00
Total Available	\$ 478,973.00	\$ -	\$ 527,902.00
Appropriations & Expenses			
GENERAL			
Technical Project Manager*	\$ 75,000.00	\$ 75,000.00	\$ 72,174.50
Contingency @ 10% (not including TPM)	39,692.00		
Total General	\$ 114,692.00	\$ 75,000.00	\$ 72,174.50
CONSULTANTS (Montgomery; Web Site Database)			
Program Administration	\$ 16,694.00	\$ 22,694.00	\$ 26,449.00
Production/Lvl/Qlty Monitoring	-		
Basin Management	187,000.00		
Seawater Intrusion Analysis Report	55,531.00	30,050.00	29,125.50
Seawater Intrusion Response Plan		37,481.00	36,187.00
Total Consultants	\$ 259,225.00	\$ 90,225.00	\$ 91,761.50
MPWMD			
Production/Lvl/Qlty Monitoring	\$ 81,556.00	81,556.00	34,891.73
Pass Through 2024	-	-	-
Basin Management	-	-	-
Seawater Intrusion	-	-	-
Direct Costs	-	-	-
Total MPWMD	\$ 81,556.00	\$ 81,556.00	\$ 34,891.73
CONTRACTOR (Martin Feeney)			
Hydrogeologic Consulting Services	\$ 4,000.00	4,000.00	630.00
Production/Lvl/Qlty Monitoring		-	-
	\$ 4,000.00	\$ 4,000.00	\$ 630.00
CONTRACTOR (Gus Yates)			
Hydrogeologic Consulting Services	\$ 4,000.00	\$ 4,000.00	590.00
CONTRACTOR (Subsurface Imaging)			
Hydrogeologic Consulting Services	\$ 15,500.00	\$ 15,500.00	-
Total Appropriations & Expenses	\$ 478,973.00	\$ 254,781.00	\$ 200,047.73
Total Available	-		327,854.27

ATTACHMENT 4

**UPDATED REPLENISHMENT ASSESSMENT UNIT
COSTS**

WATER YEAR 2026 (October 1, 2025-September 30, 2026)

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

POTENTIAL SOURCE OF REPLENISHMENT WATER	POTENTIAL DATE REPLENISHMENT WATER COULD BECOME AVAILABLE	POTENTIAL VOLUME OF WATER THAT COULD BE SUPPLIED BY THE PROJECT (AFY) ⁽¹⁾	BASE UNIT COST (\$/AF)	BASE UNIT COST YEAR
Regional Desalination ⁽²⁾	2028	6,250	\$6,147	2021
Pure Water Monterey and PWMX	2020 (PWM) 2025 (PWMX)	5,750	\$4,356	2025
Seaside Basin ASR Expansion ⁽³⁾	2021	1,000	\$1,984	2025
Regional Urban Water Augmentation Project ⁽⁴⁾	2021	1,400-1,700	\$4,356	2025

$(6,250 \times \$6,147) + (5,750 \times \$4,356) + (1,000 \times \$1,984) + (1,550 \times \$4,356) / 14,550 = \$4,962.31$ 2026 Natural Safe Yield Overproduction Unit Cost/AF

$\$4,962.31 / 4 = \$1,240.47$ Operating Yield Overproduction Unit Cost/AF

FOOTNOTES:

- (1) For the Regional Desalination Project this is the total amount of water from this source which could potentially come to the CAW distribution system, based on the desalination plant having a 6.4 MGD capacity which is equivalent to 7,169 AFY. Only a portion of this amount might be available as initially unused capacity that could be used to help replenish the Seaside Basin. For the RUWAP this is the total amount of non-potable water from this source. Only a portion of this amount might be used for in-lieu replenishment of the Seaside Basin. For the ASR Expansion Project this is the additional amount of water that could potentially be provided by this project (see footnote 4). For the PWM and PWMX this is the quantity of water that is being planned at this time by CAW for inclusion in its Monterey Peninsula Water Supply Project.
- (2) Base unit cost data based on PUC filing documents and provided by Dave Stoldt of MPWMD. The unit cost was confirmed in August 2021 by Ian Crooks of Cal Am as being the latest unit cost available for this project. For 2025, Tim O'Halloran requested the \$6,147 continue to be used because plant design and acquisition of construction bids are still underway. No new cost information is available.
- (3) The 1,000 AFY of potential water that this project could supply would be in addition to the 1,300 AFY included as part of the Monterey Peninsula Water Supply Project and would be an annual average taking into account river flow and hydrologic conditions that change from year to year. For 2024, per David Stoldt, this is the cost for ASR injection of 360 AFY long-term average of replenishment water with ASR expansion of a single new injection well. Because ASR replenishment water does not require extraction and treatment, the cost of customer demand is not factored here.
- (4) Patrick Breen of MCWD noted that to determine total cost per acre-foot, use the \$4,356/acre-foot cost from Pure Water Monterey (which would be RUWAP as well) and add MCWD O&M and Financing costs which are yet to be determined.

ATTACHMENT 5

**REPLENISHMENT ASSESSMENT
CALCULATIONS FOR WY 2025**

CALCULATION OF REPLENISHMENT ASSESSMENTS WATER YEAR 2025

Using the Basin-wide methodology approved by the Court on January 12, 2007, and as shown in detail on the spreadsheet contained in this attachement, Watermaster calculated the Water Year (WY) (October 1st through September 30th) 2025 Replenishment Assessments as follows:

2025 Replenishment Assessment NSY Overproduction Unit Charge =		\$4,845.21		
2025 Replenishment Assessment OSY Overproduction Unit Charge =		\$1,211.30		
Volume of NSY Available = Base water right + (% of NSY available x APA allocation underproduction [2,002.5]) + carryover				
Operating Yield Available = NSY Available + Water Rights Transferred/Sold				

	WY 2025 Production (AF)	Volume of NSY Available (AF)	Volume of NSY Available Plus NSY Carryover (AF)	NSY Overproduction (AF)	NSY Overproduction Assessment	Operating Yield (Equals NSY) (AF)	Operating Yield Overproduction (AF)	Operating Yield Overproduction Assessment	Total Assessment
Standard Producers									
California American Water	1,462.44	1,811.08	2,367.74	-	\$ -	2,376.20	-	\$ -	\$ -
Seaside (Municipal)	148.58	148.59	148.58	-	-	148.58	-	-	-
Granite Rock	-	14.02	293.70	-	-	293.70	-	-	-
D.B.O. Development No. 30	-	25.44	524.82	-	-	519.53	-	-	-
Calabrese (Cypress Pacific Inv.)	-	3.40	21.24	-	-	18.07	-	-	-
Total Production	1,611.02	2,002.52	3,356.08	-	\$ -	3,356.08	-	\$ -	\$ -

	WY 2025 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
Alternative Producers									
City of Seaside (Golf Courses)	1.19	N/A	540.00	0.00	\$ -	540.00	0.00	\$ -	\$ -
Security National Guaranty	-	N/A	90.00	0.00	-	90.00	0.00	-	-
Mountainlake Development LLC	-	N/A	59.00	0.00	-	59.00	0.00	-	-
Calabrese (Cypress Pacific Inv.)	-	N/A	6.00	0.00	-	6.00	0.00	-	-
Mission Memorial (Alderwoods)	-	N/A	31.00	0.00	-	31.00	0.00	-	-
City of Sand City	1.00	N/A	9.00	0.00	-	9.00	0.00	-	-
The Club at Pasadera	251.00	N/A	251.00	0.00	-	251.00	0.00	-	-
Laguna Seca Golf Resort (Bisho)	274.34	N/A	320.00	0.00	-	320.00	0.00	-	-
York School	18.87	N/A	32.00	0.00	-	32.00	0.00	-	-
Laguna Seca County Park	28.36	N/A	41.00	0.00	-	41.00	0.00	-	-
Total Production	574.76	N/A	1,379.00	0.00	\$ -	1,379.00	0.00	\$ -	\$ -

ATTACHMENT 6

WATERMASTER BUDGETS FOR 2026

**Seaside Groundwater Basin Watermaster
Administrative Fund Budget**

Administrative Year 2026

	<u>2025</u> <u>Adopted</u> <u>Budget</u>	<u>2025</u> <u>Estimated</u> <u>Total</u>	<u>2026</u> <u>Proposed</u> <u>Budget</u>
Assessment Income			
Rollover from previous year*	\$ 2,500	\$ 50,296	\$ 64,300
Administrative Assessment	113,000	113,000	57,200
Replenishment Related Legal Costs**	<u>10,474</u>	<u>4,000</u>	<u>8,112</u>
Totals	<u>125,974</u>	<u>167,296</u>	<u>129,612</u>
Expenditures			
Contractual Services - Administrative	78,000	65,000	84,000
Legal Services - Administrative	12,500	10,634	12,500
Legal Services - Replenishment	<u>10,474</u>	<u>2,362</u>	<u>8,112</u>
Total Expenses	<u>100,974</u>	<u>77,996</u>	<u>104,612</u>
Total Available	25,000	89,300	25,000
Less Reserve	<u>25,000</u>	<u>25,000</u>	<u>25,000</u>
Net Available	<u>\$ -</u>	<u>\$ 64,300</u>	<u>\$ -</u>

** Note: The Rollover balance of \$50,296 was based on a detailed reconciliation of actual expenses from 2006 through July 31, 2025 of the Administrative Fund financial records held at the Watermaster office and estimations through the remainder of the 2025 year.*

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

**Monitoring and Management Program Operations Budget
For Tasks to be Undertaken in 2026**

**Comparative
Costs from
2025 Budget**

Task	Subtask	Sub-Subtask	Cost Description	CONSULTANTS & CONTRACTORS ⁽⁹⁾					Total			
				MPWMD	Montgomery & Associates	Todd Groundwater	Martin Feeny	Contractors or Other Consultants				
				Labor								
			Technical Project Manager	N/A	N/A	N/A	N/A	N/A	\$75,000	\$75,000		
M.1 Program Administration												
	M.1.a		Project Budget and Controls	\$0					\$0	\$0		
	M.1.b		Assist with Board and TAC Agendas	\$0					\$0	\$0		
	M.1.c, M.1.d, & M.1.e		Preparation for and Attendance at Meetings and Peer Review of Documents and Reports ⁽⁸⁾	\$0	\$15,220	\$4,000	\$4,000	\$0	\$23,220	\$20,570		
	M.1.f		QA/QC	\$0					\$0	\$0		
	M.1.g		SGMA Documentation Preparation	\$0	\$2,694	\$0	\$0	\$0	\$2,694	\$3,124		
I.1 Initial Phase 1 Monitoring Well Construction (Task Completed in Phase 1)												
I.2 Production, Water Level and Quality Monitoring												
	I.2.a.		Database Management									
		I.2.a.1.	Conduct Ongoing Data Entry/ Database Maintenance and Respond to Data Requests ⁽¹⁵⁾	\$15,432					\$0	\$15,432	\$19,650	
		I.2.a.2.	Verify Accuracy of Production Well Meters	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
	I.2.b.		Data Collection Program									
		I.2.b.1.	Site Representation and Selection ⁽¹⁴⁾	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
		I.2.b.2.	Collect Water Levels ⁽⁵⁾⁽⁶⁾	\$23,932	\$0	\$0	\$0	\$0	\$23,932	\$21,644		
		I.2.b.3.	Collect Water Quality Samples and Perform Sentinel Well Induction Logging ⁽¹⁾⁽⁵⁾	\$39,862	\$0	\$0	\$0	\$0	\$39,862	\$32,382		
		I.2.b.4.	Update Program Schedule and Standard Operating Procedures.	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
		I.2.b.5.	Monitor Well Construction ⁽¹⁴⁾	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
		I.2.b.6.	Reports	\$2,112	\$0	\$0	\$0	\$0	\$2,112	\$3,792		
		I.2.b.7.	CASGEM Data Submittal for Watermaster's Voluntary Wells	\$3,168	\$0	\$0	\$0	\$0	\$3,168	\$4,320		
		I.2.b.8.	Perform Subsurface Electromagnetic Imaging	\$0	\$0	\$0	\$0	\$15,500	\$15,500	\$15,500		
I.3 Basin Management												
	I.3.a.		Enhanced Seaside Basin Groundwater Model									
		I.3.a.1.	Update the Existing Model ⁽¹¹⁾	\$0	\$125,000	\$0	\$0	\$0	\$125,000	\$125,000		
		I.3.a.2.	Develop Protective Water Levels ⁽¹²⁾	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
		I.3.a.3.	Evaluate Replenishment Scenarios and Develop Answers to Basin Management Questions ⁽¹⁰⁾	\$0	\$40,000			\$0	\$40,000	\$40,000		
	I.3.b.		Complete Preparation of Basin Management Action Plan	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
	I.3.c.		Refine and/or Update the Basin Management Action Plan ⁽⁷⁾	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
	I.3.d.		Evaluate Coastal Wells for Cross-Aquifer Contamination Potential	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
	I.3.e.		Seaside Basin Geochemical Model ⁽¹³⁾	\$0	\$10,000	\$0	\$0	\$0	\$10,000	\$10,000		
I.4 Seawater Intrusion Contingency Plan												
	I.4.a.		Oversight of Seawater Intrusion Detection and Tracking ⁽¹⁷⁾	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
	I.4.b.		Analyze and Map Water Quality from Coastal Monitoring Wells									
	I.4.c.		Annual Report- Seawater Intrusion Analysis ⁽¹⁶⁾	\$0	\$36,346	\$0	\$0	\$0	\$36,346	\$30,050		
	I.4.e.		Refine and/or Update the Seawater Intrusion Response Plan ⁽²⁾	\$0	\$0	\$0	\$0	\$0	\$0	\$25,481		
	I.4.e.1		Implement Recommendations in the Updated Seawater Intrusion Response Plan ⁽¹⁴⁾		\$25,000				\$25,000	\$0		
	I.4.f.		If Seawater Intrusion is Determined to be Occurring, Implement the Seawater Intrusion Response Plan ⁽⁹⁾	(No Costs are Included for This Task, as This Task May Not be Necessary During 2025. If it Does Become Necessary, Use of Contingency Funds or a Budget Modification Will Likely be Necessary)								
			TOTALS CONSULTANTS & CONTRACTORS	\$84,506	\$254,260	\$4,000	\$4,000	\$15,500	\$362,266	\$351,512		
				SUBTOTAL not including Technical Program Manager =					\$362,266	\$351,512		
				Contingency (not including Technical Program Manager) @ 15% ⁽⁴⁾ =					\$54,340	\$52,727		
				Technical Program Manager =					\$75,000	\$75,000		
				TOTAL=					\$491,606	\$479,239		

Footnotes:
(1) Under this Subtask the Watermaster will contract with MPWMD to perform the Sentinel Well induction logging work and to perform the other portions of the work of this Subtask. The Sentinel Wells will be induction logged once per year (in September).
(2) The response plan was updated in 2025.
(3) Within the context of this document the term "Consultant" refers to a private consultant providing professional engineering or other types of technical services. The term "Contractor" refers to a firm providing construction or field services such as well drilling or meter calibration.
(4) Due to the uncertainties of the exact scopes of some of the larger Tasks listed above at the time of preparation of this Budget it is recommended that a Contingency of 15% be included in the Budget.
(5) The MPWMD portion of these Tasks includes: For Task I.2.b.2: (1) \$570 for vehicle mileage costs for both this Task and Task I.2.b.3 and (2) \$850 to purchase a replacement datalogger (if necessary). For Task I.2.b.3: (1) \$7,488 for laboratory analytical costs, (2) \$250 for CO2 bottles to run the sample pumps, (3) \$950 to purchase a replacement low flow sampling pump (if necessary), (4) \$808 of administrative support costs for preparing billings and processing invoices from the water quality laboratory, and (5) \$3,000 for Pacific Surveys to set up a temporary pulley system for induction logging in the event they cannot locate their van adjacent to the wells they are logging.
(6) Does not include costs for MPWMD to collect water level data or water quality samples from wells other than those that are part of the basic monitoring well network, i.e. for private well owners who have requested that the Watermaster obtain this data for them. Costs to obtain that data are to be reimbursed to the Watermaster by those well owners, so there should be no net cost to the Watermaster for that portion of the work under these Tasks.
(7) The BMAP was updated in 2018, and no further work on this Task is anticipated in 2026.
(8) This cost is for Montgomery and Associates, Todd Groundwater, and Martin Feeney to provide hydrogeologic consulting assistance to the Watermaster, beyond that associated with performing other specified Tasks, when/if requested to do so by the Technical Program Manager. This work may include, but not be limited to, participation in conference calls and reviewing documents prepared by others.
(9) If work under this Task is found to be necessary, it will need to be funded through the Contingency line item or by a Budget transfer.
(10) This Task is included to provide funds for the Watermaster to perform modeling and other investigative work to aid in making Basin management decisions that the Board may wish to perform in 2026.
(11) The Model was last updated and recalibrated in 2018, but that work did not include any change to the Model itself, only inputting more recent groundwater data and then recalibrating it for a best match with field measured well data. The proposed 2026 update would incorporate new hydrogeologic data from multiple sources, along with more recent groundwater data, in order to more closely match the data being used in the models for adjacent Monterey Subbasin of the greater Salinas Valley Basin.
(12) The protective water levels developed in 2009 were examined in 2013 to see if they needed to be updated. It was concluded that the 2009 protective levels were still satisfactory for Basin management purposes, and that no revisions were needed. No work under this Task is anticipated in 2026.
(13) This was a new Task that was started in 2018, and was completed for the PWM AWT water in 2019. Funds allocated for this Task in 2026 would only be used if geochemical modeling is performed in 2026 for the MPWSP desalination plant water, and if that modeling indicates the need to have Montgomery and Associates use the Seaside Basin groundwater model to provide additional information needed by the geochemical model to develop mitigation measures for any adverse water quality impacts the geochemical model predicts could occur from introducing desalinated water into the Basin.
(14) If the updated SIRP under Task I.4.e recommends installing additional monitoring wells, and if the Board directs that such wells be installed in 2026, the cost to identify the number, type, and location of those wells will be covered under Task I.4.e.1. The cost of constructing those wells will be covered in the M&MP Capital Budget.
(15) Watermaster staff will maintain the Watermaster's website and post documents on it. It includes \$2,760 for MPWMD to respond to requests from consultants and others for data from the database (that would only be expended if needed).
(16) MPWMD's costs to assist in this Task are included in its costs under Task I.2.b.6.
(17) MPWMD's and Montgomery & Associates' costs to provide oversight in this Task are included under their other Tasks.

Monitoring and Management Program Capital Budget For Tasks to be Undertaken in 2026

No Capital projects are anticipated to be undertaken in 2026, so this budget is \$0.

Seaside Groundwater Basin Watermaster											
Replenishment Fund											
Water Year 2026 (October 1 - September 30) / Fiscal Year (January 1 - December 31, 2026)											
PROPOSED BUDGET											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Replenishment Fund											
Assessment Water Year	WY 05/06	WY 06/07	WY 07/08	WY 08/09	WY 09/10	WY 10/11	WY 11/12	WY 12/13	WY 13/14	WY 14/15	WY 15/16
Unit Cost:	a \$1,132 / \$283	\$1,132 / \$283	\$2,485 / \$21.25	\$3,040 / \$760	\$2,780 / \$695	\$2,780 / \$695	\$2,780 / \$695	\$2,780 / \$695	\$2,702/\$675.50	\$2,702/\$675.50	\$2,702/\$675.50
Cal-Am Water Balance Forward	b \$ -	\$ 1,641,004	\$ 4,226,710	\$ (2,871,690)	\$ (2,839,939)	\$ (3,822,219)	\$ (6,060,164)	\$ (8,735,671)	\$ (6,173,771)	\$ (3,102,221)	\$ (676,704)
Cal-Am Water Production (AF)	c 3,710.00	4,059.90	3,862.90	2,966.02	3,713.52	3,416.04	3,070.90	3,076.61	3,232.10	2,764.73	1,879.21
Cal-Am Water NSY Over-Production (AF)	d 1,862.69	2,266.32	2,092.16	1,241.27	1,479.47	1,146.71	820.48	856.42	1,032.77	782.17	-
Exceeding Natural Safe Yield Considering Alternative Producers	e \$ 2,106,652	\$ 2,565,471	\$ 5,199,014	\$ 3,773,464	\$ 4,112,933	\$ 3,187,854	\$ 2,280,943	\$ 2,380,842	\$ 2,790,539	\$ 2,113,414	-
Operating Yield Overproduction Replenishment	f \$ -	\$ 20,235	\$ 8,511	\$ -	\$ -	\$ -	\$ 154,963	\$ 181,057	\$ 281,012	\$ 312,103	-
Total California American	g \$ 2,106,652	\$ 2,585,706	\$ 5,207,525	\$ 3,773,464	\$ 4,112,933	\$ 3,187,854	\$ 2,435,907	\$ 2,561,899	\$ 3,071,550	\$ 2,425,516	\$ -
CAW Credit Against Assessment	h \$ (465,648)		\$ (12,305,924)	\$ (3,741,714)	\$ (5,095,213)	\$ (5,425,799)	\$ (5,111,413)				
CAW Unpaid Balance	i \$ 1,641,004	\$ 4,226,710	\$ (2,871,690)	\$ (2,839,939)	\$ (3,822,219)	\$ (6,060,164)	\$ (8,735,671)	\$ (6,173,771)	\$ (3,102,221)	\$ (676,704)	\$ (676,704)
City of Seaside Balance Forward	j \$ -	\$ 243,294	\$ 426,165	\$ 1,024,272	\$ 1,619,973	\$ 891,509	\$ (110,014)	\$ (773,813)	\$ (1,575,876)	\$ (2,889,325)	\$ (3,346,548)
City of Seaside Municipal Production (AF)	k 332.00	287.70	294.20	293.44	282.87	240.68	233.72	257.73	223.64	185.01	195.16
City of Seaside NSY Over-Production (AF)	l 194.07	153.78	161.99	153.06	113.21	50.84	58.82	85.17	52.71	25.77	37.87
Exceeding Natural Safe Yield Considering Alternative Producers	m \$ 219,689	\$ 174,082	\$ 402,540	\$ 465,300	\$ 314,721	\$ 141,335	\$ 163,509	\$ 236,782	\$ 142,410	\$ 69,630	\$ 102,330
Operating Yield Overproduction Replenishment	n \$ 12,622	\$ 85	\$ 4,225	\$ 16,522	\$ 20,690	\$ -	\$ 1,689	\$ 27,007	\$ 3,222	\$ 38	\$ 11,959
Total Municipal	o \$ 232,310	\$ 174,167	\$ 406,764	\$ 481,823	\$ 335,412	\$ 141,335	\$ 165,198	\$ 263,788	\$ 145,631	\$ 69,667	\$ 114,290
City of Seaside - Golf Courses (APA - 540 AFY)											
Exceeding Natural Safe Yield - Alternative Producer	p -	-	\$ 131,705	\$ 69,701	-	-	-	-	-	-	-
Operating Yield Overproduction Replenishment	q -	-	\$ 32,926	\$ 17,427	-	-	-	-	-	-	-
Total Golf Courses	r \$ -	\$ -	\$ 164,631	\$ 87,128	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total City of Seaside*	s \$ 232,310	\$ 174,167	\$ 571,395	\$ 568,951	\$ 335,412	\$ 141,335	\$ 165,198	\$ 263,788	\$ 145,631	\$ 69,667	\$ 114,290
City of Seaside Late Payment 5%	t \$ 10,984	\$ 8,704	\$ 26,712	\$ 26,750	\$ 15,737						
In-lieu Credit Against Assessment	u				\$ (1,079,613)	\$ (1,142,858)	\$ (828,996)	\$ (1,065,852)	\$ (1,459,080)	\$ (526,890)	\$ (162)
City of Seaside Unpaid Balance	v \$ 243,294	\$ 426,165	\$ 1,024,272	\$ 1,619,973	\$ 891,509	\$ (110,014)	\$ (773,813)	\$ (1,575,876)	\$ (2,889,325)	\$ (3,346,548)	\$ (3,232,420)
Mission Memorial Park											
Mission Memorial Park Production (AF)	w		20.80	26.40	12.80	22.40	27.00	24.95	24.89	17.97	13.67
Mission Memorial Park NSY Over-Production (AF)	x -	-	-	-	-	-	-	-	-	-	-
Exceeding Natural Safe Yield - Alternative Producer	y -	-	-	-	-	-	-	-	-	-	-
Operating Yield Overproduction Replenishment	z -	-	-	-	-	-	-	-	-	-	-
Total Mission Memorial Park	aa \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Replenishment Fund Balance	bb \$ 1,884,298	\$ 4,652,874	\$ (1,847,417)	\$ (1,219,966)	\$ (2,930,710)	\$ (6,170,178)	\$ (9,509,483)	\$ (7,749,648)	\$ (5,991,546)	\$ (4,023,252)	\$ (3,909,125)
Replenishment Fund Balance Forward	cc \$ -	\$ 1,884,298	\$ 4,652,874	\$ (1,847,417)	\$ (1,219,966)	\$ (2,930,710)	\$ (6,170,178)	\$ (9,509,483)	\$ (7,749,648)	\$ (5,991,546)	\$ (4,023,252)
Total Replenishment Assessments	dd \$ 2,349,946	\$ 2,768,576	\$ 5,805,632	\$ 4,369,165	\$ 4,464,082	\$ 3,329,189	\$ 2,601,104	\$ 2,825,688	\$ 3,217,182	\$ 2,495,183	\$ 114,290
Total Paid and/or Credited	ee \$ (465,648)	\$ -	\$ (12,305,924)	\$ (3,741,714)	\$ (6,174,826)	\$ (6,568,657)	\$ (5,940,409)	\$ (1,065,852)	\$ (1,459,080)	\$ (526,890)	\$ (162)
Grand Total Fund Balance	ff \$ 1,884,298	\$ 4,652,874	\$ (1,847,417)	\$ (1,219,966)	\$ (2,930,710)	\$ (6,170,178)	\$ (9,509,483)	\$ (7,749,648)	\$ (5,991,546)	\$ (4,023,252)	\$ (3,909,125)

**Seaside Groundwater Basin Watermaster
Replenishment Fund**

10/1/25
Page 2

Water Year 2026 (October 1 - September 30) / Fiscal Year (January 1 - December 31, 2026)

PROPOSED BUDGET - Continued

	2017	2018	2019	2020	WY 2021	WY 2022	WY 2023	WY 2024	Budget WY 2025	Totals WY 2006 Through 2024	Budget WY 2026	Projected Totals Through WY 2025
	WY 16/17	WY 17/18	WY 18/19	WY 19/20	WY 20/21	WY 21/22	WY 22/23	WY 23/24	WY 23/24		WY 23/24	
Replenishment Fund												
Assessment Water Year												
Unit Cost:	a \$2,872 / \$718	\$2,872 / \$718	\$2,872 / \$718	\$2,872 / \$718	\$2,947 / \$737	\$3,260 / \$815	\$3,461 / \$865	\$4,529 / \$1,132	\$4,845 / \$1,211			
Cal-Am Water Balance Forward	b \$ (676,704)	\$ (491,747)	\$ (48,797,949)	\$ (47,979,852)	\$ (46,855,121)	\$ (46,855,121)	\$ (46,855,121)	\$ (46,855,121)	\$ (46,855,121)		\$ (46,855,121)	
Cal-Am Water Production (AF)	c 2,029.51	2,229.45	2,120.22	2,245.88	1,664.04	1,648.71	1,569.60	1,594.25		50,853.59		
Cal-Am Water NSY Over-Production (AF)	d 64.40	374.65	284.85	334.21	-	-	-	-		14,638.57		
Exceeding Natural Safe Yield Considering Alternative Producers	e \$ 184,957	\$ 1,075,995	\$ 818,097	\$ 959,859	-	-	-	-	-	\$ 33,550,034	-	\$ 33,550,034
Operating Yield Overproduction Replenishment	f			164,872	-	-	-	-	-	\$ 1,122,753	-	\$ 1,122,753
Total California American	g \$ 184,957	\$ 1,075,995	\$ 818,097	\$ 1,124,731	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 34,672,786	-	\$ 34,672,786
CAW Credit Against Assessment	h	\$ (49,382,196)	-	-	-	-	-	-	-	\$ (81,527,907)	-	\$ (81,527,907)
CAW Unpaid Balance	i \$ (491,747)	\$ (48,797,949)	\$ (47,979,852)	\$ (46,855,121)	\$ (46,855,121)	\$ (46,855,121)	\$ (46,855,121)	\$ (46,855,121)	\$ (46,855,121)	\$ (46,855,121)	\$ (46,855,121)	\$ (46,855,121)
City of Seaside Balance Forward (120.28 AF)	j \$ (3,232,420)	\$ (3,142,500)	\$ (3,022,249)	\$ (2,919,806)	\$ (2,802,831)	\$ (2,708,829)	\$ (2,661,184)	\$ (2,661,184)	\$ (2,661,184)		\$ (2,661,184)	
City of Seaside Municipal Production (AF)	k 188.31	184.63	178.40	181.65	174.69	155.12	158.46			4,047.41		
City of Seaside NSY Over-Production (AF)	l 30.47	32.46	27.82	32.06	25.52	11.69	-			1,247.31		
Exceeding Natural Safe Yield Considering Alternative Producers	m \$ 87,512	\$ 93,225	\$ 79,893	\$ 92,089	\$ 75,197	\$ 38,116	-	0.00	0.00	\$ 2,898,358	0.00	\$ 2,898,358
Operating Yield Overproduction Replenishment	n 2,409	27,026	22,550	24,886	18,806	9,529	-	0.00	0.00	\$ 203,263	0.00	\$ 203,263
Total Municipal	o \$ 89,920	\$ 120,251	\$ 102,443	\$ 116,975	\$ 94,002	\$ 47,645	\$ -	0.00	0.00	\$ 3,101,621	0.00	\$ 3,101,621
City of Seaside - Golf Courses (APA - 540 AFY)												
Exceeding Natural Safe Yield - Alternative Producer	p -	-	-	-	-	-	-	-	-	\$ 201,406		\$ 201,406
Operating Yield Overproduction Replenishment	q -	-	-	-	-	-	-	-	-	\$ 50,353		\$ 50,353
Total Golf Courses	r \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 251,759		\$ 251,759
Total City of Seaside*	s \$ 89,920	\$ 120,251	\$ 102,443	\$ 116,975	\$ 94,002	\$ 47,645	\$ -	0.00	0.00	\$ 3,353,380	0.00	\$ 3,353,380
City of Seaside Late Payment 5%	t									\$ 88,887		\$ 88,887
In-lieu Credit Against Assessment	u									\$ (6,103,451)		\$ (6,103,451)
City of Seaside Unpaid Balance	v \$ (3,142,500)	\$ (3,022,249)	\$ (2,919,806)	\$ (2,802,831)	\$ (2,708,829)	\$ (2,661,184)	\$ (2,661,184)	\$ (2,661,184)	\$ (2,661,184)	\$ (2,661,184)	\$ (2,661,184)	\$ (2,661,184)
Mission Memorial Park (APA - 31 AFY)												
Mission Memorial Park Production (AF)	w 13.74	14.43	16.07	20.00	46.77	33.95				335.84		
Mission Memorial Park NSY Over-Production (AF)	x -	-	-	-	15.77	2.95				18.72		
Exceeding Natural Safe Yield - Alternative Producer	y -	-	-	-	\$ 46,488	\$ 9,608				\$ 56,096		\$ 56,096
Operating Yield Overproduction Replenishment	z -	-	-	-	11,626.00	2,401.97				\$ 14,028		\$ 14,028
Board Approved (5/4/22) Credit Against Assessment					(33,114.00)					\$ (33,114)		\$ (33,114)
\$8,500 Applied to Admin Fund to cover expenses					(8,500.00)					\$ -		\$ -
Mission Memorial Park Unpaid Balance	aa									\$ -		\$ -
Total	o \$ -	\$ -	\$ -	\$ -	\$ 16,500	\$ 12,010	\$ (16,500)	\$ (12,010)	\$ -	\$ (0)	\$ -	\$ (0)
Balance of Available Funds								\$ 6,049	\$ 20,398	\$ 20,398		
Total Replenishment Fund Balance	bb \$ (3,634,247)	\$ (51,820,198)	\$ (50,899,658)	\$ (49,657,952)	\$ (49,563,950)	\$ (49,516,305)	\$ (49,516,305)	\$ (49,510,256)	\$ (49,495,907)	\$ (49,495,907)	\$ (49,495,907)	\$ (49,495,907)
Replenishment Fund Balance Forward	cc \$ (3,909,125)	\$ (3,634,247)	\$ (51,820,198)	\$ (50,899,658)	\$ (49,657,952)	\$ (49,516,305)	\$ (49,516,305)	\$ (49,510,256)	\$ (49,499,907)		\$ (49,495,907)	
Total Replenishment Assessments	dd \$ 274,877	\$ 1,196,246	\$ 920,540	\$ 1,241,706	\$ 110,502	\$ 59,655	\$ -	\$ -	\$ -	\$ 38,143,563	\$ -	\$ 38,143,563
Total Paid and/or Credited	ee	\$ (49,382,196)			\$ (16,500)	\$ (12,010)				(87,659,868)		(87,659,868)
Total Paid for Replenishment Legal Services	ff						\$ 6,049	10,349	4,000	20,398	8,112	28,510
Grand Total Fund Balance	gg \$ (3,634,247)	\$ (51,820,198)	\$ (50,899,658)	\$ (49,657,952)	\$ (49,563,950)	\$ (49,516,305)	\$ (49,510,256)	\$ (49,499,907)	\$ (49,495,907)	\$ (49,495,907)	\$ (49,487,795)	\$ (49,487,795)

ATTACHMENT 7

**EXECUTIVE SUMMARY
FROM THE
WY 2025 SEAWATER INTRUSION ANALYSIS REPORT**

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 freshwater 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 Basin.

Seawater intrusion is typically identified through regular chemical analyses of groundwater that can identify geochemical changes in response to seawater intrusion. No single analysis definitively identifies seawater intrusion, however by examining various analyses it is possible to determine 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 freshwater 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.

Groundwater levels below sea level, the cumulative effect of pumping in excess of recharge and freshwater inflows, and ongoing seawater intrusion in the nearby Salinas Valley all suggest that seawater intrusion has the potential to occur in the Seaside Groundwater Basin.

Data collected in Water Year (WY) 2025 from monitoring and production wells do not indicate seawater intrusion is occurring within the Seaside Groundwater Basin. However, induction logging shows continued incremental increases in conductivity over time in Sentinel wells SBWM-1, 2, and 4 within zones of the Upper Paso Robles Formation (shallow aquifer) that are not screened within nearby monitoring wells. Continual increases in conductivity may be a precursor to seawater intrusion.

Based on the findings of this report, the following ongoing detrimental groundwater conditions pose a direct threat of seawater intrusion:

- All aquifers in the Seaside Groundwater Basin are susceptible to seawater intrusion. The shallow 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. It is uncertain whether the deep aquifer is in direct connection with Monterey Bay. If it is not in direct connection, then seawater intrusion will take longer as seawater in the shallow aquifer would need to move down through the clay rich deposits overlying the Purisima and Santa Margarita aquifers before entering the deep aquifer itself and making its way into deep aquifer production wells. It is not if, but when, seawater intrusion into these aquifers will occur if protective water elevations are not achieved.

- Sentinel wells SBWM-1 and SBWM-2, located north of the Seaside Basin, and SBWM-4, located in the Northern Coastal subarea where most of the Seaside Basin's groundwater extraction occurs, exhibit sustained increases in conductivity over time within the shallow aquifer's Upper Paso Robles Formation. It is believed the increased conductivity in the shallow portions of SBWM-1 and SBWM-2 are associated with the mapped extent of seawater intrusion emanating from the Salinas Valley Basin shown on Figure 20. Since SBWM-3 does not have increasing conductivity in the Paso Robles Formation like the other three Sentinel wells, the cause of increasing conductivity in SBWM-4 may be different than SBWM-1 and SBWM-2 to the north. Evaluation of SBWM-4 conductivity data collected prior to 2019 indicates conductivity has been increasing within this zone from at least 2007 when induction logging started. An estimate of the total dissolved solids (TDS) increase associated with the logged change in conductivity in SBWM-4 since 2007 is approximately 1,000 mg/L. The Secondary Drinking Water limit is 500 mg/L. This indicates a significant salinity increase in the Paso Robles Formation. Induction logging conducted at monitoring well Pacific Cement Aggregates (PCA)-West Deep—located 780 feet southwest of SBWM-4—to verify increasing conductivity in this area does indicate high salinity within the Upper Paso Robles Formation. However, several years of induction logs are needed to compare against the first baseline before it can be determined if conductivity is increasing at that well too.
- While most groundwater samples for WY 2025 from depth-discreet monitoring wells generally plot in a single cluster on Piper diagrams with no water chemistry changes toward seawater, there are three monitoring wells—PCA-West Shallow (Appendix C, Figure C-1), PCA-East Deep (Appendix C, Figure C-4), Ord Terrace Shallow (Appendix C, Figure C-5)—that have trends indicating groundwater may be mixing with seawater.
- Groundwater levels in some portions of both the shallow and deep aquifers in the Northern Coastal subarea continue to be below sea level year-round. Groundwater levels below sea level create hydraulic conditions causing onshore flow. WY 2025 fourth quarter (summer/fall) groundwater levels in the deep aquifer are almost 30 feet below sea

level north of the Seaside Basin and approximately 20 feet below sea level in the southern portion of the Northern Coastal subarea. The Northern Coastal subarea pumping depression in the deep aquifer is slightly larger in horizontal extent than the previous year. The pumping depression in the shallow aquifer is about the same as last year's depression.

- Groundwater levels remain below protective elevations in all three deep aquifer protective elevation monitoring wells (Monterey Sand Company [MSC] deep, PCA-W Deep, and Sentinel well SBWM-3), and in one of the three shallow aquifer protective elevation monitoring wells (MSC Shallow). In fall of WY 2025, groundwater elevations in the deep aquifer (MSC-Deep, PCA-West Deep, and Sentinel Well 3) decreased to seasonal lows similar to those observed in WY 2016 and WY 2022. In WY 2025, seasonal high groundwater levels at all three deep aquifer monitoring wells increased slightly or were about the same as the previous year. Groundwater elevations at all three shallow aquifer protective elevation monitoring wells showed an increase in seasonal highs. Increased shallow groundwater levels in the Northern Coastal subarea is likely due to Bayonet/Blackhorse golf courses irrigation switching from locally pumped groundwater to recycled water.

The following evidence from this report demonstrates that seawater intrusion has not been detected in monitoring and production wells from which groundwater quality samples are collected:

- In some production wells, groundwater quality plots on Piper diagrams are different than groundwater quality in monitoring wells. This may be a result of mixed water quality because these wells are perforated in both the shallow and deep aquifers. 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.
- Maps of chloride concentrations for the shallow aquifer do not show chlorides increasing toward the coast. Deep aquifer chloride concentration maps show that the highest chloride concentrations are limited to coastal monitoring wells PCA-West Deep and MSC Deep, but these are not indicative of seawater intrusion since their sodium/chloride molar ratios are not less than 0.86, and they do not have increasing trends.

Other important findings from the analysis contained in this report include the following:

- It is evident from comparing the long-term groundwater level trends of PCA-West Shallow and PCA-East Shallow, both in the shallow aquifer, that golf course irrigation

pumping was the cause of groundwater levels falling below protective elevations at PCA-West Shallow over the past 7 years. Using recycled water for golf course irrigation has allowed shallow groundwater levels to recover to above the protective elevations at PCA-West Shallow and they remain above protective elevations at this well.

- 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 4 feet per year in the deep aquifers. These declines have occurred since 2001 despite triennial reductions in allowable pumping and California American Water Company (CAWC) ceasing pumping its Ryan Ranch and Bishop wells. The cause of the declines is the subarea's limited groundwater inflows and natural recharge compounded by the influence of wells pumping east of the Seaside Basin in the Monterey Subbasin Corral de Tierra Management Area.
- Native groundwater production in the Seaside Basin for WY 2025 was 2,112 acre-feet, which is 239 acre-feet less than WY 2024 and 888 acre-feet less than the Decision-ordered Operating Yield of 3,000 acre-feet. Though WY 2025 was a below average year for rainfall, recovery of 3,851 acre-feet of recycled water from Pure Water Monterey and use of recycled water at the Bayonet/Blackhorse golf courses helped offset pumping of native groundwater. As outlined in the Basin Management Action Plan (M&A, 2018), it is vital that the Watermaster continues to identify ways to reduce pumping native groundwater and/or to recover groundwater elevations with water that is left in the Seaside Basin and is not extracted out as water supply.

It is important to closely monitor groundwater quality at different depths through the Seaside Basin's aquifers. Although existing monitoring and production wells are not detecting seawater intrusion, it does not mean seawater intrusion is not occurring. The discovery of increasing conductivity in specific zones in the Sentinel wells that are not screened in nearby monitoring wells illustrates this fact. Using geophysical methods such as induction logging and electromagnetic surveys to identify salinity provides a more complete "scan" of the depth of the Seaside Basin than discreetly screened wells cannot provide.

Based on the findings of this report, the following recommendations should be implemented to monitor and track potential seawater intrusion:

1. Actions Regarding Increased Conductivity Observed in Induction Logs in SBWM-1, SBWM-2, and SBWM-4

- Inform EKI and Marina Coast Water District Groundwater Sustainability Agency (MCWD GSA) that Sentinel wells SBWM-1 and SBWM-2 continue to show

increases in conductivity from 520 to 540, 605 to 625, and 685 to 695 feet below ground surface (bgs) at SBWM-1 and 340 to 390 feet bgs at SBWM-2 in defined coarser-grained zones in the Paso Robles aquifer and the upper Purisima aquifer. These monitoring wells are located outside of the Seaside Basin and are within the Marina-Ord Management Area of the Monterey Subbasin.

- Annual induction logs in PCA-West Deep and PCA-East Deep should continue to be conducted to expand the area being monitored by geophysical methods.

2. Verify Chloride Concentrations and Water Chemistry in the 140 – 200 foot Zone of SBWM-4

Watermaster has been unable to find a site for a new monitoring well near SBMW-4 to verify chloride levels. However, other subsurface access options may exist. By monitoring well activity in the Basin, Watermaster could leverage opportunities to access the subsurface near SBMW-4. An upcoming example is to request permission from the SNG well owner for isolated water quality sampling during the construction of the replacement SNG well and to offer reimbursement for that additional work.

3. Destroy the Existing Damaged SNG Well

The privately owned Security National Guaranty (SNG) well with damaged casing is scheduled to be destroyed and replaced in WY 2026. Watermaster should provide input on recommended well construction and coordinate with the owner of the SNG well to take depth-specific samples at the SNG replacement well when it is drilled.

4. Continue to Analyze and Report on Water Quality Annually

Seawater intrusion is a threat to the Seaside Basin, and data must be collected and analyzed regularly to identify incipient intrusion. Maps, graphs, and analyses similar to what are found in this report should continue to be developed every year.

ATTACHMENT 8

**SEASIDE GROUNDWATER BASIN
2026 MONITORING AND MANAGEMENT PROGRAM**

Seaside Groundwater Basin 2026 Monitoring and Management Program

The tasks outlined below are those that are anticipated to be performed during 2026. Some Tasks listed below are specific to 2026, while other Tasks are recurring such as data collection, database entry, and Program Administration Tasks.

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

M.1 Program Administration

M. 1. a Project Budget and Controls (\$0)	Consultants will provide monthly or bimonthly invoices to the Watermaster for work performed under their contracts with the Watermaster. Consultants will perform maintenance of their internal budgets and schedules, and management of their subconsultants. The Watermaster will perform management of its Consultants.
M. 1. b Assist with Board and TAC Agendas (\$0)	Watermaster staff will prepare Board and TAC meeting agenda materials. No assistance from Consultants is expected to be necessary to accomplish this Task.
M. 1. c, M. 1. d, & M.1.e Preparation for and Attendance at Meetings, and Peer Review of Documents and Reports (\$23,220)	<p>The Consultants’ work will require internal meetings and possibly meetings with outside governmental agencies and the public. For meetings with outside agencies, other Consultants, or any other parties which are necessary for the conduct of the work of their contracts, the Consultants will set up the meetings and prepare agendas and meeting minutes to facilitate the meetings. These may include planning and review meetings with Watermaster staff. The costs for these meetings will be included in their contracts, under the specific Tasks and/or subtasks to which the meetings relate. The only meeting costs that will be incurred under Tasks M.1.c, M.1.d, and M.1.e will be:</p> <ul style="list-style-type: none"> • Those associated with attendance at TAC meetings (either in person or by videoconference connection), including providing periodic progress reports to the Watermaster for inclusion in the agenda packets for the TAC meetings, when requested by the Watermaster to do so. These progress reports will typically include project progress that has been made, problem identification and resolution, and planned upcoming work. • From time-to-time when Watermaster staff asks Consultants to make special presentations to the Watermaster Board and/or the TAC, and which are not included in the Consultant’s contracts for other tasks.

Appropriate Consultant representatives will attend TAC meetings (either in person or by videoconference connection) when requested to do so by Watermaster Staff, but will not be asked to prepare agendas or meeting minutes. As necessary, Consultants may provide oral updates to their progress reports (prepared under Task M.1.d) at the TAC meetings.

When requested by the Watermaster staff, Consultants may be asked to

assist the TAC and the Watermaster staff with peer reviews of documents and reports prepared by various other Watermaster Consultants and/or entities.

M. 1. f
QA/QC
(\$0)

A Consultant (MPWMD) will provide general QA/QC support over the Seaside Basin Monitoring and Management Program. These costs are included in the other tasks.

M.1.g
Prepare Documents for
SGMA Reporting
(\$2,694)

Section 10720.8 of the Sustainable Groundwater Management Act (SGMA) requires adjudicated basins to submit annual reports. Most of the documentation that needs to be reported is already generated by the Watermaster in conjunction with preparing its own Annual Reports. However, some information such as changes in basin storage is not currently generated and will require consultant assistance to do so. This task will be used to obtain this consultant assistance, as needed.

I. 2 Comprehensive Basin Production, Water Level and Water Quality Monitoring Program

I. 2. a. Database Management

I. 2. a. 1
Conduct Ongoing Data
Entry and Database
Maintenance/
Enhancement
(\$15,432)

The database will be maintained by a Consultant (MPWMD) performing this work for the Watermaster. MPWMD will enter new data into the consolidated database, including water production volumes, water quality and water level data, and such other data as may be appropriate. Other than an annual reporting of data to another Watermaster Consultant at the end of the Water Year, as mentioned in Task I.4.c below, no reporting of water level or water quality data during the Water Year is required. However, MPWMD will promptly notify the Watermaster of any missing data or data collection irregularities that are encountered.

Under this Task, when requested MPWMD will also respond to requests from consultants and others for data from the database.

At the end of the Water Year MPWMD will prepare an annual water production, water level, and water quality tabulation in Access format and will provide the tabulation to another Watermaster Consultant who will use that data in the preparation of the SIAR under Task No. I.4.c of the Monitoring and Management Program.

No enhancements to the database are anticipated during 2026.

Watermaster staff will maintain the Watermaster's website.

I. 2. a. 2
Verify Accuracy of
Production Well Meters
(\$0)

To ensure that water production data is accurate, the well meters of the major producers were verified for accuracy during 2009 and again during 2015. No additional work of this type is anticipated during 2026.

I. 2. b. Data Collection Program	
I. 2. b. 1 Site Representation and Selection (\$0)	The monitoring well network review that was started in 2008 has been completed, and sites have been identified where future monitoring well(s) could be installed, if it is deemed necessary to do so in order to fill in data gaps. In 2026 the location(s) of additional monitoring wells may need to be identified, if additional monitoring wells are recommended and approved in the Seawater Intrusion Response Plan (SIRP) described under Task I.4.e.1. If this work is found to be necessary, the costs to perform it will be included in Task I.4.e.1.
I. 2 b. 2 Collect Water Levels (\$23,932)	Each of the monitoring wells will be visited on a regular basis. Water levels will be determined by either taking manual water levels using an electric sounder, or by dataloggers. The wells where the use of dataloggers is feasible or appropriate have been equipped with dataloggers. All of the other wells will be manually measured. This Task includes the purchase of one datalogger and parts for the datalogger to keep in inventory as a spare if needed.
I. 2. b. 3 Collect Water Quality Samples. (\$39,862)	As discussed in the 2018 Annual Report, water quality data will be collected quarterly from certain of the monitoring wells, but is no longer being collected from the four coastal Sentinel Wells. Because many years of data have shown essentially no change in aquifer water quality, beginning in WY2023 the frequency of induction logging of the Sentinel Wells was reduced to once per year. As discussed in the 2012 Annual Report, water quality analyses were expanded to include barium and iodide ions. Since these analyses have created more than 10 years of data, as discussed in the 2022 Annual Report the analyses were no longer being performed starting in WY 2023. They will only be resumed if the other water quality parameters are indicative of seawater intrusion. As discussed in the 2021 Annual Report, the frequency of sampling of SBWM-5 (the Camp Huffman well) has been reduced over the years. It is being sampled once every five years beginning in WY 2022. Water quality data may come from water quality samples that are taken from these wells and submitted to a State Certified analytic laboratory for general mineral and physical suite of analyses, or the data may come from induction logging of these wells and/or other data gathering techniques. The Consultant or Contractor selected to perform this work will make this judgment based on consideration of costs and other factors. Sampling equipment sits in the water column and may periodically need to be replaced or repaired. Accordingly, an allowance to perform maintenance on previously installed equipment has been included in this Task. Also, in the event a sampling pump fails or is found to be no longer adequate due to declining groundwater levels, an allowance of \$950 to purchase a replacement sampling pump has been included in this Task.

I. 2. b. 4 Update Program Schedule and Standard Operating Procedures. (\$0)	All recommendations from prior reviews of the data collection program have been implemented. No additional work of this type is anticipated in 2026.
I. 2. b. 5 Monitor Well Construction (\$0)	A well to replace Monitoring Well FO-9 Shallow, which in 2021 was found to have a leaking casing, was installed in 2023. In 2026 additional monitoring wells may need to be installed, if additional monitoring wells are recommended and approved in the Seawater Intrusion Response Plan (SIRP) described under Task I.4.e.1. If new monitoring wells are approved for construction, the costs associated with that work will be included in the 2026 M&MP Capital Budget.
I. 2. b. 6 Reports (\$2,112)	<p>This task was essentially eliminated starting in 2020 by having the data collected by MPWMD under tasks I.2.b.1, I.2.b.2, and I.2.b.3 reported in the SIAR under Task I.4.c. The work remaining under this task is for MPWMD to prepare and provide the data appendix to the Consultant that prepares the SIAR.</p> <p>No formalized reporting on a quarterly basis is required. However, MPWMD will promptly notify the Watermaster and the Consultant that prepares the SIAR of any missing data or data collection irregularities in the water quality and water level data collected under Tasks I.2.b.2 and I.2.b.3.</p>
I.2.b.7 SGMA Data Submittal (\$3,168)	In 2025 the Department of Water Resources created a portal into which adjudicated basins can submit their “voluntary well” data, which in the past has been submitted into the State’s CASGEM system. In 2026 on the Watermaster’s behalf MPWMD will compile and submit data on the Watermaster’s “Voluntary Wells” into the State’s Sustainable Groundwater Management Act (SGMA) groundwater management database. The term “Voluntary Well” refers to a well that does not have its data reported into the CASGEM system, but for which the Watermaster obtains data. This will be done in the format and on the schedule required by the Department of Water Resources under the SGMA.
I.2.b.8 Perform Subsurface Electromagnetic Imaging (\$15,500)	The 2023 induction logging revealed gradually increasing conductivity in some of the shallower formations near the coastline. In 2025 subsurface electromagnetic imaging in the vicinity of Sentinel Well No. 4 was performed. Depending on the usefulness and value of that work, additional subsurface electromagnetic imaging may be performed in 2026.
<i>I. 3 Basin Management</i>	
I. 3. a. Enhanced Seaside Basin Groundwater Model (Costs listed in subtasks below)	The Watermaster and its consultants use a Groundwater Model for basin management purposes.

<p>I.3.a.1 Update the Existing Model (\$125,000)</p>	<p>The Model, described in the report titled “Groundwater Flow and Transport Model” dated October 1, 2007, was updated in 2009 in order to develop protective water levels, and to evaluate replenishment scenarios and develop answers to Basin management questions. The Model was again updated in 2014.</p> <p>In 2018 the Model was recalibrated and updated. Work is being performed by the Salinas Valley Basin and Marina Coast Groundwater Sustainability Agencies on the hydrogeologic modeling of the Monterey Subbasin. Significant changes in the understanding of the hydrogeology of that subbasin are being identified, and an updated model of that subbasin is expected to be completed in late 2025. In order for the Watermaster’s Model to incorporate that new information and to more closely coordinate with the updated Monterey Subbasin model, An evaluation of the most cost-effective means of either modifying or replacing the existing Seaside Basin model was performed in late 2025. It is anticipated that the recommendations resulting from that evaluation will be implemented starting in 2026.</p>
<p>I. 3. a. 2 Develop Protective Water Levels (\$0)</p>	<p>A series of cross-sectional models was created in 2009 in order to develop protective water levels for selected production wells, as well as for the Basin as a whole. This work is discussed in Hydrometrics’ November 2009 report titled “<i>Seaside Groundwater Basin Modeling and Protective Groundwater Elevations,</i>” and is posted on the Watermaster’s website. As discussed in <u>Attachment 10</u> of the 2013 Annual Report, further work was started in 2013 to refine these protective water levels, but it was found that the previously developed protective water levels were reasonable. If appropriate, these protective water levels will be updated, and/or protective water levels will be developed for additional wells, , as part of the work of Task I.3.c. or I.4.e.</p>
<p>I. 3. a. 3 Evaluate Replenishment Scenarios and Develop Answers to Basin Management Questions (\$40,000)</p>	<p>Modeling performed to date indicates that the solution to the problem of water levels in the Seaside Basin being below Protective Water Levels will be to inject replenishment water.</p> <p>Two projects are planned that have the potential to provide additional water for Basin replenishment. The first is the Pure Water Monterey Expansion (PVMX) Project for which construction bids were solicited in 2023 and is projected to become operational in 2025. The PVMX Project will increase the capacity of the existing 3,500 AFY PWM Project by 2,250 AFY. The second is the Monterey Peninsula Water Supply Project’s (MPWSP) desalination plant which is still in the design and permitting stage. The proponent of the MPWSP, California American Water, anticipates starting construction of the desalination plant in October 2025 and the plant becoming operational in 2028. Growth is built into each of these projects’ plant capacity, and the full capacity of these plants will likely not all be needed for some years into the future. During the time period that these projects would have excess capacity, they could potentially provide water for Basin replenishment.</p>

Montgomery & Associates agrees that injection is the quickest way to bring groundwater levels up in the Seaside Basin. Modeling performed in 2022 and 2023 found that on average between 1,000 and 3,700 AFY of replenishment water will need to be needed, depending on future water demands and rainfall.

Modeling performed in 2014, 2015, and 2016 led to the conclusion that groundwater levels in parts of the Laguna Seca Subarea will continue to fall, even if all pumping within that subarea is discontinued, because of the influence of pumping from areas near to, but outside of, the Basin boundary. The Groundwater Sustainability Plan for the Corral de Tierra subarea of the Monterey Subbasin includes projects to help to alleviate this problem, but they will be insufficient to completely alleviate it.

This Task includes a \$40,000 allowance to perform further modeling or analyses pertaining to Basin management issues if so directed by the Watermaster Board.

I. 3. b. Complete Preparation of Basin Management Action Plan (\$0)	The Watermaster’s Consultant completed preparation of the Basin Management Action Plan (BMAP) in February 2009. The BMAP serves as the Watermaster’s long-term seawater intrusion prevention plan. The Sections that are included in the BMAP are: Executive Summary Section 1 – Background and Purpose Section 2 – State of the Seaside Groundwater Basin Section 3 – Supplemental Water Supplies Section 4 –Groundwater Management Actions Section 5 – Recommended Management Strategies Section 6 – References
I. 3. c. Refine and/or Update the Basin Management Action Plan (\$0)	In 2019 the BMAP was updated based on new data and knowledge that has been gained since it was prepared in 2009. No further work of this type is anticipated in 2026. However, although no funds are budgeted for this Task in 2026, since the Groundwater Sustainability Plan (GSP) for the adjacent Monterey Subbasin of the Salinas Valley Groundwater Basin was completed in early 2022, at some point it may be appropriate to further update the BMAP to reflect the impacts of implementing that GSP.
I. 3. d. Evaluate Coastal Wells for Cross-Aquifer Contamination Potential (\$0)	If seawater intrusion were to reach any of the coastal wells in any aquifer, and if a well was constructed without proper seals to prevent cross-aquifer communication, or if deterioration of the well led to casing leakage, it would be possible for the intrusion to flow from one aquifer to another. An evaluation of this was performed in 2012 and is described in Attachment 10 of the 2012 Annual Report.

In 2021 the Watermaster TAC examined the feasibility of performing conductivity profiling of certain of the near-coastal wells that were evaluated in the 2012 Memorandum, as a method of determining if any of those wells was allowing downward migration of intruded water from the shallow dunes aquifer to enter the Paso Robles aquifer. However, it was concluded that conditions in those wells would make it infeasible to perform such work.

No further work of this type is anticipated in 2026.

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

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

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

If the geochemical evaluation of injecting desalinated water indicates the potential for problems to occur, then Montgomery and Associates may use the Watermaster's updated groundwater model, and information about injection locations and quantities, injection scheduling, etc. provided by MPWMD and/or California American Water for this project, to develop model scenarios to see if the problem(s) can be averted by changing delivery schedules and delivery quantities. This Task includes an allowance of \$10,000 to have Montgomery and Associates perform such modeling, if necessary.

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

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

**I. 4. a.
Oversight of Seawater
Intrusion Detection and
Tracking
(\$0)**

Consultants will provide general oversight over the Seawater Intrusion detection program under the other Tasks in this Work Plan.

<p>I. 4. c. Annual Report- Seawater Intrusion Analysis (\$36,346)</p>	<p>At the end of each water year, a Consultant will reanalyze all water quality data. Water level and water quality data will be provided to the Consultant by another Consultant (MPWMD) in MS Access format. The Consultant will put this data into a report format and will include it as an attachment to the Seawater Intrusion Analysis Report. If possible, semi-annual chloride concentration maps will be produced for each aquifer in the basin. Time series graphs, trilinear graphs, and stiff diagram comparisons will be updated with new data. The induction logs will be analyzed to identify changes in seawater wedge locations. If subsurface electromagnetic imaging is performed in 2026 under Task I.2.b.8, information from that work will be used to supplement this data. All analyses will be incorporated into an annual report that follows the format of the initial historical data report. Potential seawater intrusion will be highlighted in the report, and if necessary, recommendations will be included. The annual report will be submitted for review by the TAC and the Board. Modifications to the report will be incorporated based on input from these bodies, as well as Watermaster staff.</p>
<p>I. 4. e. Refine and/or Update the Seawater Intrusion Response Plan (\$0)</p>	<p>Due to the observation of increasing conductivity in the 2023 induction logging in some of the shallower formations near the coastline, it was determined that in 2025 it would be appropriate to update the 2009 SIRP. The updated SIRP was completed in late 2025 and includes the incorporation of data that was obtained since 2009 and technology and techniques that make the SIRP more practical and useful.</p>
<p>I. 4. e.1 Implement Recommendations in the Updated Seawater Intrusion Response Plan (\$25,000)</p>	<p>The updated SIRP contains recommendations for proactive actions the Watermaster could take to make in advance of the actual detection of seawater intrusion, to make it possible to more rapidly implement the SIRP, if seawater intrusion is subsequently determined to be occurring. This new Task is intended to provide funds to begin taking some of those preliminary actions, if deemed beneficial. It is not expected that significant implementation actions, if any, will start being undertaken until 2027, after the Seaside Basin Groundwater Model has been updated.</p>
<p>I. 4. f. If Seawater Intrusion is Determined to be Occurring, Implement Contingency Response Plan (\$0)</p>	<p>The SIRP will be implemented if seawater intrusion, as defined in the SIRP, is determined by the Watermaster to be occurring.</p>

ATTACHMENT 9

**UPDATED SEAWATER INTRUSION RESPONSE PLAN
(BODY ONLY)**



October 1, 2025

Updated Seawater Intrusion Response Plan Seaside Basin, Monterey County, California

Prepared for:

Seaside Basin Watermaster

Prepared by:

Montgomery & Associates

1970 Broadway, Suite 225, Oakland, CA 94602

Contents

1	BACKGROUND AND PURPOSE	1
1.1	Introduction and Purpose.....	1
1.2	Background	2
2	CONSISTENCY WITH OTHER DOCUMENTS	3
2.1	Seaside Groundwater Basin Amended Decision.....	3
2.2	2016 Water Conservation and Standby Rationing Plan	4
2.3	Contingency Plan for Seawater Intrusion	4
3	SEAWATER INTRUSION INDICATORS AND TRIGGERS	6
3.1	Indicators of Seawater Intrusion	10
3.1.1	Indicator 1: Increasing Chloride Concentrations	11
3.1.2	Indicator 2: Decreasing Sodium/Chloride Molar Ratios.....	13
3.1.3	Indicator 3: Visual Inspection of Cation/Anion Ratios	14
3.1.4	Indicator 4: Chloride Concentration Maps.....	15
3.1.5	Indicator 5: Induction Logging Results.....	15
3.1.6	Other Factors.....	16
3.2	Contingency Plan Triggers.....	20
4	PROACTIVE ACTION - PART 1 OF THE PUMPING REDISTRIBUTION PLAN.....	21
5	SEAWATER INTRUSION CONTINGENCY ACTIONS	24
5.1	Geographic Area Covered by Contingency Actions	24
5.2	Actions Addressing Observed Seawater Intrusion	24
5.2.1	Action 1: Verification	24
5.2.2	Action 2: Declaration of Seawater Intrusion.....	24
5.2.3	Action 3: Notification	24
5.2.4	Action 4: Pumping Redistribution Plan.....	25
5.2.5	Action 5: Focus Supplemental Supplies to Halt and Reverse Seawater Intrusion	26
6	REFERENCES	27

Tables

Table 1.	Monitoring Wells Chloride Threshold Values and Trend Analysis.....	11
Table 2.	Sodium/Chloride Molar Trend Analysis.....	14
Table 3.	Summary of Protective Elevations at Coastal Monitoring Wells.....	16



Figures

Figure 1. Wells with Historical Water Quality Data.....	8
Figure 2. Monitoring Wells with Induction Log Data.....	9
Figure 3. MSC Deep and Shallow Groundwater and Protective Elevations.....	17
Figure 4. PCA-West Deep and Shallow Groundwater and Protective Elevations.....	18
Figure 5. CDM-MW4 Groundwater and Protective Elevations.....	19
Figure 6. Sentinel Well 3 Groundwater and Protective Elevations.....	19
Figure 7. Summary of Part 1 and 2 of the Pumping Redistribution Plan.....	23

Appendices

Appendix A. Overview of Seawater Intrusion, 2024 Seawater Intrusion analysis Report, (Section 1.1 – 1.3)
Appendix B. Historical Chloride Concentration Graphs
Appendix C. Statistical Trend Analysis
Appendix D. Historical Sodium/Chloride Molar Ratio Graphs
Appendix E. Piper Diagrams for Seaside Groundwater Basin Monitoring Wells
Appendix F. Piper Diagrams For Seaside Groundwater Basin Monitoring Wells

Acronyms & Abbreviations

BMAP	Basin Management Action Plan
mg/L.....	milligrams per liter
MPWMD	Monterey Peninsula Water Management District
NP	not possible
SBMMP	Seaside Groundwater Basin Monitoring and Management Program
SIAR	Seawater Intrusion Analysis Report
SIRP	Seawater Intrusion Response Plan
TAC	Technical Advisory Committee
WY.....	Water Year

Conversions

1 acre-foot =	325,851 gallons
1 mg/L ≈	1 part per million

1 BACKGROUND AND PURPOSE

1.1 Introduction and Purpose

This *Seawater Intrusion Response Plan* (SIRP) is the Seaside Groundwater Basin Watermaster’s (Watermaster) contingency plan for responding to seawater intrusion in the Seaside Groundwater Basin, if and when it occurs. The first SIRP was finalized in February 2009 (HydroMetrics LLC, 2009a) as part of the Watermaster’s implementation of the *Seaside Groundwater Basin Monitoring and Management* Program (SBMMP). Since it had been 15 years since the SIRP was developed, the Technical Advisory Committee (TAC) of the Seaside Basin Watermaster recommended to the Board of Directors in February 2024 to update the SIRP with additional data collected over the past 15 years and reassess indicators of intrusion, response triggers, and actions that take place to respond to seawater intrusion. This document is produced in accordance with the requirements contained in the Amended Decision (California American Water Company v. City of Seaside *et al.*, Superior Court, County of Monterey, Case Number M66343, 2007).

This updated SIRP details the indicators of seawater intrusion and recommended actions to be taken if seawater intrusion is observed. Section 2 evaluates consistency with existing documents that may influence the Watermaster’s ability to implement this response plan. Section 3 establishes indicators of seawater intrusion and action levels that trigger response measures. Section 4 describes the proactive Part 1 of the Pumping Distribution Plan, and Section 5 lists recommended actions that should be implemented if seawater intrusion is observed in the Seaside Groundwater Basin.

Actions detailed in this SIRP may have significant financial impacts on the Watermaster’s member agencies and the communities they serve. Foreseeable financial impacts might include the following:

- Reduced economic activity due to reduced water available to users
- Costs associated with immediate response monitoring for seawater intrusion verification and public notification
- Cost of installing new monitoring wells and/or pumping redistribution
- Reduced revenue for water suppliers from water users due to reduced water sales

No sources of replacement water are identified in this document. Potential sources of replacement water are identified in the 2019 Basin Management Action Plan (BMAP), which



describes supplemental water supplies and management actions that may be implemented to help prevent seawater intrusion by raising groundwater levels in the Seaside Groundwater Basin.

1.2 Background

Historical and persistent low groundwater elevations caused by pumping in the Seaside Groundwater Basin have led to concerns that seawater intrusion may threaten the coastal subareas' groundwater resources. Previous studies have addressed the potential for, and extent of, seawater intrusion in the Seaside Groundwater Basin. Seawater Intrusion Analysis Reports (SIAR) (HydroMetrics LLC, 2007 and 2008) provide detailed reviews of seawater intrusion mechanisms and analyzed historical water quality data for indications of seawater intrusion in the Seaside Groundwater Basin. The geochemical analyses from those SIARs and subsequent SIARs through Water Year (WY) 2024 showed that no seawater intrusion has been detected in the Seaside Groundwater Basin, and there is no indication of seawater intrusion into either of the Basin's principal aquifers – the Paso Robles Formation (shallow) or Santa Margarita Sandstone (deep). Although seawater intrusion has not been detected, it is apparent, based on groundwater level and pumping data, that a potential for seawater intrusion in the Seaside Groundwater Basin exists.

2 CONSISTENCY WITH OTHER DOCUMENTS

The following five documents were reviewed to evaluate consistency of the recommendations in these documents with this updated SIRP:

- Seaside Basin Amended Decision (California American Water Company v. City of Seaside et al., *Superior Court, County of Monterey, Case Number M66343*, 2007)
- *2016 Water Conservation and Standby Rationing Plan, MPWMD Regulation XV* (MPWMD, 2016)
- *Contingency Plan for Seawater Intrusion, Seaside Groundwater Basin* (Bachman, 2005)
- Annual Seaside Groundwater Basin *Seawater Intrusion Analysis Reports* from 2007 through 2018, prepared by HydroMetrics LLC
- Annual Seaside Groundwater Basin *Seawater Intrusion Analysis Reports* from 2019 through 2024, prepared by Montgomery & Associates

The SIARs provide information on groundwater levels, quality, and extractions, but do not include recommended remedial actions. Therefore, the recommendations from these documents were not analyzed further for consistency with this updated SIRP. The documents listed in the first three bullets are addressed separately below.

2.1 Seaside Groundwater Basin Amended Decision

The Amended Decision details the legal requirements imposed on the Watermaster as a result of the Seaside Groundwater Basin Adjudication. The requirements in the Amended Decision take precedence over policies or procedures outlined in other reviewed documents.

The Amended Decision included, in part, the requirement to “...develop a plan of action to contain seawater intrusion, should it occur.” Additionally, Section III(B)(3)(e) of the Amended Decision requires that any pumping reductions be distributed throughout the impacted subarea in a *pro-rata* (proportional) fashion. The Section III.b.3.e pumping reductions would occur if the Watermaster determined that the Basin’s Operating Yield needed to be reduced to prevent Material Injury from occurring. The *Interim Contingency Procedure to Contain Seawater Intrusion*¹ included in Exhibit A to the Amended Decision proposed a pumping reduction methodology that would be applied if seawater intrusion was detected in the Basin and does not use a pro-rata approach. Consequently, this updated SIRP, as was the case in the 2009 SIRP, proposes a pumping reduction plan similar to the one in Exhibit A of the Amended Decision.

¹ <https://seasidegroundwaterbasinwatermaster.wpcomstaging.com/wp-content/uploads/2024/02/08-0409-seawater-intrusion-contingency-response-plan-pdf>

2.2 2016 Water Conservation and Standby Rationing Plan

The 2009 SIRP was evaluated for consistency with MPWMD's *Expanded Water Conservation and Standby Rationing Plan* (MPWMD, 1999). In 2016, that plan was replaced with the *2016 Water Conservation and Rationing Plan* (MPWMD, 2016) and is evaluated for consistency with this updated SIRP.

The regulations imposed by MPWMD's *2016 Water Conservation and Rationing Plan* (MPWMD, 2016) state that Stage 1 through Stage 3 water conservation and Stage 4 rationing may apply to water distribution system users and water users within the Monterey Peninsula Water Resources System in response to limited water supply or a water supply emergency. These stages provide, among other benefits, responses to emergency situations where immediate reductions in water use are necessary to ensure public health, safety, or welfare.

The *2016 Water Conservation and Rationing Plan* states that in the event of a Water Supply Emergency, or at the direction of the MPWMD Board of Directors, each owner, operator, or extractor of a private water well, Water Distribution System, or other Water-Gathering Facility shall comply with the provisions of the plan. Unlike in the *Expanded Water Conservation and Standby Rationing Plan* (MPWMD, 1999), percentage reductions are not provided in the 2016 plan but rather each stage has trigger-specific amounts of reduction required.

Since regulatory and emergency triggers are included in the MPWMD plan and Watermaster's authority over the Seaside Basin's groundwater pumping makes it a regulatory agency that can direct the percentage of groundwater reduction, there is no conflict between this SIRP and the 2016 Water Conservation and Rationing Plan.

2.3 Previous Contingency Plans for Seawater Intrusion

The 2009 SIRP was informed by several older documents:

- Contingency Plan for Seawater Intrusion, Seaside Basin, developed by Dr. Steve Bachman (2005)
- Interim Contingency Procedure to Contain Seawater Intrusion included in Exhibit A to the Amended Decision (February 2007)
- Watermaster's Interim Seawater Intrusion Contingency Plan (March 2008) used until the 2009 SIRP was developed

These documents were only intended to be applicable until a formal plan to address seawater intrusion was developed. The 2009 SIAR was that plan that superseded and replaced earlier contingency plans.



The 2009 SIRP and this SIRP update use site-specific geochemical indicators of seawater intrusion. Based on the presence of specific seawater intrusion indicators, various actions—including pumping redistribution and reduction—are recommended in this SIRP.

There is no requirement for this updated SIRP to be consistent with previous contingency plans, however they were used as a reference document while developing this updated SIRP.

3 SEAWATER INTRUSION INDICATORS AND TRIGGERS

Seawater intrusion must be detected within the Adjudicated boundary of the Seaside Groundwater Basin, and declared by the Watermaster, before the response plan can be implemented. This section presents general indicators of seawater intrusion and discusses how to identify incipient seawater intrusion in the Seaside Groundwater Basin. A group of positive indicators would trigger a contingency action.

This SIRP has adopted the following terminology for identifying and containing seawater intrusion:

Indicator: A chemical characteristic or groundwater level that suggests potential seawater intrusion. No one indicator definitively identifies seawater intrusion.

Trigger: A specific group of indicators that, taken together, can identify seawater intrusion.

Contingency Actions: A series of actions that should be implemented if the triggers indicate seawater intrusion is occurring.

Each indicator of seawater intrusion is addressed separately below. Five seawater intrusion indicators have been developed for the monitoring program including:

1. Chloride concentrations and trend analysis
2. Sodium/chloride molar ratio trend analysis
3. Cation and anion distributions on Piper and Stiff Diagrams
4. Chloride concentration maps
5. Induction logging results

Chloride concentration is the only indicator with a threshold value or specific numerical target that indicates seawater intrusion. Threshold values are based on historical groundwater monitoring data collected from nine wells within the Seaside Groundwater Basin (Figure 1). The nine wells represent four well pairs and one unpaired monitoring well. FO-10 Shallow and Deep are removed from this updated SIRP because they are outside the Seaside Basin and are slated for destruction. Water quality data from these wells is included in the Watermaster's SIARs which are prepared annually and are posted on the Watermaster's website.

In the annual SIARs, electric induction logging of a number of monitoring wells is included as an indicator of potential seawater intrusion. This method measures changes in formation salinity from within a well using an electrical induction tool. Induction logging within the well measures



the fluid conductivity within the adjacent formation up to a distance of three feet from the well casing. This technique can be used in wells that are completed with PVC casings and screens, but not in steel cased wells due to the conductance of steel.

This method has been used as a cost-effective method of detecting seawater intrusion by measuring the electrical conductivity of the formation throughout the depth of the well. If over time, the conductivity steadily increases at a specific zone it could indicate seawater intrusion. One limitation of this method is that it does not provide quantitative concentrations of chloride or other ions that contribute to salinity. However, electric induction logs can be used as an indicator in this updated SIRP, and although it cannot provide a qualitative trigger on its own, it can be used in combination with other indicators to set off a series of contingency actions as described in Section 5.

Induction logging has been performed in the Watermaster's four coastal Sentinel Wells since their completion in 2007. Two additional wells started being logged in 2024. Figure 2 shows the location of wells that are induction logged annually.

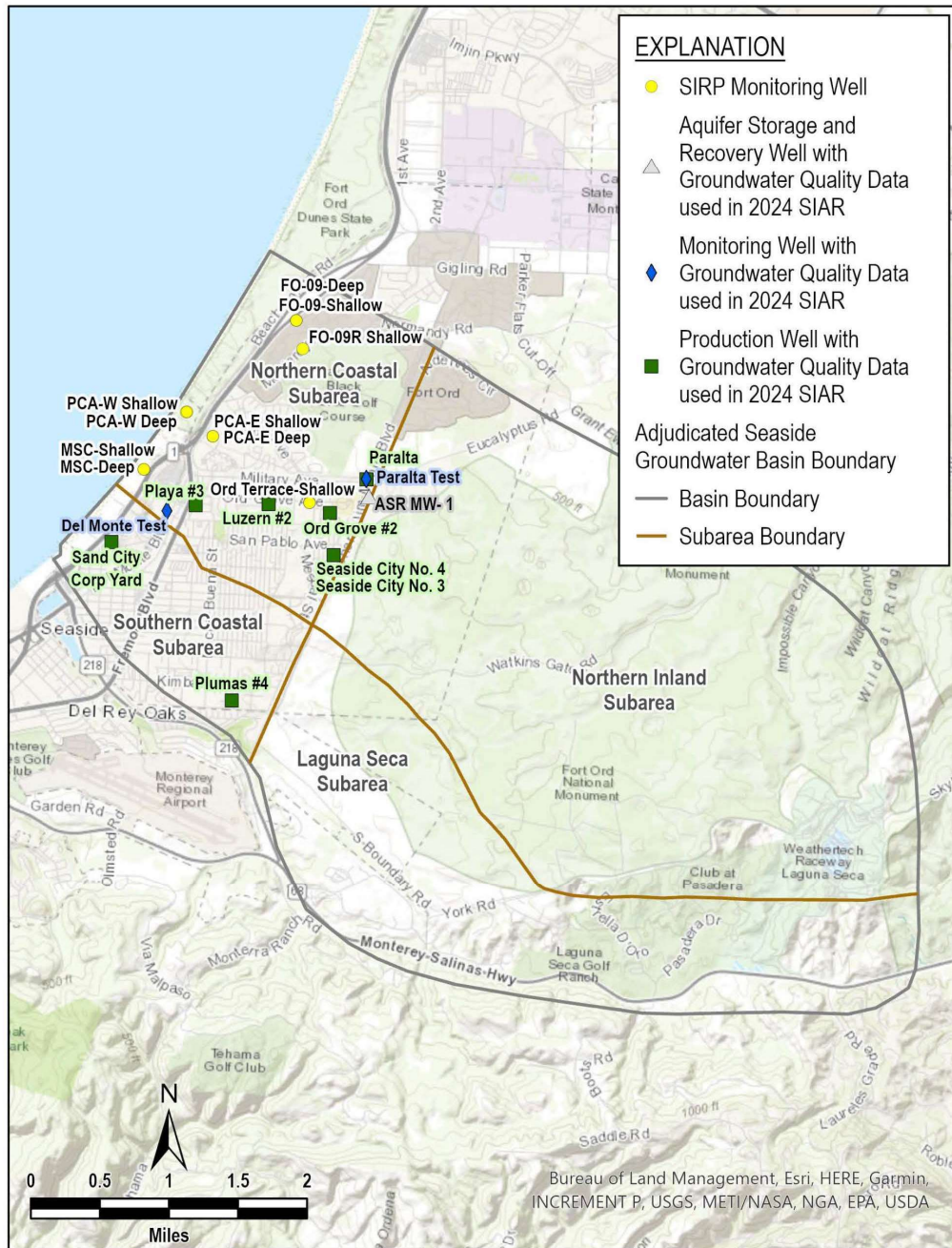


Figure 1. Wells with Historical Water Quality Data

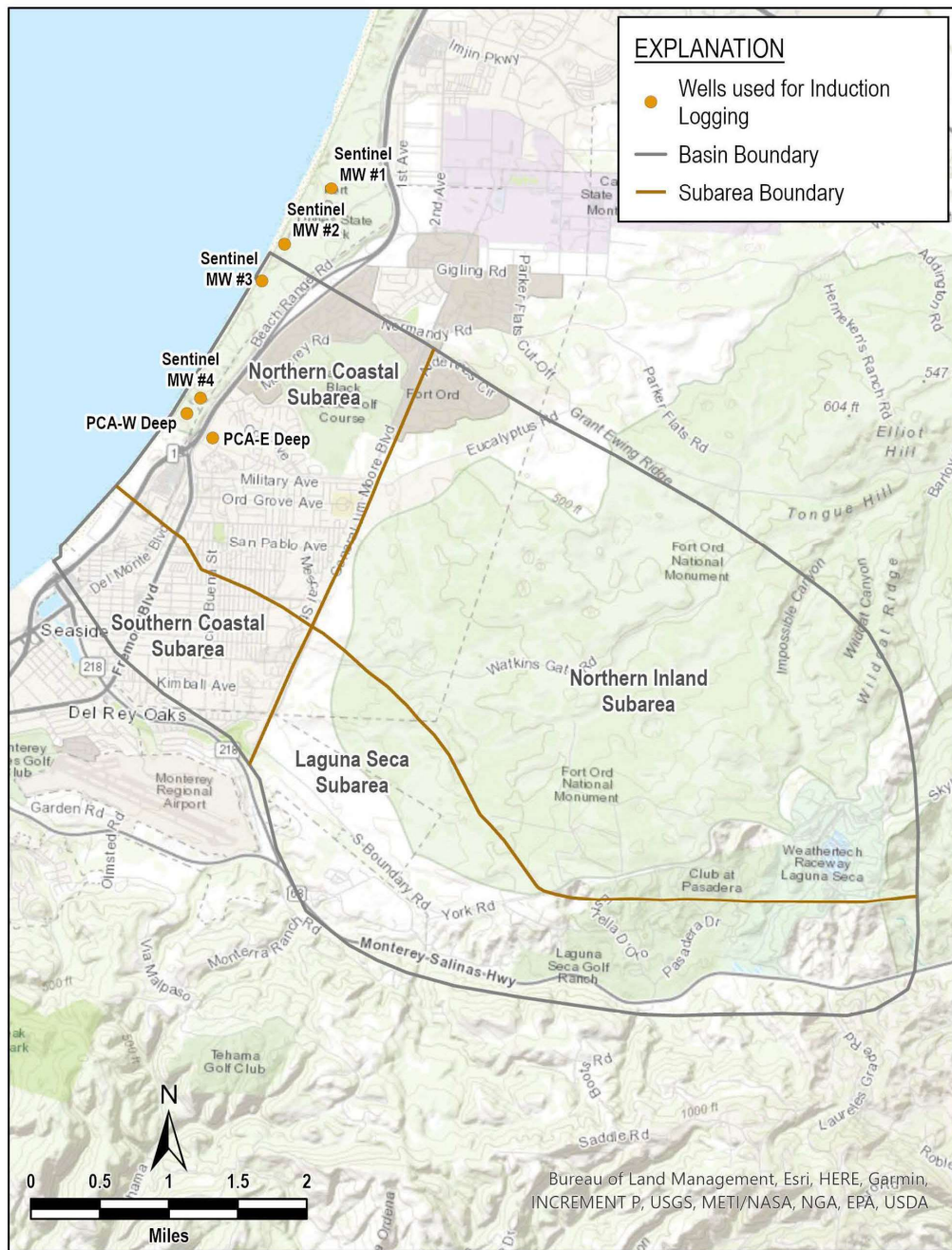


Figure 2. Monitoring Wells with Induction Log Data

3.1 Indicators of Seawater Intrusion

Seawater intrusion is generally identified through chemical analyses of groundwater. No one analysis definitively identifies seawater intrusion. However, by looking at various analyses and through statistical evaluation of historical data, it can be ascertained when fresh groundwater is beginning to mix with seawater. Common geochemical indicators of seawater intrusion are discussed and site-specific data are presented in the following sections. Sections 1.1 – 1.3 of the 2024 *Seawater Intrusion Analysis Report* (Montgomery & Associates, 2024) review geochemical characteristics indicative of seawater intrusion and is provided as Appendix A to this report.

The 10 monitoring wells with historical geochemical data that are statistically analyzed in this section are shown in Table 1. Data collected prior to the release of the Adjudication Decision in March 2006 were analyzed to provide a baseline chemical characterization of the Seaside Groundwater Basin. Where possible, analyses are separated by depth zone. Two depth zones were chosen, following the system of Yates *et al.* (2005). Wells assigned to the shallow depth zone generally correlate to the Paso Robles Formation where it exists. This shallow zone is roughly at the same depth as the Salinas Valley Pressure 400-Foot Aquifer. Wells assigned to the deep zone correlate to the Santa Margarita Sandstone where it exists in the Seaside Groundwater Basin. This deep zone is roughly at the same depth as the Salinas Valley Deep Aquifer.

Most production wells in the Seaside Groundwater Basin have long screened intervals within multiple depth zones. As a result, their water qualities reflect a blend from multiple aquifers. Because of this, production wells are not suitable for indicating seawater intrusion within a particular aquifer or zone because if there was seawater intrusion in a portion of the aquifer being pumped, that concentration could be diluted to the point of not being of concern. Trends in chloride concentration are therefore expected to be muted.

Table 1. Monitoring Wells Chloride Threshold Values and Trend Analysis

Primary Aquifer	Well Location	Chloride Threshold Value ^a (mg/L)	Mann-Kendall Statistical Trend	
			Data through March 2008	Data through Sept 2024
Paso Robles (shallow)	MSC Shallow	62	No Trend	No Trend
	PCA-West Shallow	70	No Trend	Increasing
	PCA-East Shallow	73	NP	No Trend
	FO-09-Shallow (destroyed)	67	Decreasing	No Trend
	FO-09R-Shallow (replacement)	-	-	NP
	FO-09-Deep ^b	85	No Trend	Increasing
	Basin Wide ^b	85		
Santa Margarita (deep)	MSC Deep	182	Decreasing	No Trend
	PCA-West Deep	186	No Trend	Decreasing
	PCA-East Deep	181	NP	Increasing
	Ord Terrace-Shallow ^b	185	NP	No Trend
	Basin Wide ^c	186		

Note: A minimum of 8 to 10 observations are needed for using these statistical methods.

^a Historical maximum chloride concentrations prior to 1995 are not included in the calculation of Chloride Thresholds.

^b Aquifer designations are based on groundwater quality as shown in Appendix F.

^c Basin wide screening criteria is based on maximum chloride screening criteria and applies to any well extracting groundwater from the designated aquifer.

NP = Not possible to determine trend.

3.1.1 Indicator 1: Increasing Chloride Concentrations

Unusually high or steadily increasing chloride concentrations are one of the most commonly used indicators of seawater intrusion. At low chloride concentrations, trends are often as important as absolute concentrations because of natural variations in groundwater chemistry. While chloride concentrations are strongly indicative of seawater intrusion, it often takes time for the increasing chloride trend to be recognizable due to the long-term and relatively slow increase in chlorides during seawater intrusion.

3.1.1.1 High Chloride Concentrations

Chloride concentrations significantly greater than historical average concentrations may indicate seawater intrusion. Graphs showing historical chloride concentrations from the 10 wells analyzed

are included in Appendix B. Average chloride concentrations at each well evaluated in the initial 2009 SIRP were calculated from historical data available through September 2024. Data collected prior to January 1995 are excluded from the calculation of each well's average chloride concentration due to the variable nature of those data. In general, chloride data collected after 1995 fluctuates within a relatively small range compared with data collected prior to 1995. The point at which these large fluctuations stabilize is different for each well; the 1995 cut-off date was chosen for all wells for consistency.

The graphs in Appendix B also show statistically derived chloride threshold values included in the 2009 SIRP and based on data available through March 2008. Although the threshold values seem low in comparison with chloride minimum thresholds used in neighboring SGMA-managed basins, it is the chloride concentrations greater than threshold values in combination with other indicators of seawater intrusion that will indicate seawater intrusion. For additional information regarding the statistical formulas used to calculate the chloride threshold value, refer to Appendix C.

Table 1 presents the threshold chloride concentrations at individual monitoring wells. The threshold values for wells in each aquifer without historical data are set to the highest threshold value for any well in that aquifer: 85 milligrams per liter (mg/L) for the Shallow Aquifer (FO-09 Deep), and 186 mg/L for the Deep Aquifer (PCA-West Deep). No monitoring wells currently show chloride concentrations above threshold values. There are two production wells that are at or exceed the general threshold values of 85 mg/L for the Shallow Aquifer and 186 mg/L for the Deep Aquifer, although neither well has an increasing chloride trend. Both these production wells are the closest public water supply wells to the coast in the Northern Coastal subarea (Figure 1):

- Playa #3 screened in the shallow aquifer has chloride concentrations that range between 100 and 155 mg/L.
- Luzern #2 screened in both the shallow and the deep aquifers typically has chloride ranges between 96 and 186 mg/L.

3.1.1.2 Chloride Concentration Trends

A clear trend of increasing chloride concentrations may indicate seawater intrusion. At low chloride concentrations, trends are often as important as absolute concentrations because of natural variations in groundwater chemistry. Data collected from October 2006 to September 2024 were analyzed for increasing trends using the Mann-Kendall statistical approach, which can be used to show whether chemical concentrations in a monitoring well are increasing, remaining stable, or decreasing. The Mann-Kendall Test can be used with a minimum of four consecutive sampling results. For additional information on the Mann-Kendall Test refer to Appendix C. One drawback of the Mann-Kendall test is that it is not valid if chloride concentrations have

significant seasonal fluctuations. Appendix C presents the detailed methodology and seasonality test for this evaluation and discusses additional trend analyses that would be relevant if future monitoring indicates any seasonal correlation.

Table 1 summarizes the results of the statistical trend analysis. Trends in Table 1 are categorized as increasing, decreasing, no trend, or not possible to determine (NP). Table 1 shows that PCA-West Shallow, FO-09 Deep, and PCA-East Deep have increasing chloride concentration trends, PCA-West Deep has a decreasing trend, five monitoring wells have no trend, and FO-09R Shallow does not have enough data to establish a trend yet.

3.1.2 Indicator 2: Decreasing Sodium/Chloride Molar Ratios

A rapid decline in the molar ratio of sodium to chloride may indicate seawater intrusion. In the early stages of seawater intrusion, sodium often replaces calcium on the aquifer's clay particles through ion exchange before significant chloride increases are observed. This effectively removes sodium from the water, and sodium/chloride molar ratios drop. The ratio of sodium to chloride in groundwater can therefore be used as an early indicator of seawater intrusion. Sodium/chloride molar ratios can also be used to differentiate between seawater intrusion and other sources of salinity. Jones *et al.* (1999) suggest that sodium/chloride molar ratios in advance of a seawater intrusion front will be below 0.86.

3.1.2.1 Historical Sodium/Chloride Molar Ratios

Chemographs showing sodium/chloride molar ratios over time are provided in Appendix D. None of them show a rapid decline in sodium/chloride molar ratios to a level less than 0.86 that is indicative of seawater intrusion.

3.1.2.2 Sodium/Chloride Molar Ratio Trend Analysis

In addition to evaluating increasing chloride concentrations, decreasing sodium/chloride molar ratios are also evaluated using the Mann-Kendall statistical test. Table 2 summarizes the results of the statistical trend analysis. Two wells, MSC Shallow and PCA-East Deep, have downward trends in sodium/chloride molar ratios. The remaining eight monitoring wells have no trends.

Table 2. Sodium/Chloride Molar Trend Analysis

Primary Aquifer	Well Location	Mann-Kendall Statistical Trend	
		Data through March 2008	Data through Sept 2024
Paso Robles (shallow)	MSC Shallow	No Trend	Decreasing
	PCA-West Shallow	No Trend	No Trend
	PCA-East Shallow	NP	No Trend
	FO-09 Shallow (destroyed)	Increasing	No Trend
	FO-09R Shallow (replacement)	-	NP
	FO-09 Deep ^b	No Trend	No Trend
Santa Margarita (deep)	MSC Deep	No Trend	No Trend
	PCA-West Deep	No Trend	No Trend
	PCA-East Deep	NP	Decreasing
	Ord Terrace Shallow ^b	NP	No Trend

Note: A minimum of 8 to 10 observations are needed for using these statistical methods

^a Historical maximum chloride concentrations prior to 1995 are not included in the trend analysis

^b Aquifer designations are based on groundwater quality as shown in Appendix F

NP = Not possible to determine trend

3.1.3 Indicator 3: Visual Inspection of Cation/Anion Ratios

Seawater intrusion is often indicated by graphically analyzing shifts in groundwater quality. Two common graphical techniques for these analyses are Piper diagrams and Stiff diagrams.

3.1.3.1 Piper Diagrams

Piper diagrams plot the relative abundances of individual cations and anions on two trilinear plots, and their combined distribution is plotted on a central diamond. Waters from similar or related sources will generally plot together. The mixture of two waters will generally plot along a straight line between the two end-member types within the central diamond. The trend toward seawater intrusion, however, often plots along a curved path.

An example Piper Diagram showing changes in molar ratios that are indicative of seawater intrusion is included in Appendix E. The indicator of seawater intrusion using Piper diagrams is the water chemistry trending in the direction of the curved arrow on the example Piper diagram.

Appendix E also displays Piper diagrams for each of the monitoring wells in the Seaside Groundwater Basin used to evaluate seawater intrusion. The data on the Piper diagrams have a

color gradient to identify changes more easily over time. There are no strong changes in anions and cations toward seawater, but PCA-West Shallow and PCA-East Deep do show very small ion changes that appear to be moving towards seawater.

3.1.3.2 Stiff Diagrams

Stiff diagrams plot the relative abundances of individual cations and anions on a single graph. Cations are plotted on the left side of the graph and anions are plotted on the right side of the graph. Waters with similar chemistries will have similar shaped Stiff diagrams.

Example Stiff diagrams from seawater intruded wells in the Salinas Valley are shown in Appendix A. These figures, along with a short description, are included to demonstrate the utility of Stiff diagrams. The indicator of seawater intrusion using Stiff diagrams is a change in the shape of a stiff diagram toward one of the example seawater intruded Stiff diagrams shown on Figure F-1.

Stiff diagrams for the monitoring wells, grouped by aquifer, are provided in Appendix F. None of the Stiff diagrams show the high chloride spike shown on Figure F-1 that is indicative of seawater intrusion in the example Stiff diagrams.

3.1.4 Indicator 4: Chloride Concentration Maps

In basins experiencing seawater intrusion, chloride concentrations will be highest at the coast. If chloride concentrations have a distribution that can be contoured, annual chloride isoconcentration maps can be generated. This would show if seawater were migrating in from the coast. Since 2007—when the first SIAR was prepared—to September 2024, there has been inconsistent variation in chloride measurements toward the coast to enable contouring to be performed. Therefore, data are simply plotted on chloride concentration maps.

3.1.5 Indicator 5: Induction Logging Results

Multiple years of steadily increasing conductivity in one or more layers of strata in the monitoring wells near the coast indicates that seawater is moving inland at those layers. The induction logging data to date show that there can be some variation from year-to-year in conductivity levels in various zones: sometimes increasing, sometimes decreasing, and sometimes remaining stable. However, if over a multi-year period conductivity is found to be steadily increasing in a given zone, that should be considered to be an indication of seawater intrusion advancing at that depth.

Changes in conductivity in Sentinel Well 4 since 2007 indicate an estimated increase in TDS of about 1,000 mg/L which corresponds to an estimated increase in chloride of approximately 250 mg/L. This is far above the basin wide chloride threshold levels shown in Table 1.

3.1.6 Other Factors

The indicators described above are all geochemical indicators. Groundwater levels are another factor to consider when determining if seawater intrusion is occurring. Without human influence, groundwater flows from areas of high hydraulic head (typically inland) to low hydraulic head (typically at the coast). When the hydraulic gradient is reversed by overpumping, seawater can move inland. Groundwater levels alone do not indicate seawater intrusion but can indirectly show the potential for seawater intrusion. As discussed below, coastal groundwater levels at or near sea level are not sufficient to repel seawater intrusion.

Groundwater elevations for six coastal monitoring wells that protect against seawater intrusion that could impact production wells were determined in 2009 using the Seaside Groundwater Basin groundwater flow model and cross-sectional modeling (HydroMetrics LLC, 2009b). Protective elevations for both the Santa Margarita (deep) and Paso Robles (shallow) aquifers were established for monitoring well pairs with both a shallow and deep completion. Protective elevations for the six wells are shown in Table 3. Groundwater levels below protective elevations have the potential to cause seawater intrusion that may impact production wells.

Table 3. Summary of Protective Elevations at Coastal Monitoring Wells

Subarea	Well	Completion	Protective Elevation, feet above sea level	Currently Above or Below Protective Elevations
Northern Coastal	MSC	Santa Margarita (Deep)	17	below
		Paso Robles (Shallow)	11	below
	PCA-W	Santa Margarita (Deep)	17	below
		Paso Robles (Shallow)	2	above
	Sentinel Well 3	Santa Margarita (Deep)	4	below
Southern Coastal	CDM-MW4	Paso Robles (Shallow)	2	above

Figure 3 through Figure 6 show the historical groundwater elevations at each of these protective elevation monitoring wells. Groundwater levels continue to be below protective elevations in all of these Santa Margarita monitoring wells (MSC deep, PCA-West Deep, and Sentinel Well 3). In WY 2024, groundwater levels at all three Santa Margarita (deep) monitoring wells increased by 2 to 3 feet over the previous year and levels at PCA-West Shallow rose above its protective groundwater elevation. Monitoring well CDM-MW4 and PCA-West Shallow are the only wells with groundwater elevations above protective elevations.

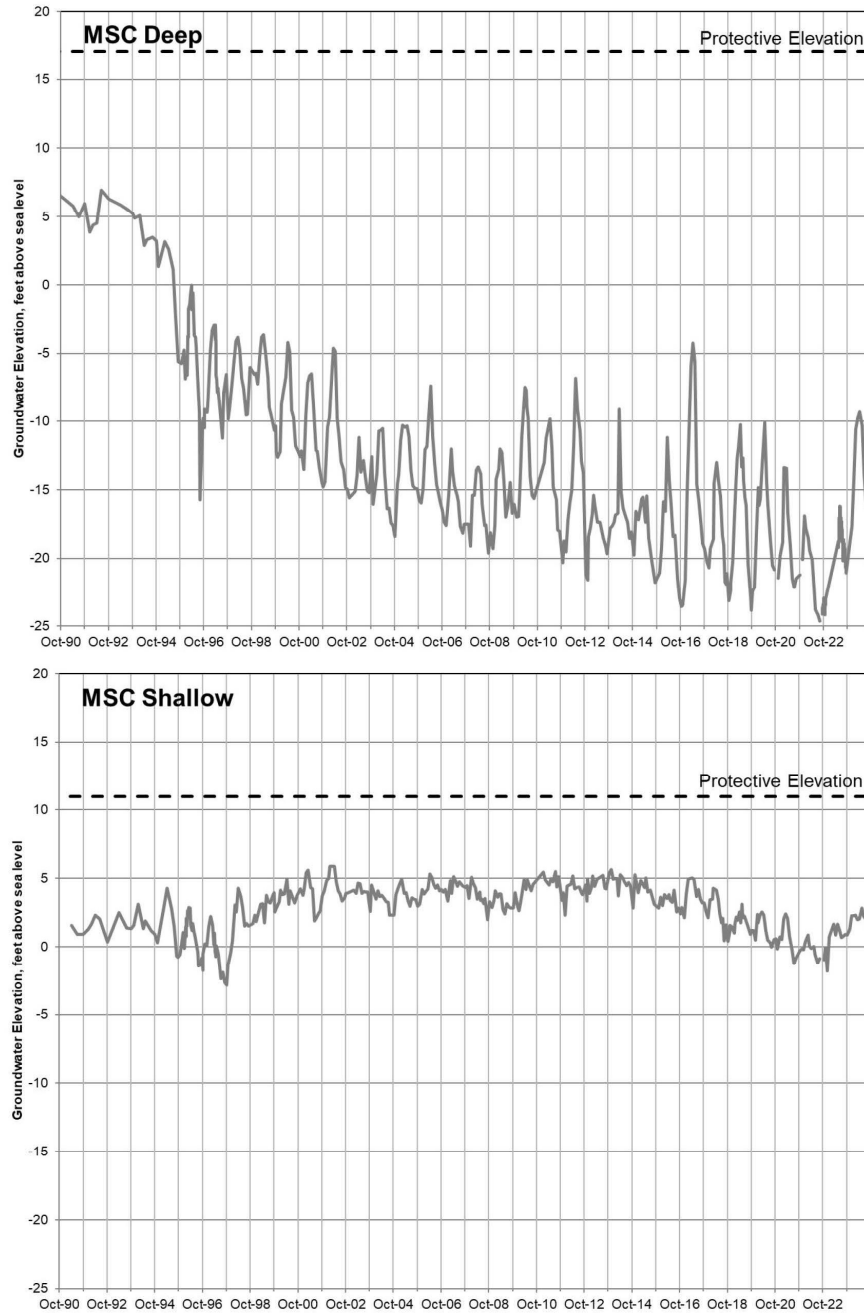


Figure 3. MSC Deep and Shallow Groundwater and Protective Elevations

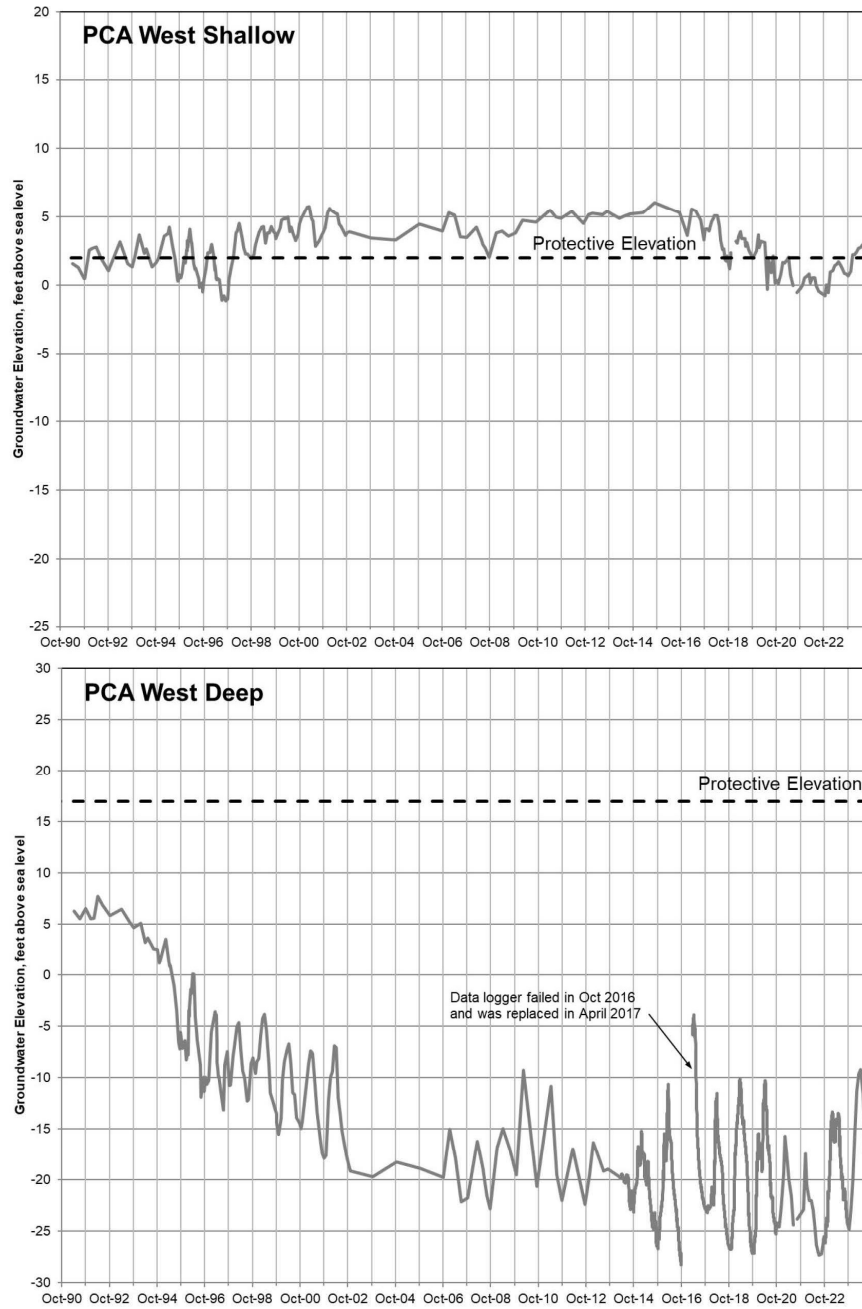


Figure 4. PCA-West Deep and Shallow Groundwater and Protective Elevations

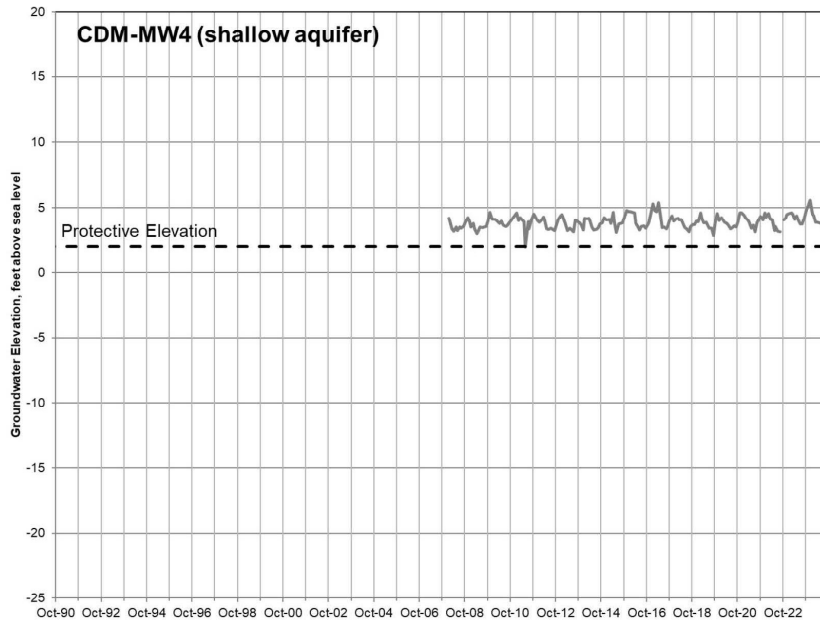


Figure 5. CDM-MW4 Groundwater and Protective Elevations

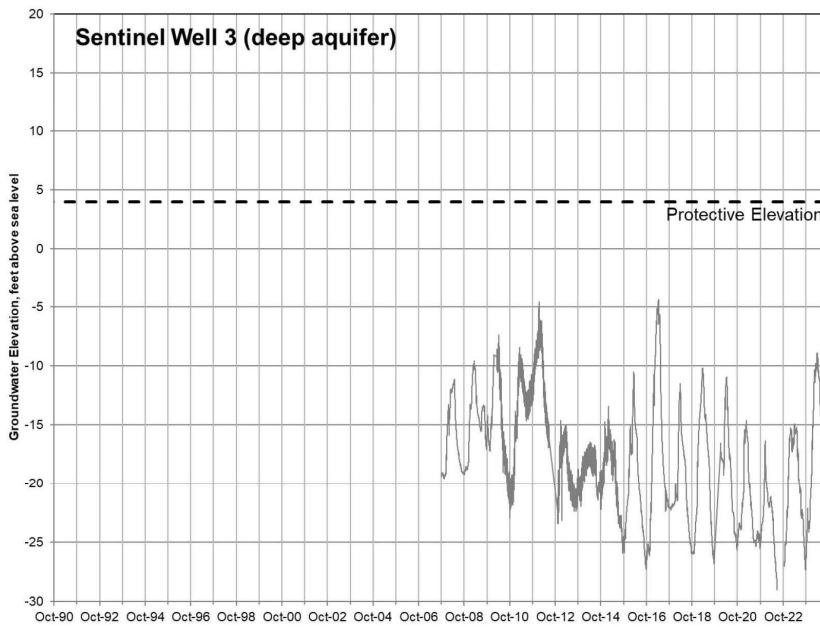


Figure 6. Sentinel Well 3 Groundwater and Protective Elevations

Additional indicators—or revisions to the indicators presented above—may be warranted in the future as more is learned about groundwater quality within the Basin over time. Revisions to indicators may also be warranted if updates to the baseline threshold values appear necessary to respond to any new groundwater management strategies of the Watermaster.

3.2 Contingency Plan Triggers

Since no one indicator definitively identifies seawater intrusion, a combination of indicators is necessary to clearly identify seawater intrusion. The following combination of indicators will trigger the actions described in Section 4:

1. Chloride concentrations must be higher than the chloride threshold value shown on Table 1.
and
2. Sodium/chloride molar ratios must show a rapid drop and be below the 0.86 molar ratio.
and
3. At least one of the following five trends or qualitative indicators must be apparent:
 - a. The Mann-Kendall statistical trend for chloride concentrations is increasing.
 - b. Evolution of seawater mixing is observed in Piper diagram(s).
 - c. Change of Stiff diagram(s) shape from baseline conditions featuring prominent high chloride spike.
 - d. Concentration maps indicate increasing chloride concentrations near the coast.
 - e. Induction logging showing steadily increasing conductivity over a period of three or more consecutive years in depth zones correlated with either the Paso Robles or Santa Margarita aquifers.

4 PROACTIVE ACTION - PART 1 OF THE PUMPING REDISTRIBUTION PLAN

The 2009 SIRP had a series of contingency actions that take place only once the Watermaster makes a Declaration of Seawater Intrusion. This updated SIRP includes the same set of actions but splits Action 4: Pumping Redistribution Plan up into two parts (Figure 7).

Time is of the essence and the first part of the Pumping Redistribution Plan must be completed as soon as possible after the Seaside Basin groundwater model has been updated in 2026. Should the Watermaster make a Declaration of Seawater Intrusion, having the Part 1 evaluations available allows Part 2 to be implemented quicker. In the future, Part 1 will only need to be updated if there are significant future operational changes to how groundwater is used and managed.

Due to the time sensitive nature of responding to observed seawater intrusion in a timely manner, some evaluations included in the 2009 SIRP pumping redistribution plan activities should be completed proactively before seawater intrusion is declared. This approach provides well pumpers with more time to plan for operational changes that need to be implemented quickly if seawater intrusion is declared.

In the context of this Updated SIRP these terms have the following meanings:

- “Impacted Well” means a monitoring or production well that has been intruded by seawater.
- “At Risk Well” means a production well that has the potential to become impacted by seawater intrusion based on its proximity to an Impacted Well(s), local groundwater gradients, and other conditions.

Once the Seaside Basin groundwater model has been updated, proactive evaluations to be completed include:

- **Identify At Risk well(s) where seawater intrusion might occur.** The groundwater model can be used to indicate which wells may be impacted if seawater intrusion is observed at individual monitoring or production wells. The 2022 particle tracking modeling of potential seawater intrusion travel rates from the coast can be leveraged where the same modeling workflow can be used for assessing likely At Risk Wells. Instead of placing particles at the coast as was done in 2022, particles can be placed at all monitoring and production wells to understand the likely path from those wells if they are impacted in the future.

- **Estimate groundwater conditions that protect production wells (activity 4 in 2009 SIRP).** Protective elevations have already been established to determine coastal groundwater conditions that protect production wells. If protective coastal elevations are not met, production wells can be protected by reversing the hydraulic gradient back toward the ocean. It is assumed that raising groundwater levels at production wells to reverse the gradient will also eventually achieve protective elevations at coastal monitoring wells. Based on below sea level groundwater elevations within the pumping depressions in the Paso Robles (shallow aquifer) and Santa Margarita (deep aquifer), static and pumping groundwater levels need to rise above sea level, which means an increase of at least 30 feet.
- **Evaluate each production wells' influence on potential seawater intrusion at each monitoring and production well.** All production wells in the Seaside Groundwater Basin will be evaluated using the numerical groundwater model or by analytical modeling and ranked by their relative influence on groundwater gradients that may cause seawater intrusion and migration. The hydraulic gradients between wells are a function of the combined effects of the regional flow gradient and the head drawdown from each production well. This allows for the contribution of each well to the magnitude of the gradient between wells to be evaluated individually. Modeling can be used to evaluate how much reduction in pumping at specific wells will reduce the gradients driving seawater intrusion between potentially Impacted and non-impacted wells to a degree that sea water intrusion does not spread further. One or more recommended pumping scenarios that achieve the maximum acceptable gradients between Impacted and At Risk well(s) should be developed.

If the Watermaster makes a Declaration of Seawater Intrusion before these evaluations have been completed, the work must be expedited so as to not delay implementation of Part 2 of the pumping redistribution plan.

PART 1 OF PUMPING REDISTRIBUTION PLAN

Proactive or advance evaluations to be completed once the Seaside Basin groundwater model has been updated:

- **Identify At Risk well(s) where seawater intrusion might occur**
- **Estimate groundwater conditions that protect production wells**
- **Identify and evaluate each production wells' influence on potential seawater intrusion at each monitoring and production well**

DECLARATION OF SEAWATER INTRUSION

PART 2 OF PUMPING REDISTRIBUTION PLAN

Initiated immediately after the Declaration of Seawater Intrusion

- **Increase monitoring frequency**

Time is of the essence – to be initiated as soon as possible after the Declaration of Seawater Intrusion:

- **Implement recommended Part 1 pumping changes specific to the location of the Impacted and At Risk well(s)**
- **Perform land-based geophysical surveys to determine how far inland from the Impacted Well the intrusion extends and to help identify sites to install additional monitoring wells, if required**
- **Identify and/or install additional monitoring wells**

Figure 7. Summary of Part 1 and 2 of the Pumping Redistribution Plan

5 SEAWATER INTRUSION CONTINGENCY ACTIONS

It is not possible to halt and reverse seawater intrusion unless supplemental supplies are available. Until these supplies are secured, the Watermaster should implement containment strategies to reduce the magnitude and extent of seawater intrusion, if it is observed. By containing seawater intrusion, the Watermaster will (1) help preserve productive use of the Seaside Groundwater Basin, and (2) facilitate the restoration of the Seaside Groundwater Basin water quality by limiting the extent and spread of the intrusion. The purpose of this section of the SIRP is to develop a containment strategy and actions that can be implemented if seawater intrusion is observed in the Seaside Groundwater Basin.

5.1 Geographic Area Covered by Contingency Actions

The contingency actions described in Section 4.2 are only triggered by seawater intrusion occurring inside the Seaside Groundwater Basin boundary illustrated on Figure 1.

5.2 Actions Addressing Observed Seawater Intrusion

The specific actions that should be implemented if seawater intrusion is detected, as defined by the triggers in Section 3.2, are as follows.

5.2.1 Action 1: Verification

Time will be of the essence and wells with chloride concentrations greater than respective chloride threshold values and Sodium/Chloride molar ratios below 0.86 shall be re-sampled as soon as possible. Re-sampling should include the full suite of major cations and anions, which will allow all of the indicators listed in Section 3 to be verified. Laboratory analyses should be conducted with an expedited turnaround time. If re-sampling these wells verifies the presence of seawater intrusion in the Seaside Groundwater Basin by meeting the required triggers (see Section 3.2), Actions 2, 3, Part 2 of action 4, and action 5 should be implemented.

5.2.2 Action 2: Declaration of Seawater Intrusion

If the verification confirms that seawater intrusion has occurred within the Seaside Groundwater Basin, time will be of the essence and the Watermaster shall issue a Declaration of Seawater Intrusion as soon as possible after verification.

5.2.3 Action 3: Notification

Within 10 calendar days following the Watermaster's Declaration of Seawater Intrusion, all groundwater producers in the Seaside Groundwater Basin, MPWMD, and all other interested

entities within the Seaside Groundwater Basin shall be formally notified. The Watermaster shall notify all parties that the SIRP contingency actions have been triggered and will identify the well(s) that triggered the SIRP contingency actions.

5.2.4 Action 4: Part 2 of the Pumping Redistribution Plan

The pumping redistribution plan is designed to contain observed seawater intrusion and protect production wells until a supplemental water supply is obtained.

5.2.4.1 Part 2 of the Pumping Redistribution Plan

Time will be of the essence and the following activity should be initiated as soon as possible after the Declaration of Seawater Intrusion:

Increase monitoring frequency. The Watermaster should increase the monitoring frequency of the Impacted Well(s), monitoring wells, and At Risk well(s) to evaluate the progress of the seawater intrusion. Each month, groundwater elevations at these wells should be measured, groundwater samples should be collected from these wells and analyzed for major cations and anions, and the groundwater gradient should be analyzed to determine if pumping reductions are having the planned effect.

Because time will be of the essence, all of the following activities shall be initiated as soon as possible after the Declaration of Seawater Intrusion:

1. **Implement recommended Part 1 pumping changes specific to the locations of the Impacted and At Risk well(s).** If seawater intrusion has been declared for a production well, pumping changes at this well and other identified production wells should be implemented as soon as possible per Part 1 of the Pumping Redistribution Plan. Part 1 of the Pumping Redistribution Plan will uniquely identify what pumping changes are needed if seawater intrusion is detected in any production or monitoring well to reverse the groundwater gradient from inland to towards the coast to protect against seawater intrusion. Once Part 1 of the Pumping Redistribution Plan has been completed, this SIRP will be amended to include specific (quantified) recommendations for pumping changes in this section
2. **Perform land-based geophysical surveys.** If this technology is found to be feasible in the area to be surveyed, land-based geophysical survey(s) to determine how far inland the intrusion extends from the Impacted Well should be performed. This information can be used to improve travel time estimates to At Risk wells. It also helps to identify sites where additional monitoring well(s) may be beneficial.

3. **Identify and/or install additional monitoring wells (activity 2 in 2009 SIRP).** The Watermaster will evaluate the benefit of installing additional groundwater monitoring wells to evaluate the movement of seawater intrusion toward the At Risk well(s). If this evaluation concludes that monitoring wells should be installed, the Watermaster should pursue installation of these wells. Factors to be considered in performing this evaluation are expected to include:
 - The location(s) at which a new monitoring well(s) should be installed
 - The depth at which water quality sampling perforations in a new monitoring well should be constructed
 - The cost of installing a new monitoring well
 - Will data collected from the new monitoring well(s) sufficiently improve our knowledge of the location of seawater intruded strata to justify the cost of installing a new monitoring well(s)

5.2.5 Action 5: Focus Supplemental Supplies to Halt and Reverse Seawater Intrusion

When a supplemental water supply becomes available for Seaside Groundwater Basin replenishment, the Watermaster should seek to have the supplemental water used strategically to protect the Seaside Groundwater Basin from further seawater intrusion and to restore the Basin to pre-seawater intruded conditions. Supplemental supplies should be used to both offset pumping that causes the observed seawater intrusion and to raise groundwater levels to reverse it.

6 REFERENCES

- Bachman, S. 2005. Seaside Basin – Principles of Settlement, October 20, 2005.
- California American Water v. City of Seaside et al. Monterey County Superior Court, Case Number M66343, filed in Monterey County Superior Court on March 27, 2006, amended on February 9.
- Feeney, M.B. 2022. Addendum to Geophysical Investigation of Fort Ord Monitoring Well FO-10, prepared for Seaside Groundwater Basin Watermaster. February 28.
- HydroMetrics LLC. 2009a. Seawater Intrusion Response Plan, Seaside Basin, Monterey County, California, prepared for the Seaside Groundwater Basin Watermaster, February.
- HydroMetrics LLC. 2009b. Seaside Groundwater Basin Modeling and Protective Groundwater Elevations, prepared for the Seaside Groundwater Basin Watermaster, October 2009.
- Jones, B.F., A. Vengosh, E. Rosenthal, and Y. Yechieli. 1999. Geochemical investigations, *in* Bear, Jacob, and others, eds., Seawater intrusion in coastal aquifers—Concepts, methods and practices, Dordrecht, The Netherlands, Kluwer Academic Publishers, p. 51–71.
- Monterey Peninsula Water Management District (MPWMD). 1999. Expanded Water Conservation and Standby Rationing Plan, Rule 160 et seq. added by ordinance number 92, January 29, 1999, updated by ordinance number 119, March 21, 2005.
- Monterey Peninsula Water Management District (MPWMD). 2016. 2016 Water Conservation and Rationing Plan, Rule 16-167 added by ordinance number 169, adopted February 17, 2016. Accessed online on May 1, 2025 at: <https://www.mpwmd.net/wp-content/uploads/2016-Conservation-and-Rationing-Plan-1.pdf>
- Montgomery & Associates. 2024. Water Year 2024 Seawater Intrusion Analysis Report, prepared for the Seaside Groundwater Basin Watermaster, December 23.
- Seaside Groundwater Basin Watermaster. 2006. Seaside Basin Monitoring and Management Program, May 17, 2006, 24 p.
- United States Environmental Protection Agency (US EPA). 2008. Drinking Water Contaminants, retrieved from <http://www.epa.gov/safewater/contaminants/index.html#mcls>, accessed on June 16, 2008, last updated on Thursday, June 5th, 2008.



Yates, E.B., M.B. Feeney, and L.I. Rosenberg. 2005. Seaside groundwater basin: update on water resources conditions, prepared for Monterey Peninsula Water Management District.

ATTACHMENT 10

**MONTEREY COUNTY HEALTH DEPARTMENT LETTER TO
THE OWNER OF THE SECURITY NATIONAL GUARANTEE
WELL**



COUNTY OF MONTEREY HEALTH DEPARTMENT

Elsa Jimenez, Director of Health

Administration Clinic Services Public Health
Behavioral Health Emergency Medical Services Public Administrator/Public Guardian
Environmental Health/Animal Services

Nationally Accredited for Providing Quality Health Services

April 1, 2025

Ed Ben Ghandour SNG Evariste LLC
Parcel Number 011-501-014-000
SNG Evariste LLC
520 New Port Center Dr. Ste 480
New Port Beach, Ca 92660
Sent Via E-mail
edg.sng@outlook.com

RE: Abandoned Water Well APN 011-501-014-000

Dear Mr. Ghandour:

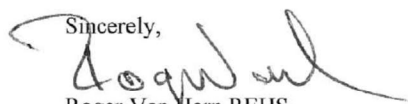
It has come to Monterey County Health Department, Environmental Health Bureau's (EHB) attention that an abandoned water well exists on parcel 011-501-014-000. The well was drilled and completed March 16, 1966, to a depth of 650'. After examining the e-log that was completed February 16, 2018, by Newman Well Surveys, it shows considerable damage to the casing as well as the bottom of the well is now only 544', which indicates that the well has collapsed below that depth. I have included the well completion report and the e-log.

A well is considered abandoned when it had not been used for a period of one year, unless the owner can demonstrate the intention to use the well again for supplying water or other associated purpose. In the case of this well the potential that the well will allow impairment of the water quality within the well and the groundwater indicates that this well must be destroyed.

Abandoned wells may endanger the public and contaminate our groundwater and are required to be properly destroyed according to standards set forth in the Monterey County Code 15.08 Section 120 and the California Well Standards.

Please have a licetice well driller obtain a well destruction permit from the EHB no later than **April 30th, 2025**, and have the well properly destroyed within 30 days of issuance of the destruct permit.

If you have any questions please contact this me at 755- 4763 or email vanhornrw@countyofmonterey.gov

Sincerely,


Roger Van Horn REHS
Supervisor Environmental Health Specialist

Attachments: A. Well completion report
B. Newman Well Surveys dated 16-Feb-18

