

#### AGENDA Water Supply Planning Committee

Monday, May 5, 2025, at 2:00 p.m. | Virtual Meeting

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#### Join the meeting at:

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Copies of the agenda packet are available for review on the District website (<u>www.mpwmd.net</u>) and at 5 Harris Court, Bldg. G, Monterey, CA.

#### Call to Order / Roll Call

#### Additions and Corrections to the Agenda

**Comments from Public** – *The public may comment on any item within the District's jurisdiction. Please limit your comments to three (3) minutes in length.* 

**Action Items** – *Public comment will be received. Please limit your comments to three (3) minutes per item.* 

1. Consider Adoption of Committee Meeting Minutes from March 3, 2025

**Informational Items** – *Public comment will be received. Please limit your comments to three (3) minutes per item.* 

2. Seaside Municipal Well Funding Request

**Discussion Items** – *Public comment will be received. Please limit your comments to three (3) minutes per item.* 

- 3. Follow-Up on Watermaster Board Workshop on April 2, 2025
- 4. Update on Fort Ord Wells 09, 10, 11 Status
- 5. Timeline for Pure Water Monterey Expansion AWPF, Injection Wells, CAW Extraction Wells, and Regulatory Approvals (*Verbal Report*)
- 6. Committee Activities Related to Adopted 2025 Strategic Goals and Objectives (Verbal Report)

#### Suggest Items to be Placed on Future Agendas

#### Adjournment

#### Accessibility

In accordance with Section 202 of the Americans with Disabilities Act of 1990 (42 U.S.C. Sec. 12132), MPWMD will make a reasonable effort to provide written agenda materials in appropriate alternative formats, or disability-related modification or accommodation, including auxiliary aids or services, to enable individuals with disabilities to participate in public meetings. MPWMD will also make a reasonable effort to provide translation services upon request. Please send a description of the requested materials and preferred alternative format or auxiliary aid or service at least 48 hours prior to the scheduled meeting date/time. Requests should be forwarded to Sara Reyes by e-mail at sara@mpwmd.net or at (831) 658-5610.

#### **Options for Providing Public Comment**

#### Submission of Written Public Comment

Send written comments to District Office, 5 Harris Court, Building G, Monterey, CA or online at <u>comments@mpwmd.net</u>. Include the following subject line: "PUBLIC COMMENT ITEM #" (insert the agenda item number relevant to your comment). Written comments must be received by 12:00 PM on Monday, May 5, 2025. All submitted comments will be provided to the Committee, compiled as part of the record, and placed on the District's website as part of the agenda packet for the meeting. Correspondence is not read during public comment portion of the meeting.

Instructions for Connecting to the Zoom Meeting can be found at <u>https://www.mpwmd.net/instructions-for-connecting-to-the-zoom-meetings/</u>

Refer to the Meeting Rules to review the complete Rules of Procedure for MPWMD Board and Committee Meetings: <u>https://www.mpwmd.net/who-we-are/board-of-directors/meeting-rules-of-the-mpwmd/</u>

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#### WATER SUPPLY PLANNING COMMITTEE

**ITEM:** ACTION ITEM

1. CONSIDER ADOPTION OF COMMITTEE MEETING MINUTES FROM MARCH 3, 2025

Meeting Date: May 5, 2025

From: David J. Stoldt, General Manager

Prepared By: Sara Reyes

**SUMMARY:** Attached as **Exhibit 1-A** are the draft minutes of the Water Supply Planning Committee meeting held on March 3, 2025.

**RECOMMENDATION:** The Water Supply Planning Committee should review and adopt the minutes by motion.

#### EXHIBIT

**1-A** Draft Minutes of March 3, 2025 Water Supply Planning Committee Meeting

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#### EXHIBIT 1-A

Draft Minutes Water Supply Planning Committee Meeting Monday, March 3, 2025, at 2:00 p.m. Meeting Location: Zoom

#### Call to Order / Roll Call

Chair Paull called the meeting to order at 2:01 p.m.

#### Committee Members Present

Karen Paull, Chair Alvin Edwards (Alternate) Rebecca Lindor

#### **District Staff Members Present**

David Stoldt, General Manager Jonathan Lear, Water Resources Manager Maureen Hamilton, District Engineer Sara Reyes, Board Clerk

#### **District Counsel Present**

Michael Laredo, De Lay & Laredo Fran Farina, De Lay & Laredo

Additions and Corrections to the Agenda None

#### **Comments from the Public**

Chair Paull opened the public comment period, and the following comment was made to the committee:

1) John Tilley, urged the District to discuss the source waters for the Pure Water Monterey expansion. He raised concerns about the return on investment, suggesting that if the water sources are only temporarily available or not contractually secured, it would be wise to reconsider the expansion investment.

#### **Action Items**

#### 1. Consider Adoption of Committee Meeting Minutes from November 4, 2024

Chair Paull introduced this item and opened public comment; however no comments were directed to the committee.

On a motion by Paull and seconded by Edwards, the minutes of the November 4, 2024, committee meeting were approved on a roll call vote of 3 Ayes (Edwards, Paull and Lindor) and 0 Noes.

5 Harris Court, Building G, Monterey, CA 93940 – P.O. Box 85, Monterey, CA 93942-0085 831-658-5600 – Fax 831-644-9560 – <u>http://www.mpwmd.net</u>

**Committee Members Absent** Amy Anderson

**District Staff Members Absent** None

#### 2. Adopt 2025 Meeting Schedule

Chair Paull introduced this item and opened public comment; however, no comments were directed to the committee.

The committee discussed and agreed to change the September meeting date from the  $8^{th}$  to the  $2^{nd}$ .

Director Lindor offered a motion to adopt the 2025 meeting schedule with the change discussed. Director Edwards seconded the motion. The motion passed on a roll call vote of 3 Ayes (Lindor, Edwards, and Paull) and 0 Noes.

#### **Discussion Items**

#### 3. Discuss Seaside Subbasin Groundwater Divide Technical Memorandum

General Manager Stoldt reported that the District has hired Montgomery & Associates to investigate how groundwater levels in the Salinas Valley affect the Seaside Subbasin. This work aims to understand the groundwater flow divide at the northern boundary of the Seaside Subbasin.

Jonathan Lear, Water Resources Manager, and Fran Farina with De Lay & Laredo, answered questions of the committee. After discussion by the committee, it was agreed to include this item on the March 17, 2025 Board meeting agenda so that the full Board could participate in this matter.

#### 4. Seaside Groundwater Basin Watermaster Meetings

General Manager Stoldt reported that the District offered to post the Watermaster's meeting videos on the District's YouTube channel. District staff would either post the videos on their behalf or assist and/or train the Watermaster staff to post the videos on their own site.

Director Edwards stated he will attend the Wastermaster meeting on March 5 and will follow up on this matter.

#### 5. Update on Cease and Desist Order Timeline

General Manager Stoldt reported that the Monterey One Water is developing an notification and response plan for the Pure Water Monterey Project. He mentioned that this task involves some calculations on how CalAm can produce water in the event of a loss of a well. The plan may impact the readiness of CalAm to receive water from the Expansion and possibly the schedule. Staff will keep the committee updated on this matter.

#### Suggest Items to Be Placed on a Future Agenda

Update the Committee on the source waters for Pure Water Monterey.

#### Adjournment

There being no further business, Chair Paull adjourned the meeting at 3:34 p.m.

/s/ Sara Reyes

Sara Reyes, Board Clerk to the MPWMD Water Supply Planning Committee

Approved by the MPWMD Water Supply Planning Committee on \_\_\_\_\_\_. Received by the MPWMD Board of Director's on \_\_\_\_\_.

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#### WATER SUPPLY PLANNING COMMITTEE

#### **ITEM: DISCUSSION ITEM**

#### 2. SEASIDE MUNICIPAL WELL FUNDING REQUEST

Meeting Date:	May 5, 2025	<b>Budgeted:</b>	N/A
From:	David J. Stoldt General Manager	Program/ Line Item No.:	N/A
Prepared By:	David J. Stoldt	Cost Estimate:	N/A

General Counsel Approval: N/A Committee Recommendation: N/A CEQA Compliance: This action does not constitute a project as defined by the California Environmental Quality Act Guidelines Section 15378.

**SUMMARY:** In 2024 the District worked with Congressman Panetta's office and City of Seaside staff to apply for a Community Project Funding grant, or "earmark" for the 2025 Fiscal Year to assist in funding a second, redundant municipal well. That grant was approved in an amount of \$1.1 million. However, when the Continuing Resolution (CR) was passed by Congress in January to keep the government open, all earmarks were removed.

For FY2026, Rep. Panetta's office, and our two Senators' offices, have indicated they will resubmit the FY2025 earmark requests. The District has coordinated with the City and Congressman Panetta's office, and recently submitted a letter of support attached as **Exhibit 2-A**.

#### **EXHIBITS**

2-A District Letter-of-Support for Seaside Well Community Project Funding

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#### **EXHIBIT 2-A**



April 25, 2025

The Honorable Jimmy Panetta United States House of Representatives 304 Cannon House Office Building Washington, DC 20515

Dear Representative Panetta:

On behalf of the Monterey Peninsula Water Management District (MPWMD), I am writing to express our strong support for the allocation of funds in the Fiscal Year 2026 appropriations for the Seaside Municipal Well for Community Project Funding.

The Seaside Municipal Well Project, potentially through the EPA's STAG program, will be used to design and construct a backup potable water well for the Seaside Municipal Water System (SMWS). The SMWS serves 2,947 residents (800 connections). Approximately half the customers are identified by the California Department of Water Resources as a Census Block Group Disadvantaged Community with median income of \$39,750. The system has one active potable water well that is over 20 years old and experiences reliability problems. The State Division of Drinking Water requires that any community water system using only groundwater shall have a minimum of two approved sources. SMWS does not have a second drinking water well. Historically, when SMWS had a problem with its potable well, it obtained water from California American Water (Cal-Am) through an emergency intertie. In May 2023, Cal-Am indicated that it cannot guarantee water to SMWS because Cal-Am may not have capacity and its first obligation is to provide water to its own customers. SMWS has no reliable backup water supply for its customers. Design of the new well needs to be completed. A test well will need to be drilled in advance of proceeding with ordering and installation of the well pump. This project will help guarantee an uninterrupted supply of clean, affordable, and reliable water for the residents of Seaside, thereby safeguarding public health and community welfare.

The project has garnered widespread support from local and regional stakeholders, underscoring its significance to our community's water security. Furthermore, this project is especially crucial for serving our low- and moderate-income residents, ensuring equitable access to essential resources.

Thank you for your consideration. Your continued support is greatly appreciated as we seek to work with our community partners to help build a more sustainable and resilient future for the residents of Monterey Peninsula.

Sincerely,

David J. Stoldt General Manager

#### WATER SUPPLY PLANNING COMMITTEE

#### **ITEM: DISCUSSION ITEM**

#### 3. FOLLOW-UP ON WATERMASTER BOARD WORKSHOP ON APRIL 2, 2025

Meeting Date:	May 5, 2025	Budgeted:	N/A
From:	David J. Stoldt General Manager	Program/ Line Item No.:	N/A
Prepared By:	David J. Stoldt	Cost Estimate:	N/A

#### General Counsel Approval: N/A Committee Recommendation: N/A CEQA Compliance: This action does not constitute a project as defined by the California Environmental Quality Act Guidelines Section 15378.

**SUMMARY:** As part of ongoing District-funded work to understand the influence of groundwater levels in the Salinas Valley on conditions in the Seaside Subbasin, the District contracted with Montgomery & Associates (Consultant) to further investigate and summarize the dynamics of the groundwater flow divide that defines the northern boundary of the Seaside Subbasin in a Technical Memorandum.

The District's Water Supply Planning Committee reviewed and discussed the technical memorandum at its March 3, 2025 meeting and recommended informing the full Board of its findings. At the March 17, 2025 Board meeting, the Board directed staff to send to the Watermaster a letter summarizing its conclusions. That letter is included as **Exhibit 3-A**.

On April 2, 2025 the Watermaster held a workshop for its Board where a response to the District's letter was highlighted in an informational PowerPoint presentation entitled "What is the Problem?"

That presentation went on to state "there are two categories of problems": (a) "physical problems", and (b) "institutional problems with MPWMD." District staff who observed the presentation felt that the presentation mischaracterized the District's position on several issues related to the Seaside Basin. The Committee will receive a presentation from District staff on the topic and will be asked whether to make a presentation to the full Board, or any additional correspondence to the Watermaster.

#### EXHIBITS

- **3-A** March 31, 2025 Correspondence from District to Watermaster
- **3-B** April 2, 2025 Presentation from Watermaster Board Workshop

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#### **EXHIBIT 3-A**



VIA EMAIL

March 31, 2025

Mayor Ian Oglesby, Chairman Seaside Groundwater Basin Watermaster

#### RE: Recent Seaside Basin Groundwater Model Results

Dear Mayor Oglesby and Watermaster Members:

Since groundwater level data mapped by hand in 2002 and reported in 2005 by Yates *et al*, the Monterey Peninsula Water Management District has held the belief that the northern physical boundary – or hydrologic flow divide – of the Seaside Groundwater Basin did not align well with the legal boundary as shown in maps of the basin adopted by the Superior Court in the adjudication. As part of ongoing District-funded work to better understand the influence of groundwater levels in the Salinas Valley on conditions in the Seaside Subbasin, the District contracted with Montgomery & Associates (Consultant) to further investigate and summarize the dynamics of the groundwater flow divide that defines the northern boundary of the Seaside Subbasin. The Consultant's technical memorandum is attached.

The District's Water Supply Planning Committee reviewed and discussed the technical memorandum at its March 3, 2025 meeting and informed its full Board of its findings March 17, 2025. The District Board has asked that this letter and the Technical Memorandum be forwarded to you.

Principal conclusions of the memorandum are as follows:

- The physical flow divide is dynamic and moves over time in response to changes in pumping and recharge, both seasonally and long-term;
- The flow divide does not align with the court-adjudicated boundary, nor the State Department of Water Resources boundary published in its Bulletin 118;
- The interpretation of inflow and outflow across the Court-adopted adjudicated basin boundary needs to be re-considered in light of this, as in theory there would be zero flow across an actual flow divide.

Previous estimates and discussions of inter-basin flows have been based solely on the position of the jurisdictional subbasin boundary rather than on the actual position of the flow divide. In fact, at its November 6, 2024 meeting the Seaside Groundwater Basin Watermaster adopted a "target" for annual replenishment water – if such water was available – based in part upon net outflows from the basin (see "Summary of Updated Replenishment Water Analyses", October 10, 2022 and updated September 10, 2024, an Attachment to Watermaster agenda Item VIII.A, November 6, 2024. aka

Seaside Groundwater Basin Watermaster Page 2 of 2 March 3, 2025

"Watermaster Summary")

This new technical memorandum effectively calls into question the entire concept of "Net Flows from the Deep Aquifer to the Monterey Subbasin" as shown in Figure 11 of the Watermaster Summary (also attached to this letter.) Hence, several of the principal conclusions of the Watermaster Summary presented November 6, 2024 cannot be substantiated. Specifically, groundwater is not predictably "lost" to the Monterey Subbasin. Instead, that water remains in the physical basin, providing protective water against seawater intrusion. <u>Therefore, the</u> replenishment "target" adopted by the Watermaster is based upon an unproven assumption of leakage or outflow and should be revisited with additional groundwater modeling analyses.

The Consultant proposes that a potential new analysis framework could be developed and used as part of Seaside Boundary Conditions Sensitivity Analysis work currently underway by the Watermaster.

The District believes that there are additional areas of concern surrounding any assumptions the Watermaster could make about protective water levels in the Basin and hopes to share the District's thoughts in future correspondence.

Sincerely,

David J. Stoldt General Manager

cc: Salinas Valley Basin Groundwater Sustainability Agency Marina Coast Water District Groundwater Sustainability Agency



Groundwater experts since 1984



February 3, 2025

Mr. Jonathan Lear Water Resources Manager Monterey Peninsula Water Management District P.O. Box 85 Monterey, CA 93942-0085

#### SUBJECT: SEASIDE SUBBASIN GROUNDWATER DIVIDE

#### Dear Mr. Lear:

Per your request, Montgomery & Associates (M&A) has prepared this letter memorandum to summarize the current understanding of the dynamics of the groundwater flow divide that defines the northern boundary of the Seaside Subbasin. This northern boundary is shared with the Monterey Subbasin and has historically been defined by the position of a groundwater flow divide inferred from groundwater elevation contours. Unlike the southern boundary of the Seaside Subbasin, the groundwater divide is not a physical structural boundary, but rather a ridge of higher groundwater elevation that develops between the pumping depressions in the Seaside Subbasin and pumping depressions further north in the Monterey and 180/400-Foot Aquifer Subbasins in the Salinas Valley. As part of ongoing Monterey Peninsula Water Management District (MPWMD) funded work to understand the influence of groundwater levels in the Salinas Valley to conditions in the Seaside Subbasin, M&A reviewed previous work and publications that evaluated the position of the flow divide based on mapped groundwater levels (See Figures 1 and 2). We also looked at the results of previous modeling studies (HydroMetrics LLC, 2009b, M&A 2022) using the Seaside Watermaster Groundwater model to determine if the model can be used to identify the position of the flow divide (Figure 3) over time and how it responds to changes in basin management activities such as seasonal and long-term shifts in pumping and injection. The results of this review are summarized below:

- The positions of the flow divides in the Paso Robles (PR) and Santa Margarita (SM) Aquifers are different (see Figure 2).
- The simulated and mapped position of the flow divides do not align with either the Adjudicated or the DWR Bulletin 118 jurisdictional Basin boundaries (see example on Figure 3).



- The flow divides are dynamic, and their positions move over time in response to changes in pumping and recharge in each subbasin (both seasonally and long term).
- The 2009 Basin Management Action Plan (BMAP) (HydroMetrics, LLC, 2009a) and the 2018 BMAP update (M&A, 2019) describe the northern boundary as being roughly parallel to (rather than coincident with) the position of mapped groundwater divides and highlight the differences between the location of the jurisdictional basin boundary and the position of mapped flow divides in both the Shallow and Deep Aquifer. Both documents describe the dynamic nature of the flow divide positions in response to changes in conditions on either side.
- The 2009 BMAP (HydroMetrics, LLC, 2009a) identified the Seaside Subbasin's northern boundary as a management issue that needed to be addressed:
  - "This BMAP identifies other basin management issues that need to be addressed and pursued by the Watermaster. One such issue is the dynamic nature of the Basin's northern boundary. This boundary (flow divide), although delineated in the Amended Decision will change location over time in response to changes in pumping in the Seaside area, Marina, the Salinas Valley and the lower El Toro Creek area. Given that this boundary is controlled by hydraulic factors, it is possible that if pumping in the Seaside area ceased completely and groundwater levels recovered to a certain point, groundwater in the northern portion of the Basin might flow into the Salinas Valley. Similarly, increased pumping in the Seaside Groundwater Basin might capture groundwater from the Salinas Valley."
- Review of groundwater levels from previous simulations suggests:
  - The groundwater level ridge that defines the flow divide in the SM can disappear locally and seasonally in response to increases in groundwater levels associated with Pure Water Monterey (PWM) and Carmel River Aquifer Storage and Recovery (ASR) injection operations. As the injection mounds develop around the injection wells the local water levels eventually rise above the previous elevation of the groundwater ridge such that locally it ceases to form a divide and instead forms a sort of north flowing chute through which water flows from the areas of higher groundwater elevation around the wells to areas north with lower elevation.
  - Similarly, long term increase of groundwater levels in both aquifers within the Seaside Subbasin may also cause areas of the flow divides to disappear and/or move further into the Seaside Subbasin as water levels south of the previous position of the groundwater ridge rise above it.



 Increases in groundwater levels due to ongoing and projected future reductions in pumping from wells screened in the PR (e.g., reductions from a shift to recycled water for golf course irrigation and a shift from older multi-aquifer production wells to newer wells screened only in SM), coupled with recharge from the PWM shallow aquifer vadose zone well and percolation ponds could eliminate the PR flow divide altogether or shift it much further into the Seaside subbasin.

Previous estimates and discussions of inter-basin flows have been based solely on the position of the jurisdictional subbasin boundary rather than on the actual position of the flow divides. The interpretation of inflows and outflow across the adjudicated basin boundary needs to be re-considered in light of this, because theoretically there would be zero flow across an actual flow divide.

Take for example the Deep Aquifer, where water level mapping has consistently shown the position of the flow divide to be north of the adjudication boundary line. Flow lines that move north across the jurisdictional boundary may not actually continue toward the Salinas Valley. They may bend toward the west, parallel to the groundwater divide, with some flow lines moving back across the jurisdictional boundary and being captured by the Seaside pumping depression; other flow lines may continue west to the offshore portions of the aquifer. In other cases such as those described in the bullets above where the flow divide is no longer continuous, some of these flow lines that cross the jurisdictional boundary could potentially continue further north and not get recaptured. Similarly, some of the water being captured by the Seaside pumping depression could in fact be coming from across the adjudicated boundary line from what is jurisdictionally the Monterey Subbasin but could still be originating from within the Seaside subbasin if the boundary were considered as being defined by the actual position of the flow divide.

An alternate analysis framework that incorporates and considers the dynamic position of the flow divides in each aquifer can be developed using the model. For example, particle tracking could be used to trace the movement of particles released along the adjudicated boundary line during each simulated stress period. This would allow us to track where cross-boundary flows exit and/or enter the subbasin, what fraction of the particles flow into or out of the subbasin, and/or are recaptured within the Seaside subbasin. The particle path lines would also serve to help visualize the changing positions of the flow divides in each aquifer relative to the jurisdictional boundary line.

This new analysis framework would complement, rather than replace, the water budget cross-boundary flow estimates developed based on the jurisdictional boundary and could be used to re-evaluate previous model scenarios that have already been simulated or as a tool used for evaluating new model scenarios. We feel it is important to investigate what impact this would



have on interpretations of future projects and management actions in the Seaside Subbasin and the wider Salinas Valley. We propose that this new analysis framework be developed as an additional data analysis task as part of the Seaside Boundary Conditions Sensitivity Analysis work currently underway. If the District sees value in this approach, we can develop a cost estimate proposal to incorporate it into the scope of work. Please let us know if you have any questions or would like to discuss the material presented in more detail.

Sincerely, MONTGOMERY & ASSOCIATES

Rembo

Pascual Benito, Ph.D. Senior Hydrogeologist

#### REFERENCES

HydroMetrics LLC, 2009a, Basin Management Action Plan - Seaside Groundwater Basin Monterey County, California. Prepared for the Seaside Basin Watermaster. February.

\_\_\_\_\_, 2009b, Seaside Groundwater Basin Modeling and Protective Elevations Monterey County, California. Prepared for the Seaside Basin Watermaster. November.

Montgomery & Associates, Inc. (M&A), 2019. Seaside Groundwater Basin 2018 Basin Management Action Plan, Monterey County, California. Prepared for the Seaside Basin Watermaster July.

\_\_\_\_\_, 2022. Technical Memorandum, Updated Modeling of Seaside Basin Replenishment Options, January 2022.

- Muir, K.S. 1982. Groundwater in the Seaside area, Monterey County, California. U.S. Geological Survey Water Resources Investigation 82-10. Washington, D.C., September. URL: <u>https://doi.org/10.3133/wri8210</u>
- Yates, E.B., Feeney, M.B., and Rosenberg, L. I., 2005. *Seaside groundwater basin: update on water resource conditions*. Prepared for Monterey Peninsula Water Management District, Monterey, California. April.





Figure 1. Seaside Basin Watershed and Storage Units as Drawn by K.S. Muir (USGS, 1982) based on 1979 water level data.

K.S. Muir (U.S. Geological Survey [USGS], 1982) describes that the data were averaged from wells screened across multiple depths and aquifers, and thus represents a composite of both the Deep and Shallow Aquifer. The report describes the north and east boundaries of the basin "watershed" as being "in the vicinity of groundwater divides", but the northern boundary appears to be drawn slightly south of where an inferred flow divide would be located based on the drawn contour lines. It should be noted that there is only a single data point north of the boundary line with which to infer the position of a groundwater divide. The USGS 1982 report is cited as the basis for the basin adjudication boundary and for the DWR Bulletin 118 Subbasin boundary adopted in 2018.





Figure 2. Positions of Shallow (orange dashed line) and Deep Aquifer Flow Divide (blue dashed line)

These flow divide positions are based on hand drawn contour maps of water level data from fall 2002 by Yates *et al.* (2005), as shown in a slide presentation of the 2009 Basin Management Action Plan (BMAP) (HydroMetrics, LLC, 2009a).





Figure 3. Plot Showing Simulated Position (yellow area) of Ground Water Divide in the Deep Aquifer

This figure was presented in the 2009 modeling report (HydroMetrics LLC, 2009b). Note that the simulated position of the Deep Aquifer groundwater divide differs significantly from the jurisdictional boundary line (thin black line) and has differences with the Deep Aquifer divide as mapped by Yates *et al.* (2005) from hand contoured 2002 groundwater level data (thick dashed line). The 2009 modeling report did not show or discuss how the simulated Shallow Aquifer groundwater divide compared with the jurisdictional boundary or the Yates *et al.*, Shallow Aquifer boundary, but a brief review of modeling results shows that while similar in a broad sense, they also differ in many places. This suggests that the hand drawn flow divides based on limited water level data sets are simplified representations of more complex and dynamic boundaries.

Figure 11 Annual Groundwater Losses from the Seaside Subbasin to the Monterey Subbasin under the Baseline Scenario



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## SEASIDE GROUNDWATER BASIN

# Informational Presentation to the Watermaster Board: What is the Problem? April 2, 2025

### THERE ARE TWO CATEGORIES OF PROBLEMS

### Physical Problems

### Institutional Problems with MPWMD

### PHYSICAL PROBLEMS

- Portions of the Basin have groundwater levels below sea level
- Pumping and groundwater losses from the Basin keep groundwater levels from being raised to Protective Elevations without adding replenishment water

### RISK OF SEWATER INTRUSION AND LOSS OF GROUNDWATER



#### Paso Robles (Shallow) Aquifer

Santa Margarita (Deep) Aquifer



Seawater Intrusion map of the 180- foot aquifer in the Salinas Valley as prepared by MCWRA in 2012

### INSTITUTIONAL PROBLEMS WITH MPWMD

- Discounting the risk of seawater intrusion
- Questioning the importance of achieving Protective groundwater elevations
- Questioning the loss of groundwater from the Basin
- Questioning the need for, or the amount of, replenishment water needed to protect the Basin

### WHAT IS THE MPWMD STAFF TELLING ITS BOARD ABOUT GROUNDWATER LOSSES, REPLENISHMENT WATER, AND PROTECTIVE ELEVATIONS?

- > These are verbatim excerpts from Mr. Stoldt's statements in his agenda Transmittals:
- <u>This new technical memorandum effectively calls into question the entire concept of "Net</u> <u>Flows from the Deep Aquifer "</u>
- Several of the principal conclusions of the Watermaster cannot be substantiated. Specifically, groundwater is not predictably "lost" to the Monterey Subbasin.
- Therefore, the replenishment "target" adopted by the Watermaster is based upon an unproven assumption of leakage or outflow and should be revisited with additional groundwater modeling analyses.
- Also, at the March 3 meeting an attorney advising the Committee referred to the Watermaster's Protective Elevations as "alleged."

### WHAT DID THE AUTHOR OF THE MEMORANDUM HAVE TO SAY AFTER LEARNING OF MR. STOLDT'S STATEMENTS?

- There has not been any new data or modeling results that would revise or change the modeling results in the BMAP update or as presented in the 2022 replenishment modeling
  - Those values were calculated based on the simulated net flow across the Adjudication Decision boundary line
  - Even the additional particle tracking analysis that MPWMD has asked him to perform to better understand the fate of the water that crosses the Adjudication boundary, and to evaluate the position of the flow divide, would not change those numbers

What could change is our understanding and ability to differentiate where those net outflows across the adjudication boundary end up going. As shown in the earlier slides:

- Does it all actually stay within the previously mapped deep aquifer flow divide boundary and then end up just flowing offshore?
- Or is it really flowing further north into the Monterey Subbasin "proper"?
- Or some combination?

# WHAT IS THE SIGNIFICANCE OF THE SEASIDE BASIN BOUNDARY?

- The boundary of the Basin is set forth in the Adjudication Decision
  - The Watermaster is bound by the Decision to manage groundwater resources <u>within this boundary</u>
  - This is the same boundary shown on the Department of Water Resources Statewide Basin Maps in their Bulletin 118
  - This is the same boundary that the Monterey Subbasin used in its Groundwater Sustainability Plan
- It is the <u>net</u> amount of flow crossing that boundary that is important to the Watermaster in terms of Basin management decision-making.

### WHY DOES THE WATERMASTER STAFF CONSIDER THIS TO BE A PROBLEM?

- A source of revenue will be needed in order to obtain replenishment water
- > One method of generating this revenue would be to:
  - Request that MPWMD form a "zone" overlying the Basin and
  - Levy a groundwater extraction fee within that zone
  - Use this revenue to purchase replenishment water
- Alternatively a basinwide water supply protective charge could be collected from all rate-payers for this same purpose
- It will be a problem to gain MPWMD agreement to levy a fee to purchase replenishment water if MPWMD does not believe that is necessary

# **QUESTIONS?**

#### WATER SUPPLY PLANNING COMMITTEE

#### ITEM: DISCUSSION ITEM

#### 4. UPDATE ON FORT ORD WELLS 09, 10, AND 11 STATUS

Meeting Date:	May 2, 2025	Budgeted:	N/A
From:	David J. Stoldt General Manager	Program/ Line Item No.:	N/A
Prepared By:	David J. Stoldt	Cost Estimate:	N/A

#### General Counsel Approval: N/A Committee Recommendation: CEQA Compliance: This action does not constitute a project as defined by the California Environmental Quality Act Guidelines Section 15378.

**SUMMARY:** On April 5, 2021 Martin B. Feeney PG, Consulting Hydrogeologist, issued a condition assessment of Fort Ord Wells No. 9 and No. 10 to the Seaside Basin Watermaster. Monitoring Wells FO-9 and FO-10 were drilled in 1994 and 1996, respectively. The wells are nested completions with multiple casings of varying lengths in the same borehole. FO-9 has two completions - a shallow completion in the Paso Robles Formation and a deeper completion in the Santa Margarita Sandstone. FO-10 has 3 completions - one in the Paso Robles Formation, one in the Santa Margarita Sandstone and a third completion in an intermediate depth.

At that time, FO-9 Shallow and FO-10 Shallow displayed increasing concentrations of chloride ions, raising the possibility that these data are indicative of advancement of seawater into the basin. However, the data was difficult to reconcile with other data from the more seaward Sentinel Wells that have seen no changes. A Seaside Basin ad-hoc advisory team, which includes the Monterey Peninsula Water Management District (District), suggested that the monitoring wells be induction logged and the data from the induction log be compared to the original electric logs to assist in evaluating if there have been conductivity changes in the formation since the time of the well installation. Such work was completed and the findings included:

For FO-9, FO-09 Shallow is leaking poor quality water into the well at about 185 feet. The data suggested the well has a structural flaw (crack, open joint?) at this depth. Feeney's conclusion was the elevated chloride values in the water quality samples from this well were the result of the entry of water from higher in the casing, not recently advancing seawater intrusion.

For FO-10, the induction tool was not able descend in the deep well as the upper section has a bend in the casing that is too tight for passage. The intermediate and shallow wells were successfully logged to bottom. The induction log was severely muted when compared with the original e-log. At first glance it looks like seawater intrusion, but on further reflection the shift is along the entire profile, which is considered unlikely and odd. The reason for the muted response was unclear. Discussions with the geophysical contractor suggest that all the intermediate well

seals are leaking and allowing poor quality water from above. Whereas that theory would explain the data, it is considered highly unlikely because water level data from these wells in the past consistently show significant differences between shallow and deep completions. However, at that time of Feeney's induction logging the water level data appears to be the same for both well readings.

The fluid resistivity logs suggested the quality in the screen section may have been changing and the water quality samples from this well may be valid. The data also confirms that the recent increase in chlorides in FO-10 Shallow is representative of the water in the perforations. The reason for the increase is not known. Ongoing routine sampling may assist in better determining water quality trends and any additional well investigative recommendations at this location. The District has been performing the ongoing sampling.

Well FO-9 Shallow belonged to District and was in its monitoring network. At the time, the District determined to destroy monitoring Well FO-9 Shallow and recommended a replacement well. Later in 2021, The Watermaster sought a three-party arrangement between Monterey Peninsula Water Management District (District), Marina Coast Water District, and the Watermaster to fund replacement of monitoring well FO-09 Shallow. In March 2023, the District Board approved participation in the cost sharing agreement. The replacement well was placed on City of Seaside property and is owned by the Watermaster, but remains in the District's monitoring network.

The District also suggested to Marina Coast Water District (MCWD) that they consider taking ownership of FO-10, as MCWD has taken on Groundwater Sustainability Agency duties for the Monterey Sub-Area of the Salinas Valley Groundwater Basin due north of the Seaside Basin.

Later, the District also suggested MCWD take ownership of FO-11, for the same reason.

In late 2024, District granted MCWD access to the wells to conduct hydraulic testing and assess the potential interconnectivity of aquifers occurring in the borehole. MCWD's consultant designed and implemented a pneumatic slug testing program for the investigation. Available data indicate that the FO-10 nested monitoring well directly connects multiple aquifers and will

continue to be a potential risk factor in spreading elevated chloride concentrations from the shallower aquifer, where seawater intrusion has been widely documented in the region, to the deeper aquifer zones. To prevent further hydraulic connection of the three aquifer zones screened by the FO-10 nested well and associated impairment to water quality, FO-10 should be decommissioned and destroyed. The District has budgeted for destruction of this well in FY 2025/26.

MCWD has indicated that it willingly will take responsibility for FO-11, and the District will have to receive formal indication to do so from MCWD and then seek acceptance of the form of Assignment of Easement Agreement from the Presidio.

#### **EXHIBITS**

- **4-A** Wells in the Seaside Basin
- **4-B** Form of Assignment of Easement Agreement

#### **EXHIBIT 4-A**

Location Map of Northerly Wells in Seaside Area



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#### EXHIBIT 4-B

#### ASSIGNMENT OF EASEMENT AGREEMENT

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT (ASSIGNOR) does hereby assign, transfer, and convey to the MARINA COAST WATER DISTRICT, a California water district (ASSIGNEE), as of \_\_\_\_\_\_ (Effective Date), all of ASSIGNOR's title, right, obligations, and interest in that certain Easement AGREEMENT, granted by the Department of the Army to ASSIGNOR on June 9, 2003, as Instrument No. DACA05-2-03-551, a copy of which is attached hereto and made a part hereof as Exhibit A (Easement Agreement).

ASSIGNEE releases ASSIGNOR from any and all obligations, responsibilities, and duties under the Easement Agreement from and after the Effective Date; provided, ASSIGNOR shall indemnify, defend, and hold ASSIGNEE harmless from any and all penalties, liabilities, losses, claims, actions, judgments, liabilities, proceedings and costs, including reasonable attorneys' fees, arising directly or indirectly out of any damage or injury to persons or property by reason of the actions or omissions, intentional or otherwise, of ASSIGNOR in exercising any of the privileges granted or in consequence thereof under the Easement Agreement prior to the Effective Date.

Acceptance: ASSIGNEE agrees, by acceptance of this Assignment of Easement Agreement from ASSIGNOR, that the terms and conditions herein set forth shall be binding upon and inure to the benefit of ASSIGNEE.

IN WITNESS WHEREOF this Assignment of Easement Deed has been executed this \_\_\_\_\_ day of \_\_\_\_\_\_, 2025.

#### ASSIGNOR

Monterey Peninsula Water Management District

By:	
Name:	
Title:	

#### ASSIGNEE

Marina Coast Water District

By:	
Name:	
Title:	

#### Approved by Department of the Army District Engineer:

By:	
Name:	
Date:	
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