AGENDA
Water Supply Planning Committee

Monday, March 3, 2025, at 2:00 p.m. | *Virtual Meeting*

COMMITTEE MEMBERS	STAFF	Mission Statement
Karen Paull – Chair *Amy Anderson* *Rebecca Lindor* *Alvin Edwards - Alternate*	*David J. Stoldt, General Manager* *Jonathan Lear, Water Resources Manager* *Sara Reyes, Board Clerk*	Sustainably manage and augment the water resources of the Monterey Peninsula to meet the needs of its residents and businesses while protecting, restoring, and enhancing its natural and human environments. **Vision Statement** Model ethical, responsible, and responsive governance in pursuit of our mission. **Board's Goals and Objectives** Are available online at https://www.mpwmd.net/who-we-are/mission-vision-goals/

Join the meeting at:
https://mpwmd-net.zoom.us/j/85443277026?pwd=RpqegEIrlZ5cACEOujfWbSAeephcSG.1

Webinar ID: **854 4327 7026**| Password: **030325** | To Participate by Phone: **(669) 900-9128**

For detailed instructions on how to connect to the meeting, please click the link below:
https://www.mpwmd.net/instructions-for-connecting-to-the-zoom-meetings/

Copies of the agenda packet are available for review on the District website (www.mpwmd.net) 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 November 4, 2024

2. Adopt 2025 Meeting Schedule

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

3. Discuss Seaside Subbasin Groundwater Divide Technical Memorandum

4. Seaside Groundwater Basin Watermaster Meetings (YouTube discussion)

5. Update on Cease and Desist Order Timeline

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 comments@mpwmd.net. 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, March 3, 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
https://www.mpwmd.net/instructions-for-connecting-to-the-zoom-meetings/

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WATER SUPPLY PLANNING COMMITTEE

ITEM: ACTION ITEM

1. CONSIDER ADOPTION OF COMMITTEE MEETING MINUTES FROM NOVEMBER 4, 2024

Meeting Date: March 3, 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 November 4, 2024.

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

EXHIBIT
1-A Draft Minutes of November 4, 2024 Water Supply Planning Committee Meeting

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EXHIBIT 1-A

Draft Minutes
Water Supply Planning Committee of the
Monterey Peninsula Water Management District
Monday, November 4, 2024 at 3:00 p.m.

Call to Order

Chair Paull called the meeting to order at 3:02 p.m.

Committee Members Present:	Karen Paull, Chair Marc Eisenhart Ian Oglesby
Staff Members Present:	David J. Stoldt, General Manager Sara Reyes, Executive Assistant/Board Clerk Jonathan Lear, Water Resources Manager Maureen Hamilton, District Engineer
District Counsel Present:	Michael Laredo, De Lay & Laredo Fran Farina, De Lay & Laredo
Comments from the Public:	Chair Paull opened the public comment period; however, no public was in attendance.

Corrections / Additions to the Agenda

None

Action Items

1. Consider Adoption of the September 4, 2024 Committee Meeting Minutes

Chair Paull introduced the item.

A motion was made by Director Paull, seconded by Director Oglesby to adopt the September 4, 2024, Committee Meeting minutes. The motion passed on a roll-call vote with 2 Ayes (Paull and Oglesby), 0 Noes, and 1 Abstention (Eisenhart).

Discussion Items

2. Marina Coast Water District Injection Concept

Chair Paull introduced the item, and General Manager David Stoldt presented his update. Mr. Stoldt referred to his staff report, which covered:

1. Injection and storage concepts

2. Injection options
3. Problematic concepts.

The committee engaged in a discussion, and Chair Paull thanked General Manager Stoldt for the updates.

3. Update on Water Supply V Demand - CPUC and 2023-24 Water Allocation Process

Chair Paull introduced the item, and General Manager David Stoldt presented his update and responded to questions from the committee. Jonathan Lear, Water Resources Manager, and Fran Farina with De Lay & Laredo also provided information and answered questions from the committee. The committee then engaged in a vigorous discussion, and Chair Paull thanked staff and counsel for the updates.

Suggest Items to be Placed on Future Agendas

Chair Paull introduced the item; however, no formal suggestions were made.

Adjournment

There being no further business, Chair Paull adjourned the meeting at 3:57 p.m.

/s/ Sara Reyes

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

Reviewed and Approved by the MPWMD Water Supply Planning Committee on _____, 2025.
Received by the MPWMD Board of Directors on _____, 2025.

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WATER SUPPLY PLANNING COMMITTEE

ITEM: ACTION ITEM

2. ADOPT 2025 COMMITTEE MEETING SCHEDULE

Meeting Date: March 3, 2025

From: David J. Stoldt,
General Manager

Prepared By: Sara Reyes

SUMMARY: Shown below is a proposed committee meeting schedule for the calendar year 2025. Please review and inform Sara Reyes if you are unable to participate on any of the proposed dates. Any meeting may be canceled if there is no business for committee consideration.

RECOMMENDATION: The Water Supply Planning Committee should review and adopt the meeting schedule for 2025.

Day of Week	Date	Time
Monday	March 3, 2025	2:00 p.m
Monday	May 5, 2025	2:00 p.m.
Monday	July 7, 2025	2:00 p.m.
Tuesday	September 8, 2025	2:00 p.m.
Monday	November 3, 2025	2:00 p.m.
Monday	January 5, 2025	2:00 p.m.

WATER SUPPLY PLANNING COMMITTEE

ITEM: DISCUSSION ITEM

3. DISCUSS SEASIDE SUBBASIN GROUNDWATER DIVIDE TECHNICAL MEMORANDUM

Meeting Date:	**March 3, 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: 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. The Consultant's technical memorandum is attached as **Exhibit 3-A**.

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 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 "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 (**Exhibit 3-B.**) 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. **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.

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.

A discussion will occur at the Committee meeting.

EXHIBITS

3-A Seaside Subbasin Groundwater Divide Technical Memorandum

3-B Figure 11 of the Watermaster Summary 11/6/24

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EXHIBIT 3-A

MONTGOMERY & ASSOCIATES
Water Resource Consultants

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

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: https://doi.org/10.3133/wri8210

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.

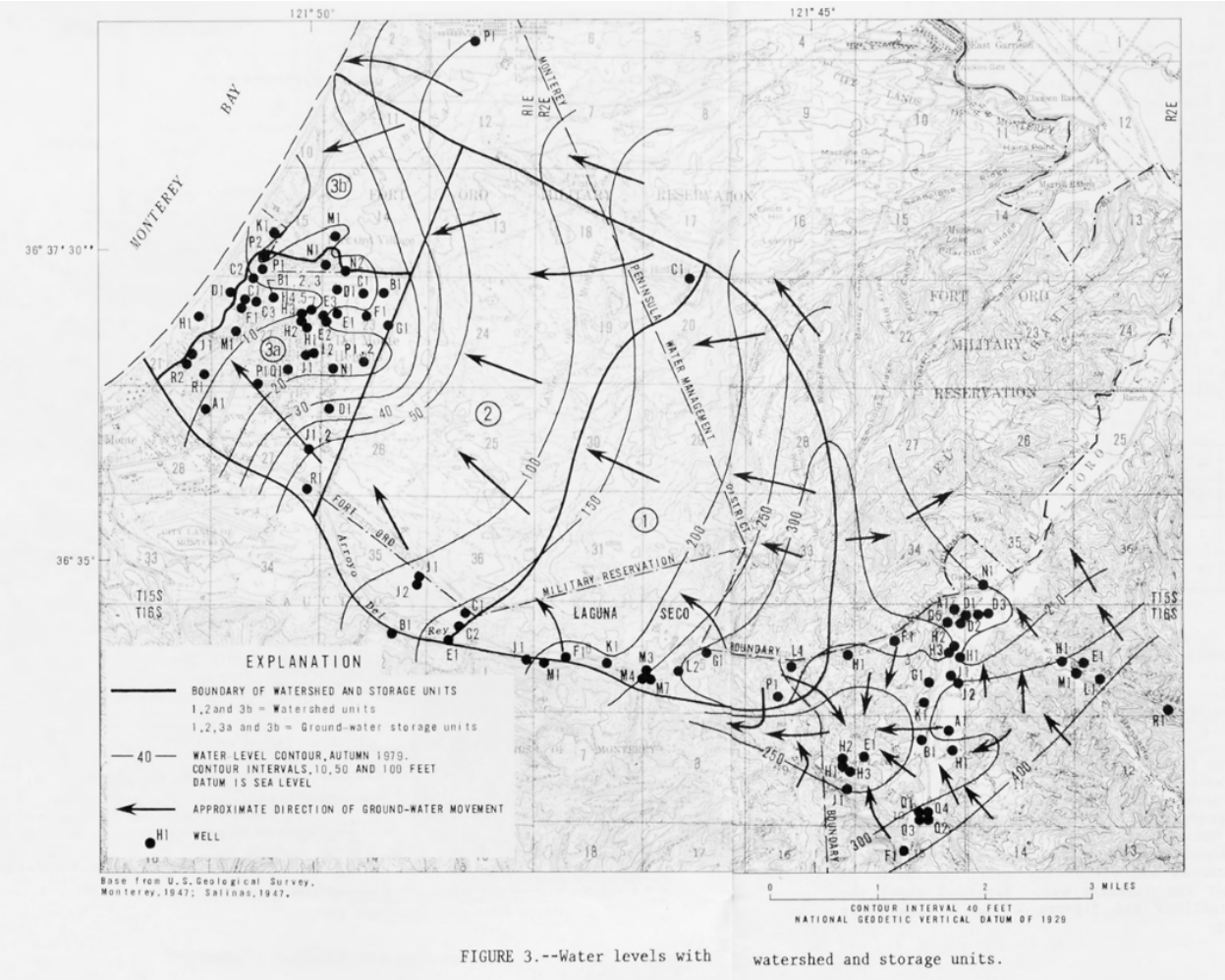

Figure 1. Seaside Basin Watershed and Storage Units as Drawn by K.S. Muir (USGS, 1982) based on 1979 water level data.

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.

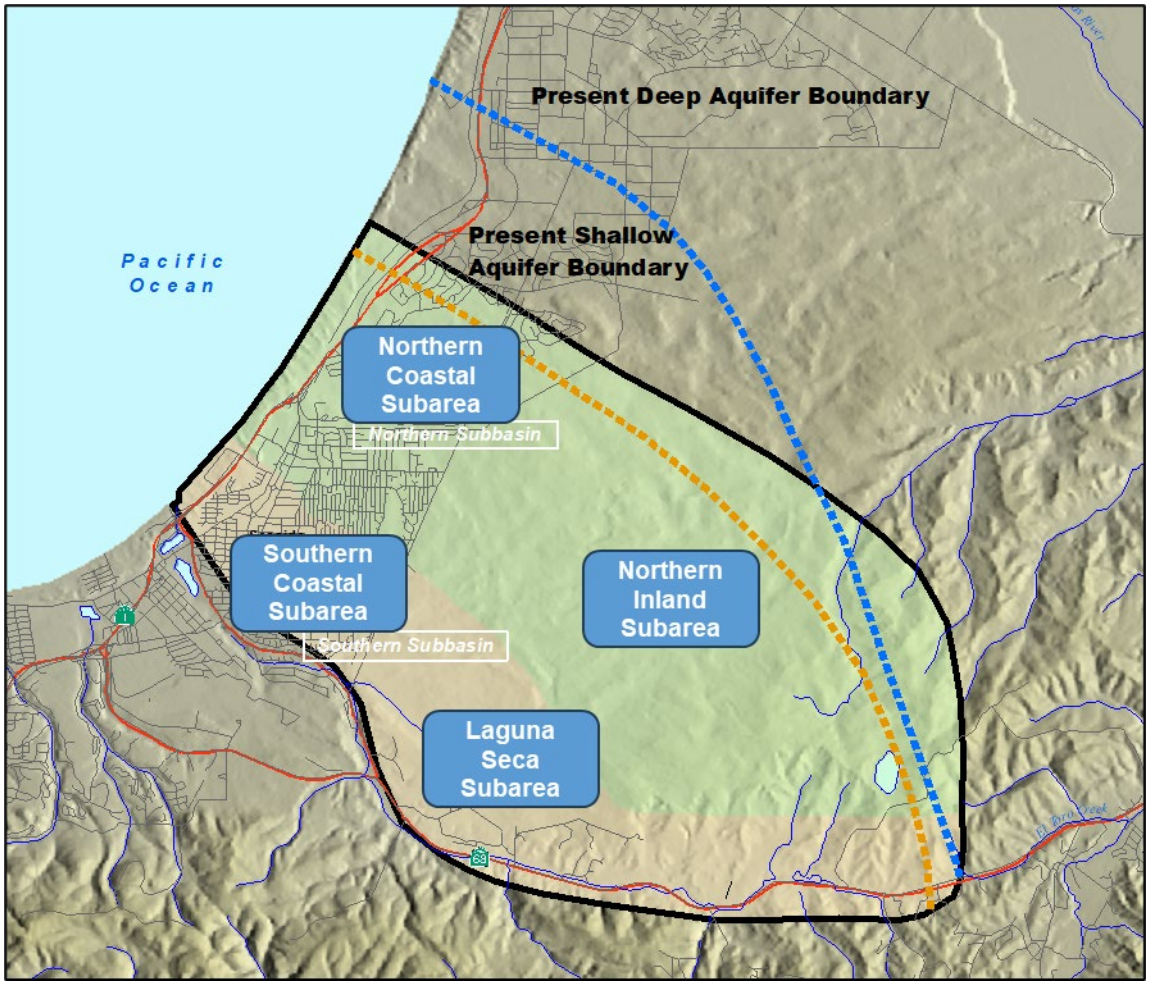

Figure 2. Positions of Shallow (orange dashed line) and Deep Aquifer Flow Divide (blue dashed line)

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).

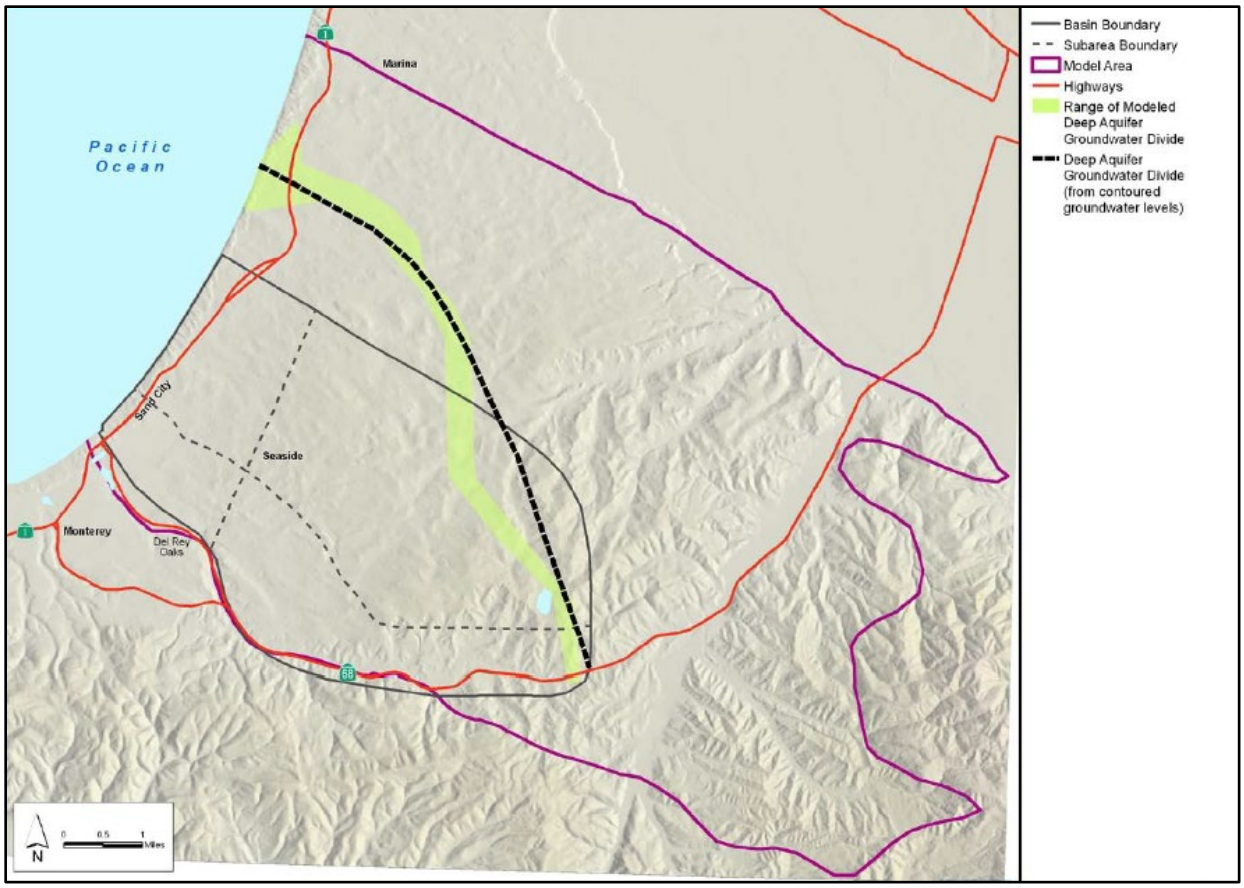

Figure 3. Plot Showing Simulated Position (yellow area) of Ground Water Divide in the Deep Aquifer

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*