

**CALIFORNIA PUBLIC UTILITIES COMMISSION  
DIVISION OF WATER AND AUDITS**

**Advice Letter Cover Sheet**

<b>Utility Name:</b> California American Water	<b>Date Mailed to Service List:</b> December 23, 2022
<b>District:</b> Monterey Service Area	
<b>CPUC Utility #:</b> U210W	<b>Protest Deadline (20<sup>th</sup> Day):</b> January 12, 2023
<b>Advice Letter #:</b> 1402	<b>Review Deadline (30<sup>th</sup> Day):</b> January 22, 2023
<b>Tier</b> <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/> 3 <input checked="" type="checkbox"/> Compliance	<b>Requested Effective Date:</b> TBD
<b>Authorization</b> D.22-12-001	
<b>Description:</b> Pure Water Monterey Expansion – Potential Mercury Treatment	<b>Rate Impact:</b> \$See AL See AL%

The protest or response deadline for this advice letter is 20 days from the date that this advice letter was mailed to the service list. Please see the "Response or Protest" section in the advice letter for more information.

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**DWA USE ONLY**

<u>DATE</u>	<u>STAFF</u>	<u>COMMENTS</u>
_____	_____	_____
_____	_____	_____

[ ] APPROVED

[ ] WITHDRAWN

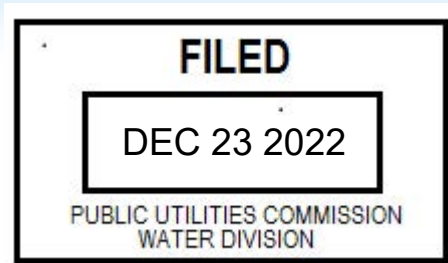
[ ] REJECTED

**Signature:** \_\_\_\_\_

**Comments:** \_\_\_\_\_

**Date:** \_\_\_\_\_

\_\_\_\_\_



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Decemeber 23, 2022

ADVICE LETTER NO. 1402

TO THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

California-American Water Company (U210W) (California American Water) submits this advice letter applicable to its Monterey Main service area customers.

**Purpose:**

By this advice letter, California American Water complies with Ordering Paragraph 4 of Decision (“D.”) 22-12-001 and requests authorization to refile this Tier 3 advice letter, either as a supplement or as a new filing, at a time when cost estimates can be provided.

**Background:**

On December 5, 2022, the Public Utilities Commission issued D.22-12-001. D.22-12-001 authorized, among other items, cost caps for certain facilities necessary for the Pure Water Monterey (“PWM”) Expansion Project. The facilities included extraction wells EW-1 and EW-2. EW-1 and EW-2 will be located at the Seaside Middle School, which is also the location of ASR Well 4 (“ASR-4”). In D.22-12-001, the Commission found “[w]ater samples collected from well ASR-4 on June 16, 2021, and July 6, 2021, contained concentrations of mercury above the maximum contamination level set by SWRCB.”<sup>1</sup> The Commission further noted that:

The presence of mercury at ASR-4 is of concern for the PWM Expansion Project because the proposed EW-1/EW-2 facility is also located at the Seaside Middle School. As the primary extraction site for the PWM Expansion Project, Cal-Am must demonstrate that mercury contamination in groundwater at the Seaside Middle School will not impact PWM Expansion Project wells EW-1 or EW-2, since Cal-

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<sup>1</sup> D.22-12-001, p.80, Finding of Fact 25.

Am's current budget contemplates disinfection but not treatment of extracted groundwater for mercury.<sup>2</sup>

Based on its findings, the Commission ordered California American Water to file this Tier 3 advice letter as follows:

4. California-American Water Company must file a "Response to Inquiry" within 30 days of the issuance date of this decision, providing additional information discussing the extent of mercury above maximum contamination levels in the vicinity of ASR-4, the potential for mercury to impact extracted water from the EW-1/EW-2 site, any proposal to treat the mercury, and the potential cost impacts from mercury treatment as a Tier 3 advice letter to the California Public Utilities Commission's Water Division within 30 days of the issuance date of this decision. Water Division is directed to increase the cost cap herein authorized for the EW-1/EW-2 facility, as reasonable, to address additional remediation measures.<sup>3</sup>

### **Response to Inquiry:**

California American Water worked with Valentine Environmental Engineers, LLC in order to provide the required response to inquiry. The following summarizes those findings.

#### **1. Extent of mercury above maximum contamination levels in the vicinity of ASR-4.**

Mercury can be either naturally occurring or found as a result of anthropogenic sources (such as from production of electrical products and other mercury-laden wastes).

The available water quality results indicate that other wells within a five (5) mile vicinity of EW-1/EW-2 are not typically subject to elevated mercury concentrations. While there is a chance that anthropogenic contamination may have resulted in the elevated concentration of mercury at the existing ASR Wells 1, 2 and 4, the issue is likely created by the combined injection and extraction operation of each well creating further disturbance of the subterranean soils local to each well and resulting in atypical release of naturally occurring mercury into the groundwater. Investigations California American Water has performed

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<sup>2</sup> D.22-12-001, p.33.

<sup>3</sup> D.22-12-001, pp. 87-88, Ordering Paragraph 4.

indicate mercury detection is from particles released from mercury containing aquifer deposits due to initial injection/extraction operations (flow direction change causing particle release).

To further support the theory of injection/extraction operation resulting in atypical release of mercury, the observed mercury issues at ASR 4 well have been temporary. When the well operation is changed from injection to extraction mode, the elevated mercury concentrations are only observed for a period of time before concentrations drop below the MCL. Thus far the period of time with elevated mercury in the ASR wells has been in the range of 1 to 2 years, but appears dependent on factors including the length of the injection time period as well as time between injection and extraction operations.

**2. The potential for mercury to impact extracted water from the EW-1/EW-2 site.**

Based on the data for wells in the area around the proposed EW-1 and EW-2 wells and because these wells will only be operated in extraction mode (California American Water has no plans to alternate injection and extraction at these wells), a mercury issue is not anticipated at EW-1 and EW-2.

The extent of whether mercury above the maximum contaminant level (MCL) of 2 ug/L will be an issue at the new extraction wells (EW-1/EW-2) cannot be confirmed until a test well is drilled and tested for water quality. The test well drilling and testing will be completed before the production extraction wells are constructed and thus will confirm whether mercury is present above MCL and warrants treatment. If mercury is encountered from the test well analysis or future water quality sampling, the EW-1/EW-2 site design(s) can be adjusted to include mercury treatment.

**3. Any proposal to treat the mercury.**

Based on the foregoing, a proposal for mercury treatment is not included at this time.

**4. The potential cost impacts from mercury treatment.**

For the cost impacts of mercury treatment for the future extraction wells, if warranted, the concentrations of mercury and flows from the wells would need to be defined as these could significantly impact the treatment required and the treatment cost.

The test well is estimated to be completed by mid-2023 or sooner. If mercury is encountered in the test well that is above the MCL, there would be an expected timeframe of 30-60 days (1-2 months) needed in order to develop a range of

treatment system cost estimates for the Tier 3 advice letter to the CPUC. A range of cost estimates would be provided as the production well flowrate is also a factor in the cost of the treatment system; however, this production flowrate would not be confirmed until the actual extraction wells (EW-1 and EW-2) were drilled and tested.

**Request:**

For the reasons described above – the anticipation that no mercury above the MCL will be found and that costs cannot be determined unless and until it is found in the test well – providing cost estimates for treatment is not possible at this time. Therefore, California American Water requests the ability to refile this Tier 3 advice letter, either as a supplement or as a new filing, at a time when cost estimates can be provided. As described above, the filing would be made approximately two months after any potential discovery of mercury above the MCL in the test well. Should this timeline change, California American will communicate the potential changes to Water Division.

**Tier Designation:**

This advice letter is submitted pursuant to General Order No. 96-B and D.22-12-001 and is designated as a Tier 3 filing.

**Effective Date:**

California American Water requests the advice letter be made effective following a resolution from the CPUC.

**Notice:**

Pursuant to Section 4.3 of General Order No. 96-B, a copy of this advice letter is being provided to those entities listed in the attached “SERVICE LIST PURSUANT TO SECTION 4.3 OF G.O. NO. 96-B.” Per guidance from the California Public Utilities Commission’s Water Division, during the COVID-19 pandemic, advice letters will only be delivered electronically to the service list.

**RESPONSE OR PROTEST**<sup>4</sup>

Anyone may submit a response or protest for this AL. When submitting a response or protest, **please include the utility name and advice letter number in the subject line.**

A **response** supports the filing and may contain information that proves useful to the Commission in evaluating the AL. A **protest** objects to the AL in whole or in

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<sup>4</sup> G.O. 96-B, General Rule 7.4.1

part and must set forth the specific grounds on which it is based. These grounds<sup>5</sup> are:

- (1) The utility did not properly serve or give notice of the AL;
- (2) The relief requested in the AL would violate statute or Commission order, or is not authorized by statute or Commission order on which the utility relies;
- (3) The analysis, calculations, or data in the AL contain material error or omissions;
- (4) The relief requested in the AL is pending before the Commission in a formal proceeding; or
- (5) The relief requested in the AL requires consideration in a formal hearing, or is otherwise inappropriate for the AL process; or
- (6) The relief requested in the AL is unjust, unreasonable, or discriminatory, provided that such a protest may not be made where it would require relitigating a prior order of the Commission.

A protest may not rely on policy objections to an AL where the relief requested in the AL follows rules or directions established by statute or Commission order applicable to the utility. A protest shall provide citations or proofs where available to allow staff to properly consider the protest.

DWA must receive a response or protest via email (**or** postal mail) within 20 days of the date the AL is filed. When submitting a response or protest, **please include the utility name and advice letter number in the subject line.**

The addresses for submitting a response or protest are:

<b>Email Address:</b> <a href="mailto:Water.Division@cpuc.ca.gov">Water.Division@cpuc.ca.gov</a>	<b>Mailing Address:</b> CA Public Utilities Commission Division of Water and Audits 505 Van Ness Avenue San Francisco, CA 94102
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On the same day the response or protest is submitted to DWA, the respondent or protestant shall send a copy of the protest to California American Water at:

<b>Email Address:</b> <a href="mailto:chase.grady@amwater.com">chase.grady@amwater.com</a>	<b>Mailing Address:</b> 520 Capital Mall, Suite 630 Sacramento, CA 95814
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<sup>5</sup> G.O. 96-B, General Rule 7.4.2



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CALIFORNIA-AMERICAN WATER COMPANY  
ADVICE LETTER 1402  
SUPPORTING DOCUMENTATION FOR STAFF

Pure Water Monterey Expansion –  
Potential Mercury Treatment – Monterey Service Area  
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ALJ/ZK1/sgu

Date of Issuance 12/5/2022

Decision 22-12-001 December 1, 2022

**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA**

Application of California-American Water Company (U210W) to Obtain Approval of the Amended and Restated Water Purchase Agreement for the Pure Water Monterey Groundwater Replenishment Project, Update Supply and Demand Estimates for the Monterey Peninsula Water Supply Project, and Cost Recovery.

Application 21-11-024

**DECISION AUTHORIZING CALIFORNIA-AMERICAN WATER COMPANY TO ENTER INTO THE PURE WATER MONTEREY GROUNDWATER REPLENISHMENT EXPANSION PROJECT, AND AUTHORIZING THE CONSTRUCTION OF FOUR COMPANY-RELATED FACILITIES AND ASSOCIATED RATEMAKING TREATMENT**

**O R D E R****IT IS ORDERED** that:

1. California-American Water Company is authorized to enter into the Amended and Restated Water Purchase Agreement, attached to this decision as Appendix A.
2. California-American Water Company (Cal-Am) shall actively participate in each Monterey One Water (M1W) and Monterey Peninsula Water Management District (MPWMD), or their successor entities, rate proceedings involving the Amended and Restated Water Purchase Agreement (Amended WPA), attached to this decision as Appendix A. Cal-Am shall serve and file its written comments to the M1W or MPWMD proposal in the applicable rate proceeding(s). Cal-Am's written comments shall identify any and all concerns of Cal-Am with M1W's and MPWMD's proposals and provide alternative recommendations, if appropriate. If Cal-Am has no concerns, Cal-Am, in its written comments, shall state that it has no concerns. At the time Cal-Am serves and files its comments on the service list of the rate proceeding at issue, including M1W or MPWMD, Cal-Am shall simultaneously serve an electronic copy of the comments on the Commission's Director of Water Division and the service list of this proceeding.
3. California-American Water Company is authorized to construct and operate the following Company-related facilities: (1) extraction wells EW-1 and EW-2, and the chemical treatment facility; (2) extraction wells EW-3 and EW-4, and related piping; (3) the General Jim Moore Parallel Pipeline and the 1,100-foot section of the Transfer Pipeline; and (4) the Carmel Valley Pump Station.
4. California-American Water Company must file a "Response to Inquiry" within 30 days of the issuance date of this decision, providing additional

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information discussing the extent of mercury above maximum contamination levels in the vicinity of ASR-4, the potential for mercury to impact extracted water from the EW-1/EW-2 site, any proposal to treat the mercury, and the potential cost impacts from mercury treatment as a Tier 3 advice letter to the California Public Utilities Commission's Water Division within 30 days of the issuance date of this decision. Water Division is directed to increase the cost cap herein authorized for the EW-1/EW-2 facility, as reasonable, to address additional remediation measures.

5. The Mitigation Monitoring and Reporting Plan, attached to this decision as Appendix C, is adopted.

6. California-American Water Company (Cal-Am) shall carry out the following identified mitigation measures associated with the construction of Cal-Am's facilities which are detailed in the attached Appendix C: AE-2, AE-3, AE-4, AQ-1, BT-1a to BT-1d, BT-1f, BT-1h to BT-1k, BT-1m, BT-4, CR-2b, CR-2c, EN-1, NV-1a, NV-1c, NV-1e, NV-1f, NV-2, PS-3, TR-2, TR-3, and TR-4.

7. California-American Water Company (Cal-Am) is authorized to construct wells EW-3, EW-4, and the associated pipelines, on condition that Cal-Am complies with the following identified mitigation measures associated with the construction of Cal-Am's facilities which are detailed in the attached Appendix C: AE-2, AE-3, AE-4, AQ-1, BT-1a to BT-1d, BT-1f, BT-1h to BT-1k, BT-1m, BT-4, CR-2b, CR-2c, EN-1, NV-1a, NV-1c, NV-1e, NV-1f, NV-2, PS-3, TR-2, TR-3, and TR-4.

8. California-American Water Company is authorized to track direct costs for the four Company-related facilities, including the allowance for funds used during construction, in a subaccount of the Monterey Peninsula Water Supply

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Project Phase 1 Costs Memorandum Account called the “PWM Expansion Project Costs Memorandum Account.”

9. California-American Water Company shall submit a Tier 1 Advice Letter to the Commission’s Water Division within 30 days of the date of issuance of this decision requesting to establish the PWM Expansion Project Costs Memorandum Account for the purpose of tracking PWM Expansion Project costs.

10. Within 60 days after operation commences at any of the Company-related facilities approved in this decision, California-American Water Company shall notify the Director of the Commission’s Water Division by electronic letter indicating that the facility is completed and fully in service.

11. Within 60 days of notifying the Commission’s Water Division of facility operation, California-American Water Company (Cal-Am) shall seek recovery of the costs of Company-related facilities up to the following cost caps using a Tier 2 Advice Letter: (1) \$16,723,704 for extraction wells EW-1 and EW-2, and the chemical treatment facility; (2) \$30,220,960 for extraction wells EW-3 and EW-4 and related piping; (3) \$8,264,655 for the General Jim Moore Parallel Pipeline and the 1,100-foot section of the Transfer Pipeline; and (4) \$6,475,000 for the Carmel Valley Pump Station. Cal-Am’s Tier 2 AL filing shall provide the following: (1) a description of the facilities that are used and useful; (2) whether the costs are reasonable; and (3) whether the facilities are appropriately sized.

12. California-American Water Company is authorized to seek recovery for the additional costs incurred subsequent to October 2021, when the costs exceed the rate caps adopted for the Company-related facilities, through the next applicable general rate case.

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13. All rulings issued to date by the assigned Commissioner and the assigned Administrative Law Judge in this proceeding are affirmed.

14. All pending motions relating to issues in Phase 1 of this proceeding, not expressly addressed by the assigned Administrative Law Judge or assigned Commissioner are denied.

15. Application 21-11-024 remains open to resolve Phase 2 issues.

This order is effective today.

Dated December 1, 2022, at San Francisco, California.

ALICE REYNOLDS

President

CLIFFORD RECHTSCHAFFEN

GENEVIEVE SHIROMA

DARCIE L. HOUCK

JOHN REYNOLDS

Commissioners

## MEMORANDUM

**To:** Tim O'Halloran  
California American Water

**From:** Samantha Terrell, PE  
Teresa Valentine, PE  
Valentine Environmental Engineers, LLC

**RE:** Extraction Wells (EW) 1 and 2 Anticipated Mercury Issues

**Date:** December 21, 2022

### **Introduction**

The California Public Utilities Commission (CPUC) has requested that California American Water (CAW) discuss potential for mercury to impact the future extraction wells (EW) 1 and 2. California American Water is authorized to construct and operate EW-1 and EW-2 as well as the chemical addition facility, which will all be located to the west of General Jim Moore Boulevard and north of Coe Avenue. Mercury issues have been observed in CAW's existing ASR Wells – specifically ASR Well 4. ASR Well 4 is located west of General Jim Moore Boulevard and north of Coe Avenue. The new EW-1 and EW-2 will be located a couple hundred feet north/northwest of the ASR Well 4. A figure showing the overall locations of CAW wells is included in Figure 1.

The CPUC requested additional discussion on the following related to the EW-1 and EW-2 project:

- Extent of mercury above maximum contaminant levels (MCL) in the vicinity of ASR-4
- Potential for mercury to impact extracted water from the EW-1/EW-2 site
- Any proposal to treat mercury
- Potential cost impacts from mercury treatment as a Tier 3 advice letter to the CPUC

### **Mercury Issue Background**

As stated in the State Water Resources Control Board's published groundwater information sheet for mercury, mercury can be either naturally occurring or found as a result of anthropogenic sources (such as from production of electrical products and other mercury-laden wastes).

The Groundwater Information System (GAMA) was explored to assess whether mercury has been observed within the last 10 years in any type of well within a five (5) mile radius of the new extraction wells 1 and 2 (EW-1 and EW-2). Figure 2 is included in the attached and shows that for the reported water quality, only one well other than the ASR Wells 1, 2 and 4 had a reported mercury concentration above 2 ug/L in the last 10 years. This was within one sampling event for the well, which is



located near Fremont Street and Highway 218, which occurred in 2015 with a reported mercury concentration of 2.1 ug/L.

Thus, the available water quality results indicate that other wells within a five (5) mile vicinity of EW-1/EW-2 are not typically subject to elevated mercury concentrations. While there is a chance that anthropogenic contamination may have resulted in the elevated concentration of mercury at the existing ASR Wells 1, 2 and 4, the issue is likely created by the combined injection and extraction operation of each well creating further disturbance of the subterranean soils local to each well and resulting in atypical release of naturally occurring mercury into the groundwater. Investigations CAW has performed indicate mercury detection is from particles released from mercury containing aquifer deposits due to initial injection/extraction operations (flow direction change causing particle release).

This theory is especially considered as the GAMA shows there are no other wells with reported elevated mercury concentrations within the last 10 years in the vicinity. California American Water's nearby extraction-only Paralta Well (located at General Jim Moore Boulevard and Coe Avenue as shown in Figure 1), for example, has historically not had mercury concentrations in excess of the MCL. The Paralta well located is approximately 1,000 feet south from the ASR 4 well.

To further support the theory of injection/extraction operation resulting in atypical release of mercury, the observed mercury issues at ASR 4 well have been temporary. When the well operation is changed from injection to extraction mode, the elevated mercury concentrations are only observed for a period of time before concentrations drop below the MCL. Thus far the period of time with elevated mercury in the ASR wells has been in the range of 1 to 2 years, but appears dependent on factors including the length of the injection time period as well as time between injection and extraction operations.

### **Potential for Mercury Issue at EW-1 and EW-2**

Based on the data for wells in the area around the proposed EW-1 and EW-2 wells and because these wells will only be operated in extraction mode (CAW has no plans to alternate injection and extraction at these wells), a mercury issue is not anticipated at EW-1 and EW-2.

The extent of whether mercury above the maximum contaminant level (MCL) of 2 ug/L will be an issue at the new extraction wells (EW-1/EW-2) can not be confirmed until a test well is drilled and tested for water quality. The test well drilling and testing will be completed before the production extraction wells are constructed and thus will confirm whether mercury is present above MCL and warrants treatment. If mercury is encountered from the test well analysis or future water quality sampling, the EW-1/EW-2 site design(s) can be adjusted to include mercury treatment.

A proposal for mercury treatment is not included at this time. For the cost impacts of mercury treatment for the future extraction wells, if warranted, the concentrations of

mercury and flows from the wells would need to be defined as these could significantly impact the treatment required and the treatment cost.

The test well is estimated to be completed by mid-2023 or sooner. If mercury is encountered in the test well that is above the MCL, there would be an expected timeframe of 30-60 days (1-2 months) needed in order to develop a range of treatment system cost estimates for the Tier 3 advice letter to the CPUC. A range of cost estimates would be provided as the production well flowrate is also a factor in the cost of the treatment system; however, this production flowrate would not be confirmed until the actual extraction wells (EW-1 and EW-2) were drilled and tested.

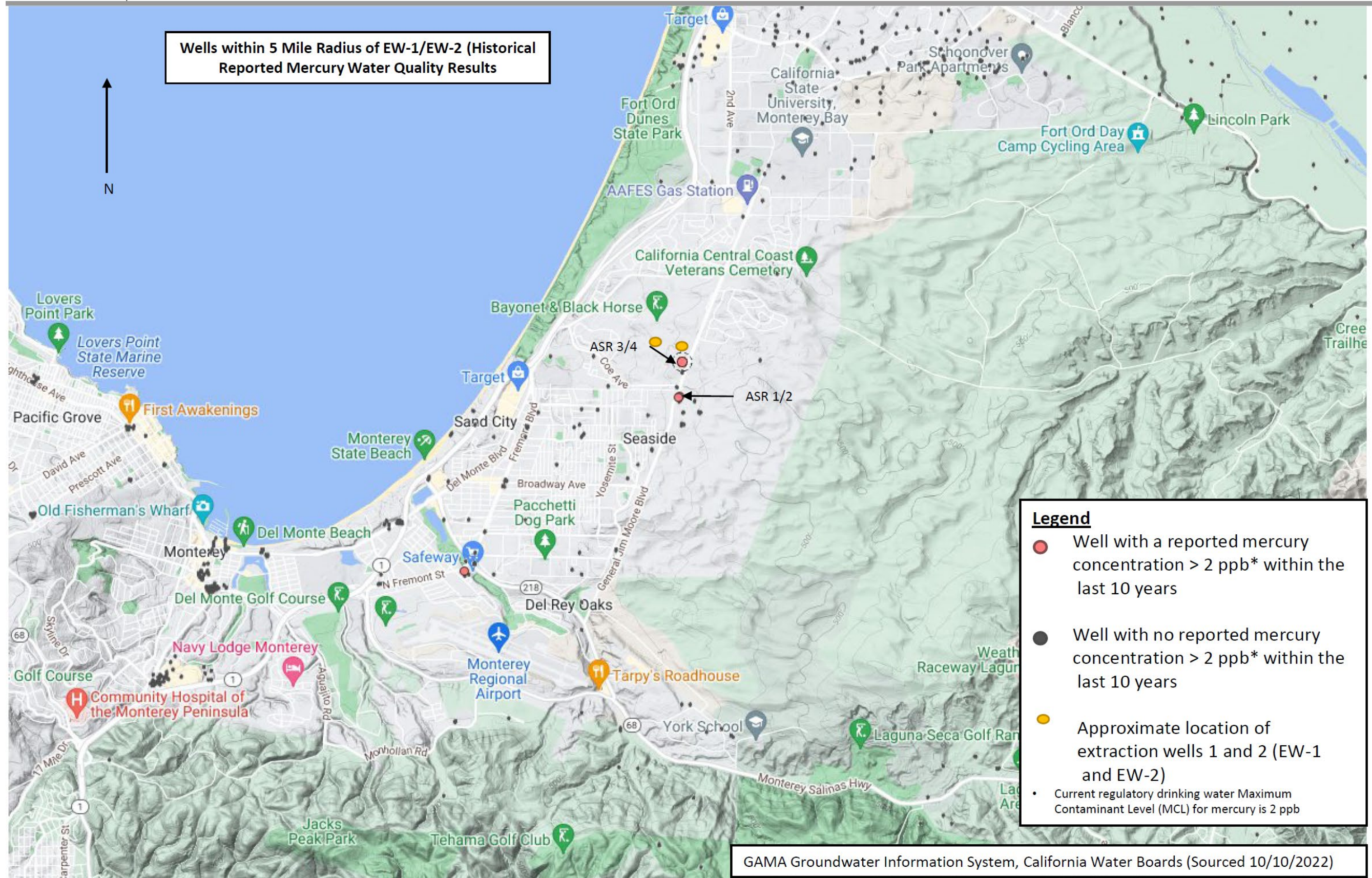
### California American Water | Extraction Wells (EW) 1 and 2 Anticipated Mercury Issues



Overall Map of CAW-Owned Wells in Vicinity of Extraction Wells 1 and 2

Figure 1

### California American Water | Extraction Wells (EW) 1 and 2 Anticipated Mercury Issues



**Mercury Concentrations in Five (5) Mile Radius Vicinity of EW-1 and EW-2 – GAMA Groundwater Information System**

**Figure 2**