



Item 3: MPWMD and the Seaside Groundwater Basin

Meeting Date: May 5, 2025
Staff contact: David J. Stoldt


Watermaster Presentation

- Watermaster Special Meeting – Board Workshop
 - April 2, 2025
 - Presentation Titled ‘Seaside Groundwater Basin What is the Problem?’
 - Slide Titled ‘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

MPWMD SGB Activities Over the Past 40+ Years

- 1. Invest in full-time professionally licensed geologists and hydrogeologist staff**
- 2. Provided resources to design, install, operate, and maintain monitoring wells**
 - MPWMD has been installing SGB monitoring wells since at least 1990 and owned over 30 SGB monitoring wells
 - MPWMD collects and reports monitoring well data to CASGEM for 27 monitoring wells
 - CASGEM = California Statewide Groundwater Elevation Monitoring, DWR program available to public
 - MPWMD monitors an additional 21 wells owned by others
- 3. Collect Seaside Groundwater Basin level data**
 - MPWMD has collected SGB level data for 45 years
- 4. Collect Seaside Groundwater Basin water quality data**
 - MPWMD has collected SGB water quality data for 45 years

MPWMD Activities (cont'd)

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- 5. Funded, researched, and test the Aquifer Storage and Recovery (ASR) program**
 - MPWMD has spent 29 years determining feasibility, designing, and testing the ASR program
 - MPWMD staff collect data and carefully track the movement of ASR water relative to native and PWM water
 - 6. Co-funded development and update of the Seaside Groundwater Basin model (Model)**
 - 7. Participated in the seven (7) Pure Water Monterey tracer studies**
 - MPWMD implemented 2 extrinsic (added dye) tracer studies, assisted in implementation of an additional 2 extrinsic and 3 intrinsic tracer studies, and collected field data for all the tracer studies
 - 8. Supported improvement of the Model in 2023 for PWM tracer study data, and ASR and PWM projects' operation data**
 - 9. Funded MPWMD Model runs addressing technical questions**
 - Performed Seaside Muni replacement well location analysis
 - Performed model boundary sensitivity analyses


Extrinsic Tracer Study 2021



Extrinsic Tracer Study 2022



Replacement Water Supply

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- A vertical photograph on the left side of the slide shows a river with white water rapids flowing over dark rocks. The background is filled with dense green trees and foliage.
- 1. Constructed the Aquifer Storage and Recovery (ASR) sites in addition to providing operation, data collection, reporting, and maintenance**
 - MPWMD has spent approximately 25 years permitting, constructing, operating, and maintaining the ASR program
 - MPWMD funded and owns the operating ASR injection site
 - 2. Invested funds and staff time to design, permit, and construct the Pure Water Monterey (PWM) project**
 - MPWMD funded 75% of the PWM front-end costs
 - MPWMD project managed construction, testing, and start-up of the Injection Wellfield in 2020 and 2022
 - 3. Invested funds and staff time, and procured grant funds to design, permit, and construct the Pure Water Monterey Expansion project**

SGB Recent Status

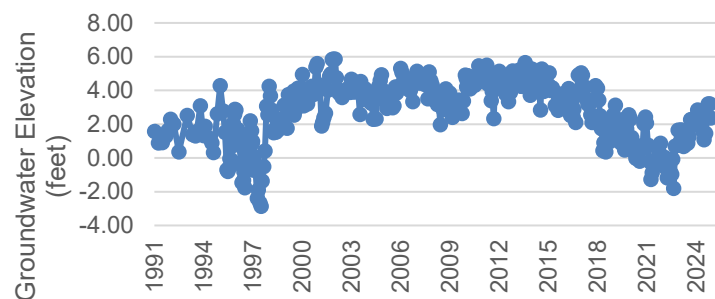
1. Pure Water Monterey injection began in 2020
2. SGB Natural Safe Yield met beginning in 2022

➤ How are the water levels responding in the SGB Coastal Subarea?

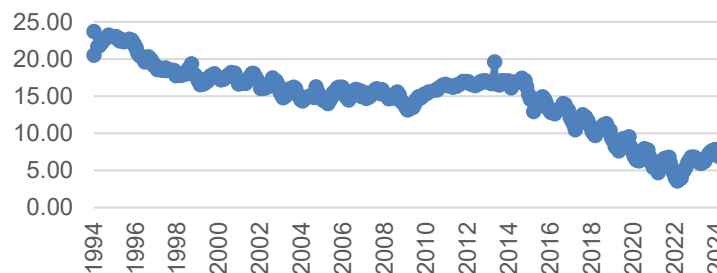
- *The following charts are organized by:*
 - *Monitoring well depth*
 - *Left column is western wells*
 - *Middle column is eastern wells*
 - *Right column is southern wells*

Shallow Monitoring Wells

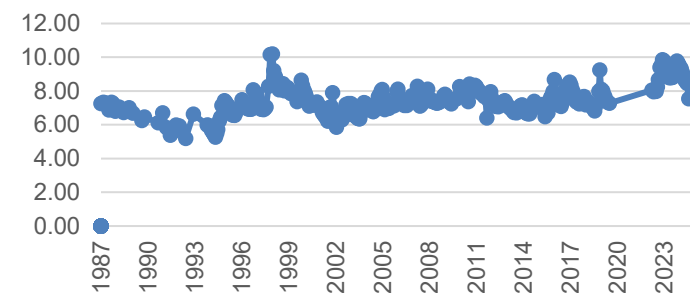
MSC SHALLOW



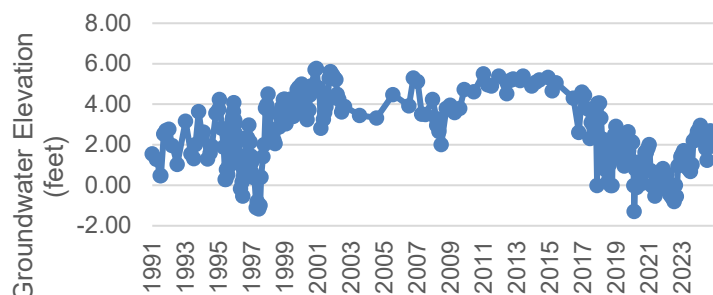
FO7SHALLOW



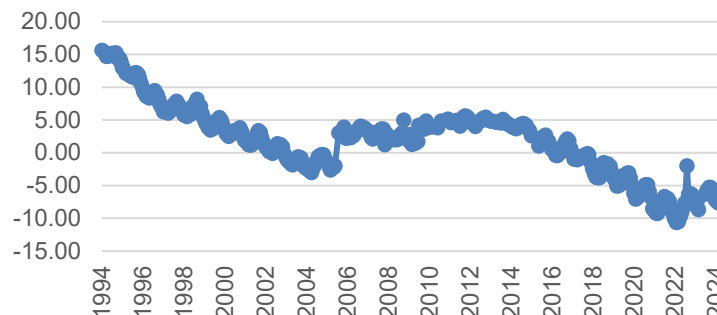
KMART



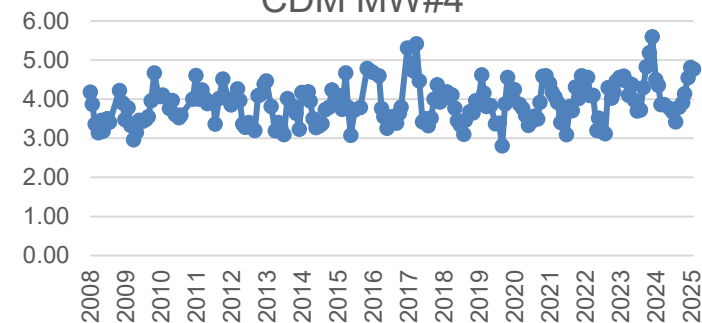
PCA WEST SHALLOW



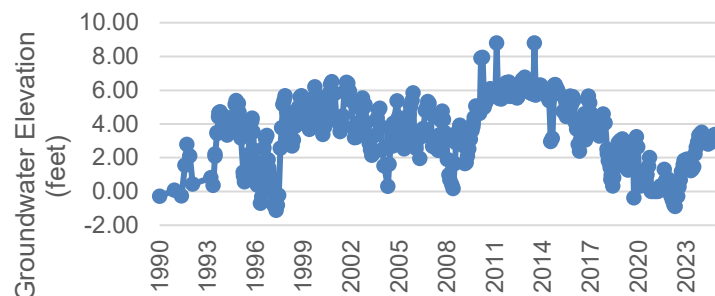
FO8SHALLOW



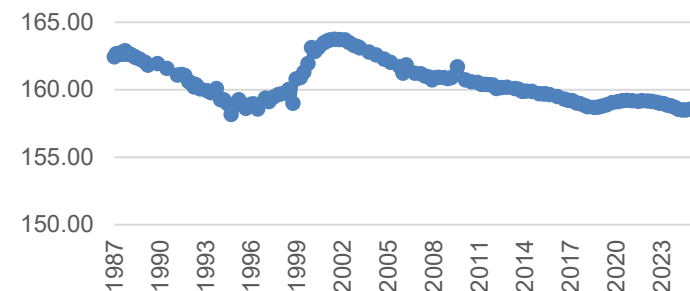
CDM MW#4



PCA EAST SHALLOW



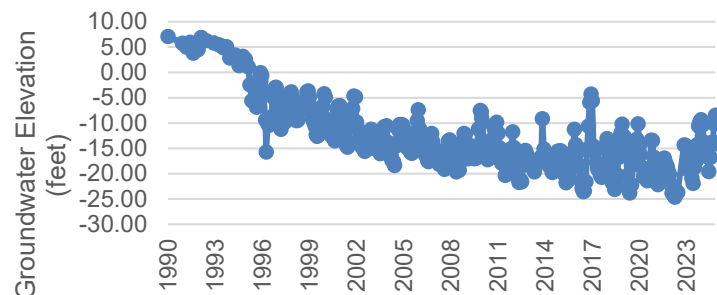
FO01 SHALLOW



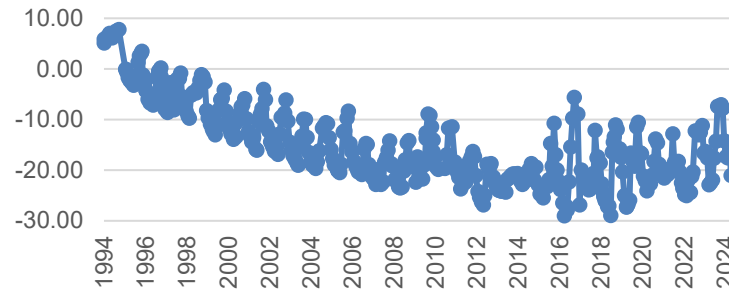
Deep Monitoring Wells



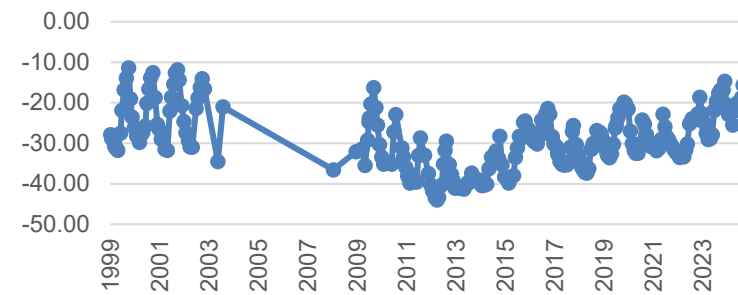
MSC DEEP



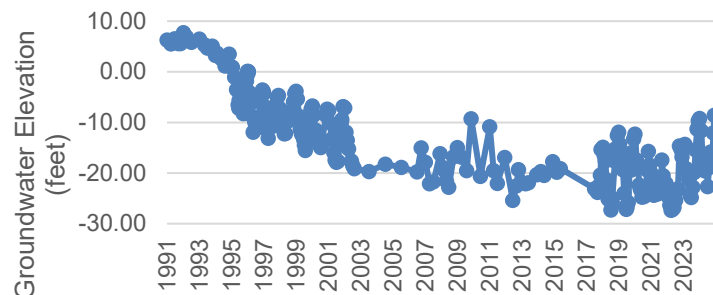
FO7DEEP



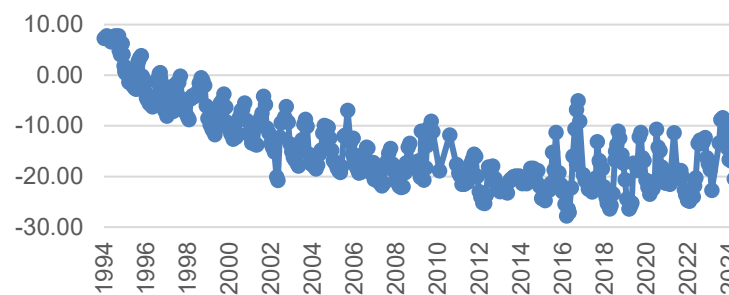
Ord Terrace



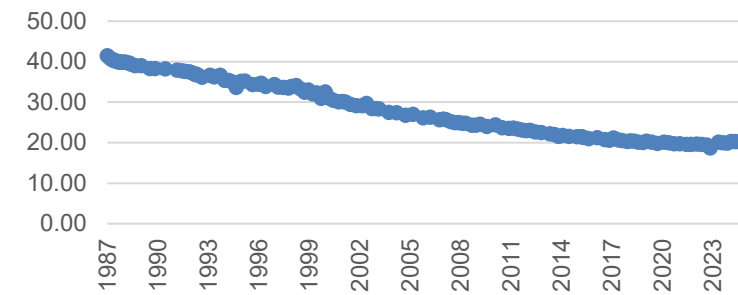
PCAW(Deep)



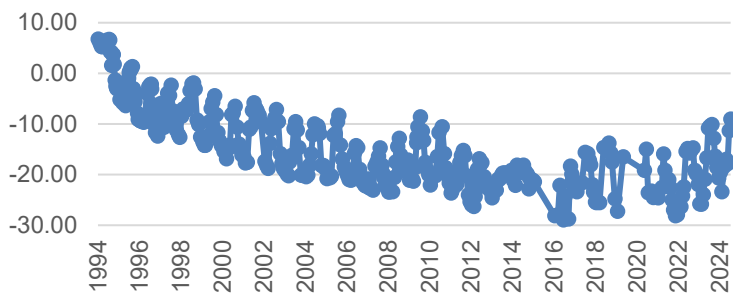
FO8DEEP



FO1Deep



FO9DEEP



MPWMD Looking Forward

- More water coming this winter
- Data from the effect of the 25-Year 700 AFY payback
- Many points of agreement between the organizations

Questions?

Empty slide to expand charts if asked

