



## Item 19: MPWMD and the Seaside Groundwater Basin

*Meeting Date: May 19, 2025*  
*Staff contact: Maureen Hamilton*

# Watermaster Presentation


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

- 
- 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

- 
- 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 foliage and trees.
- 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?

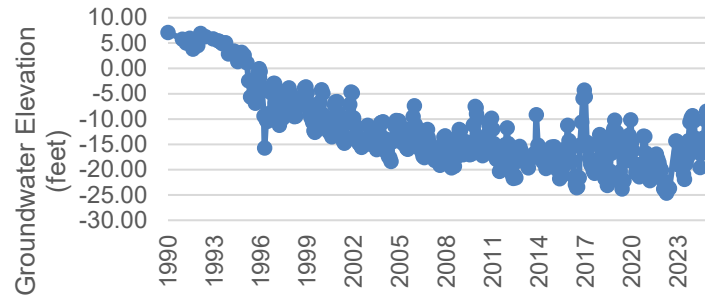
- *The following charts are organized by:*
  - *Monitoring well depth*
    - *Left column is western wells*
    - *Middle column is eastern wells*
    - *Right column is southern wells*



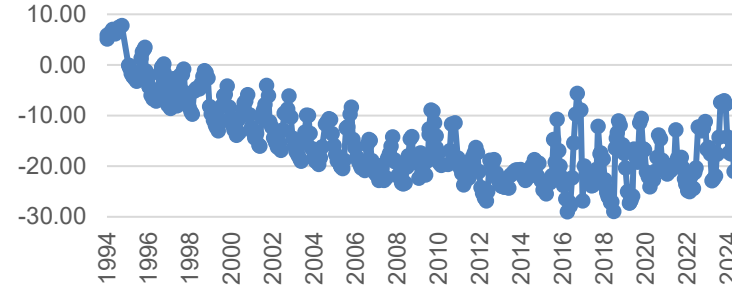
# Deep Monitoring Wells



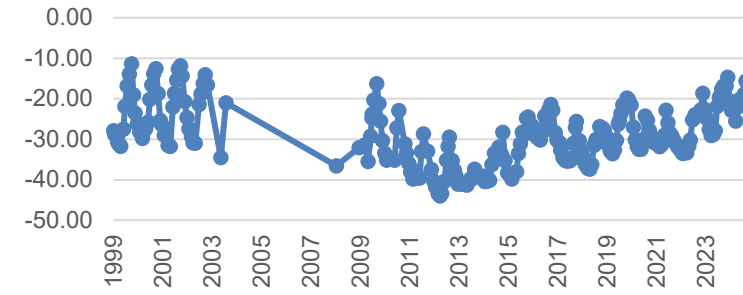
MSC DEEP



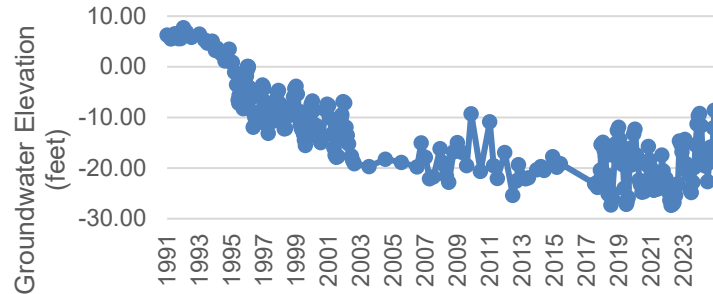
FO7DEEP



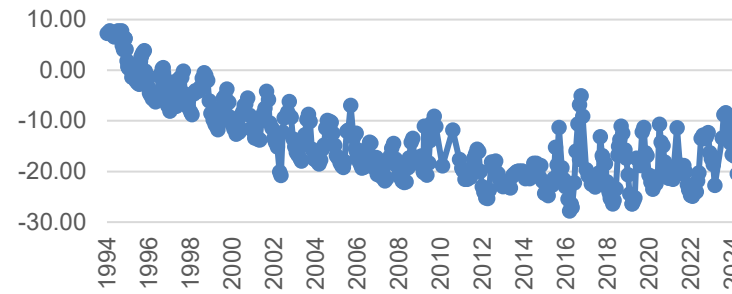
Ord Terrace



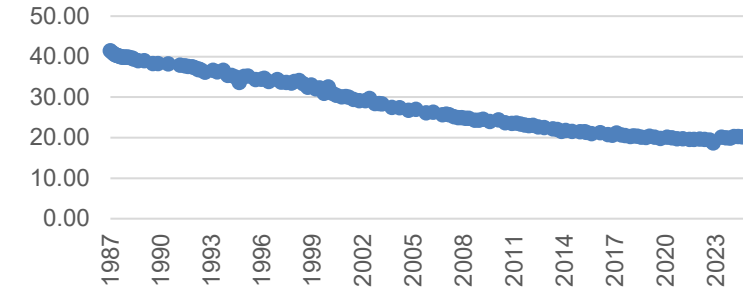
PCAW(Deep)



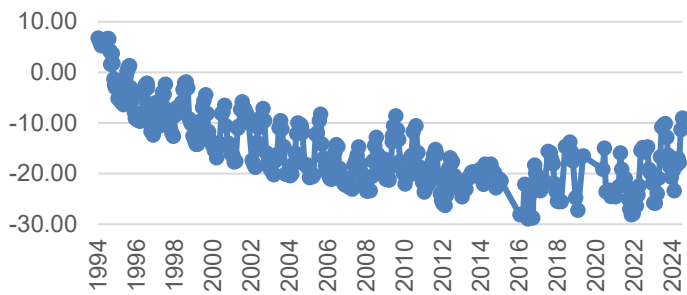
FO8DEEP



FO1Deep



FO9DEEP



# MPWMD Looking Forward

- Continue to monitor effect of being at Natural Safe Yield
- Data from the coming 25-Year 700 AFY payback
- More water coming this winter
- Many points of agreement between the organizations

Questions?



Empty slide to expand charts if asked



# Shallow Monitoring Wells

