

DEEP AQUIFERS
WELL OWNER
WORKSHOP

MAY 20, 2026

Introduction

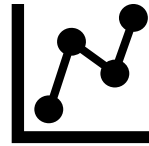
- Today's workshop and the recommendations we'll discuss have been prepared through a collaborative effort between:
 - County of Monterey
 - Marina Coast Water District & Groundwater Sustainability Agency (MCWDGSA)
 - Monterey County Water Resources Agency (MCWRA)
 - Salinas Valley Basin Groundwater Sustainability Agency (SVBGSA)



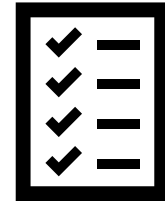
Workshop Objectives



Provide an update on work since the Deep Aquifers Study was published, including the Deep Aquifers Memo.



Initiate a discussion about interim management for the Deep Aquifers.

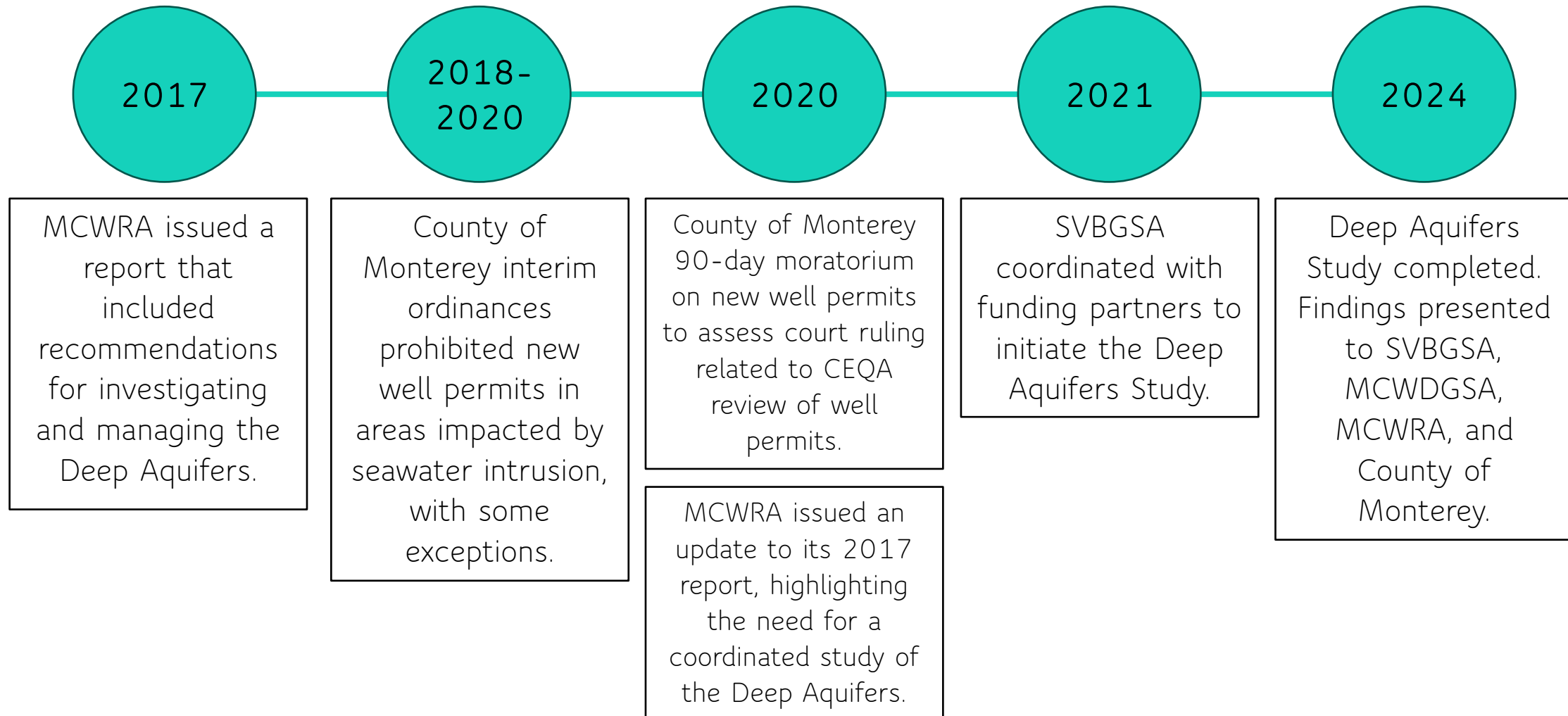


Describe long-term projects and pathways for implementation

BACKGROUND AND RECENT ACTIVITIES



Background



Why are we concerned?

- Groundwater levels in the Deep Aquifers continue to decline in most wells.
- The hydraulic gradient is downward into the Deep Aquifers, which is a reversal of historical conditions.
- Current conditions make the Deep Aquifers vulnerable to seawater intrusion, especially in areas where the overlying aquifers are already intruded.

WY 2024 Annual Report

Monterey Subbasin

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

Salinas Valley Groundwater Basin

180/400-Foot Aquifer Subbasin

Water Year 2024 Annual Report

Submitted in Support of Groundwater Sustainability Plan Implementation



Prepared by:



Recent activities

Since completion of the Study, MCWRA, SVBGSA, and MCWDGSA have continued to monitor and evaluate conditions in the Deep Aquifers.

- 180/400 Subbasin 5-Year Evaluation (Water Years 2019-2023)
 - SVBGSA submitted an evaluation to the Dept. of Water Resources in January 2025.



Lowering
GW Levels

- Groundwater levels in the Deep Aquifers fell below the minimum threshold in all 5 years.
- Groundwater levels in parts of the Deep Aquifers are below those of the overlying aquifers. This creates vulnerability to vertical migration of seawater intruded water into the Deep Aquifers.



Reduction
of Storage



Seawater
Intrusion

- The 180/400 Subbasin also had undesirable results for seawater intrusion (WY 2019-2023) and groundwater storage (WY 2021 and 2022).

Recent activities

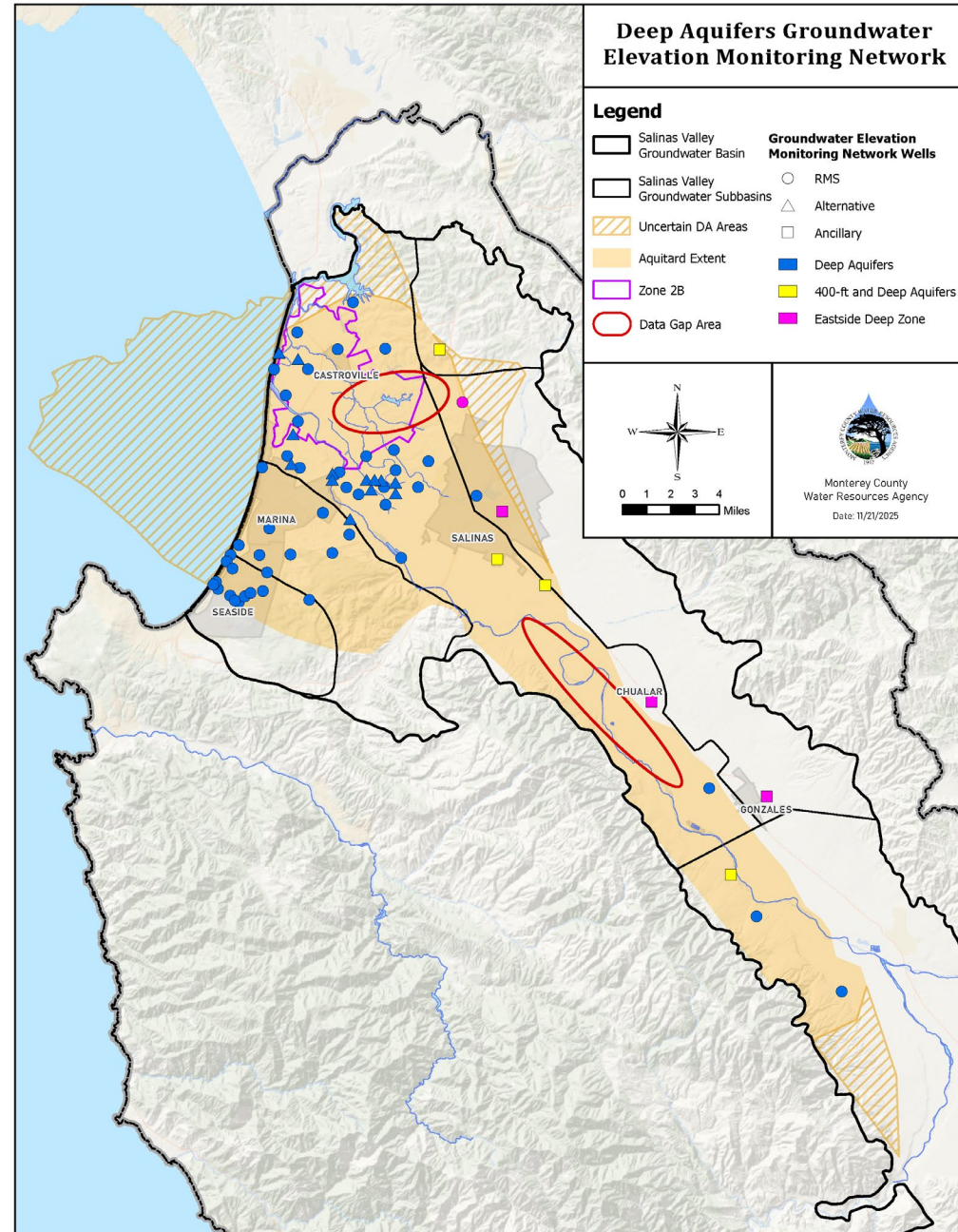
- MCWDGSA and SVBGSA have increased the number of representative monitoring sites in the Deep Aquifers.
- 8 new dedicated Deep Aquifers monitoring wells were installed.
- This expanded monitoring network will support:
 - Development of groundwater elevation contours for the Deep Aquifers
 - Calculation of groundwater storage changes
 - Tracking of hydraulic connectivity



Recent activities

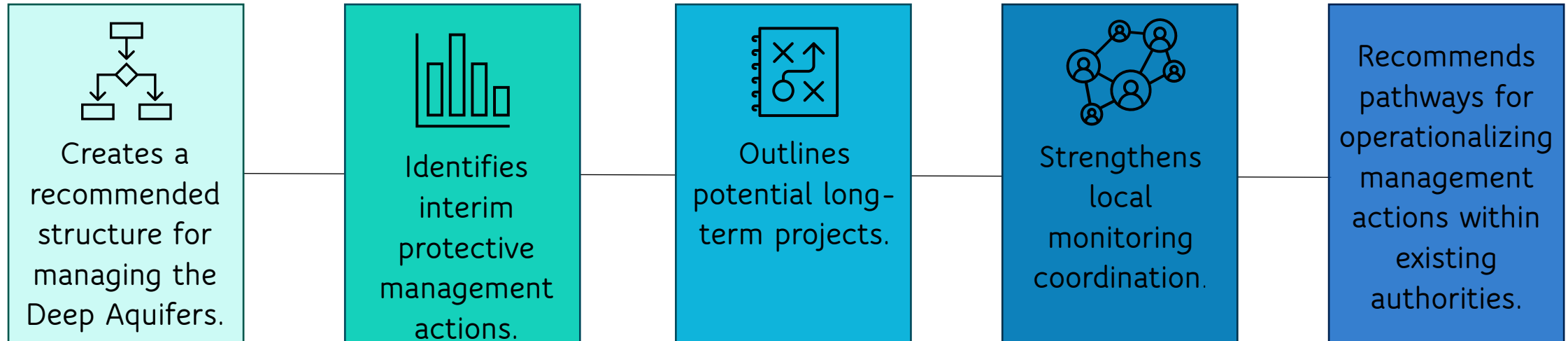
MCWRA prepared a Monitoring Plan for the Deep Aquifers in 2025.

- The Deep Aquifers cover a geographic space that is managed by multiple entities.
 - Consistent and compatible monitoring will inform management actions for all agencies.
- What is covered in the Monitoring Plan?
 - Groundwater extraction and injection reporting
 - Groundwater elevation
 - Groundwater quality for seawater intrusion
- Data gaps were identified.
- An annual process for collaboratively evaluating the monitoring network and sharing data is described.



Deep Aquifers Memorandum

- The *Deep Aquifers Management Recommendations Memorandum* (DA Memo, 2026) was prepared by the SVBGSA, MCWRA, MCWDGSA, and County of Monterey.
- It builds on recommendations from the Deep Aquifers Study and related earlier reports.
- The DA Memo:



Questions on
background or
recent activities?

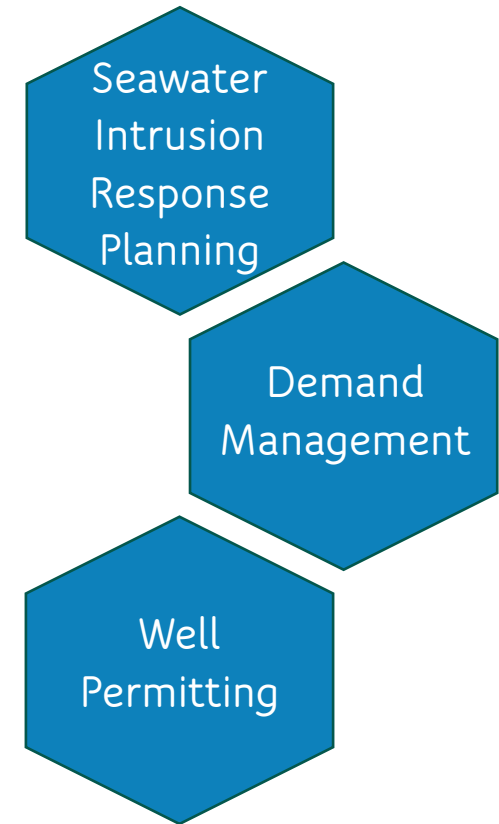
Recommended Interim Local Management Actions



Interim Management Actions

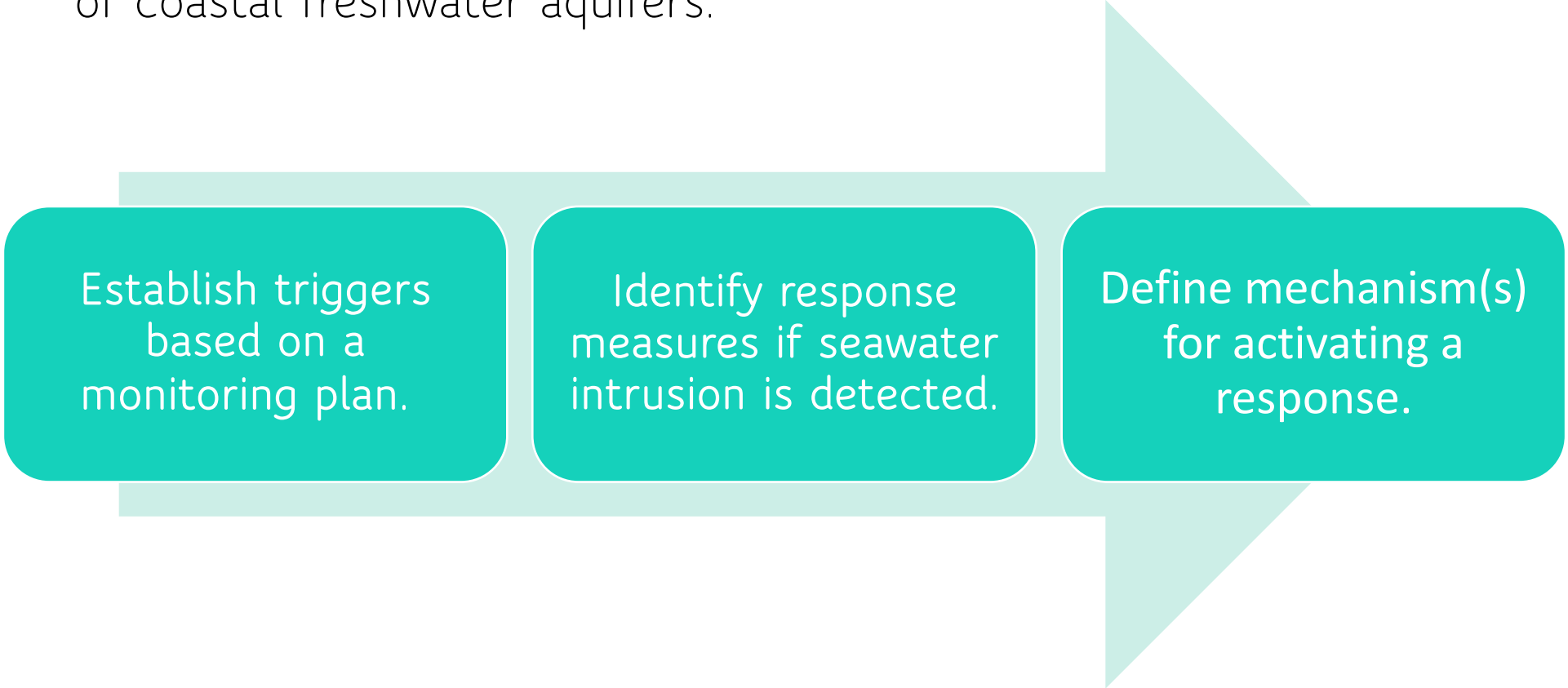
Actions that:

- Build on content from the Deep Aquifers Study
- Can be undertaken now to address existing issues in the Deep Aquifers
- Emphasize activities that can be completed while longer-term project or management actions are developed



Interim Local Management: Seawater Intrusion Response Planning

- A strategy for detecting, preventing, and mitigating contamination of coastal freshwater aquifers.



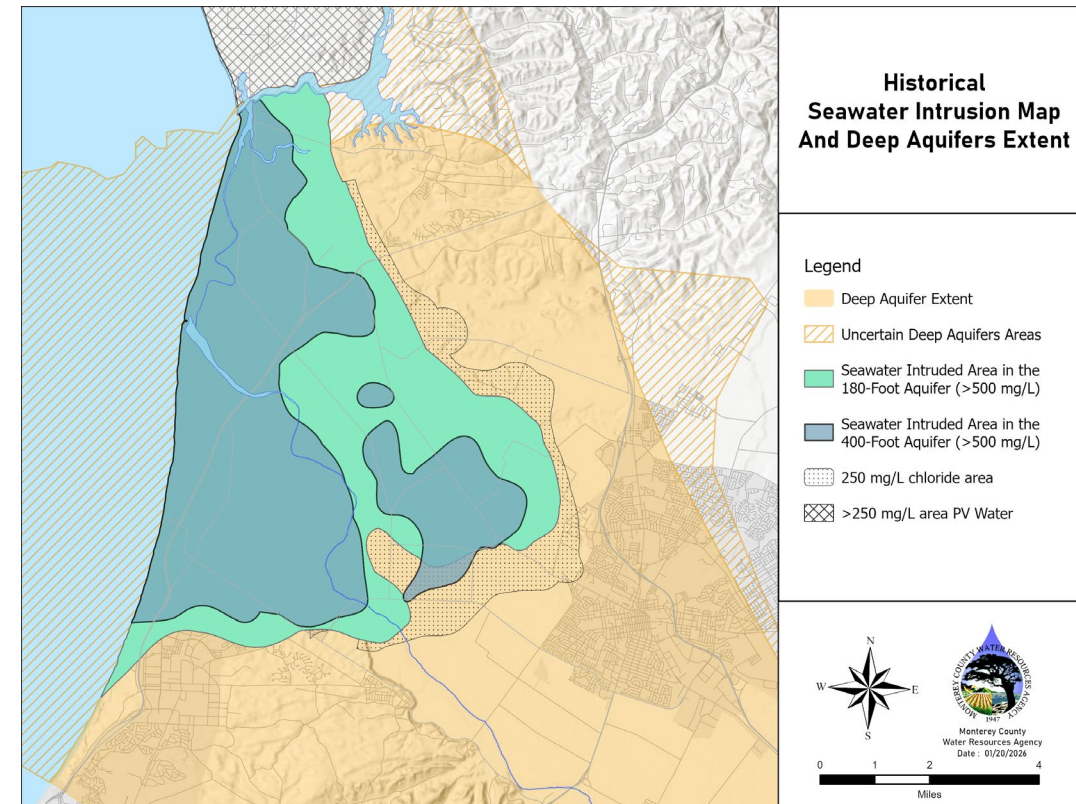
Establish triggers
based on a
monitoring plan.

Identify response
measures if seawater
intrusion is detected.

Define mechanism(s)
for activating a
response.

Interim Local Management: Seawater Intrusion Response Planning

- Examples of potential response measures:
 - Water shortage response plan
 - Pumping reductions
 - Relocation of wells
 - Well destruction
 - Pumping schedules
 - Development of alternative supplies
 - Recharge augmentation
- The DA Memo supports a SIRP to enable rapid assessment and response action if and when wells become seawater intruded.
- Implementation coordinated across agencies within existing statutory authorities and Groundwater Sustainability Plans.

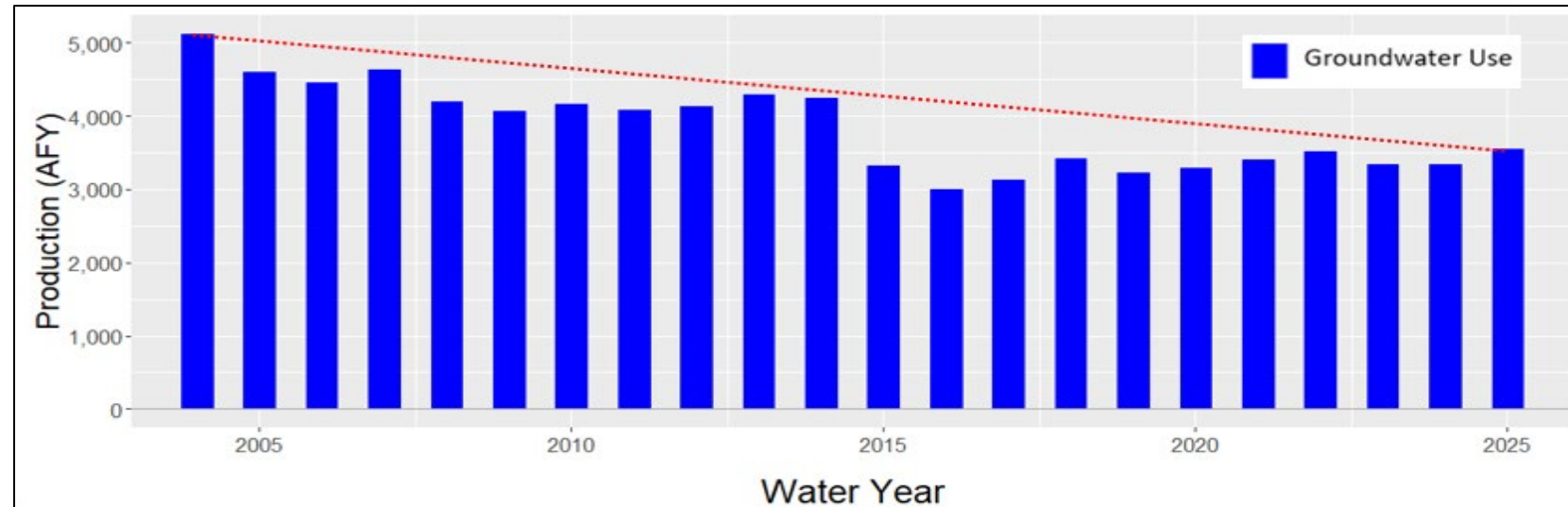


Interim Local Management: Demand Management/SVBGSA

- Prioritizing demand management in areas facing the greatest groundwater risks, based on stages in the Demand Management Framework.
 - 180/400 Subbasin in Stage 4 because of seawater intrusion and Deep Aquifers groundwater level undesirable results since GSP implementation.
 - Demand management measures needed as a strategy until long-term projects are in place.
- Measures to limit groundwater pumping align with recommendations from the Deep Aquifers Study to stabilize and improve groundwater levels.
- FY 2027 work plan includes developing:
 - Allocation rules
 - Program structures
 - Administrative systems for a Demand Management Fee

Demand Management Options MCWDGSA

- MCWD continues to lower demand from 2004 to Today:



- Increase monitoring of detected wells showing early signs of seawater intrusion
- Evaluate production wells near impacted areas
- Possibly reduce or temporarily shift pumping away from impacted wells
- Consider using operational pumping flexibility across MCWD's well network to reduce stressed aquifers
- May adjust pumping patterns to manage hydraulic gradients

Interim Local Management: Well Permitting

- All well applications submitted to the Environmental Health Bureau (EHB) are vetted through an Initial Study check list to determine if a more in depth CEQA review is required. Depending on the proposed well details, EHB staff determines if additional information is needed and on the complexity of study that will be required.
- In the case of well applications for new or replacement agricultural wells in the Deep Aquifers, the findings have been that an EIR is required.
- EHB is in the process of updating Monterey County Code Chapter 15.08 - Water Wells and planning to start public review in mid-summer.

Questions on Interim Local Management?



Long-Term Projects

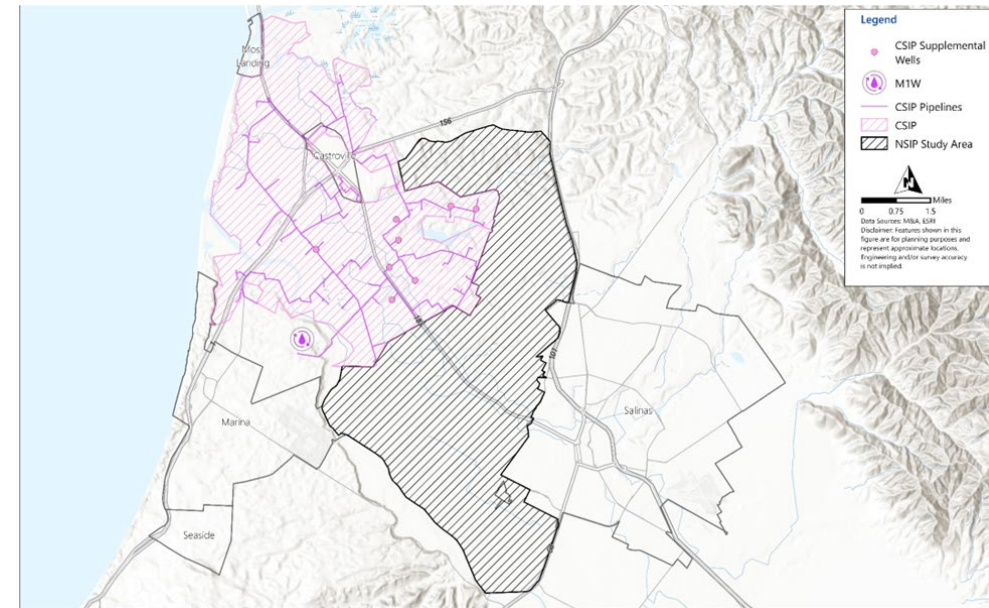
MCWDGSA PROJECTS

- Indirect potable reuse (IPR) project expansion
- Phase 1 renovation and recommissioning of pilot desalination plant
- Advancement of injection well projects into deep aquifer
- Continued operation of municipal wells, supported by new leak detection and SCADA systems



MCWRA/SVBGSA PROJECT CONCEPTS

- CSIP Enhancements/Optimization:
 - CIP 1 – Rodgers Loop Check Valve and Pressure Relief Valve
 - CIP 2 – Second CSIP Storage Pond Outlet Pipeline
 - CIP 3 – In-System Storage Tank and Booster Pump Station
- New Seawater Intrusion Project/CSIP Expansion
- Aquifer Storage and Recovery of Salinas River Diversions
- Brackish Groundwater Restoration Project



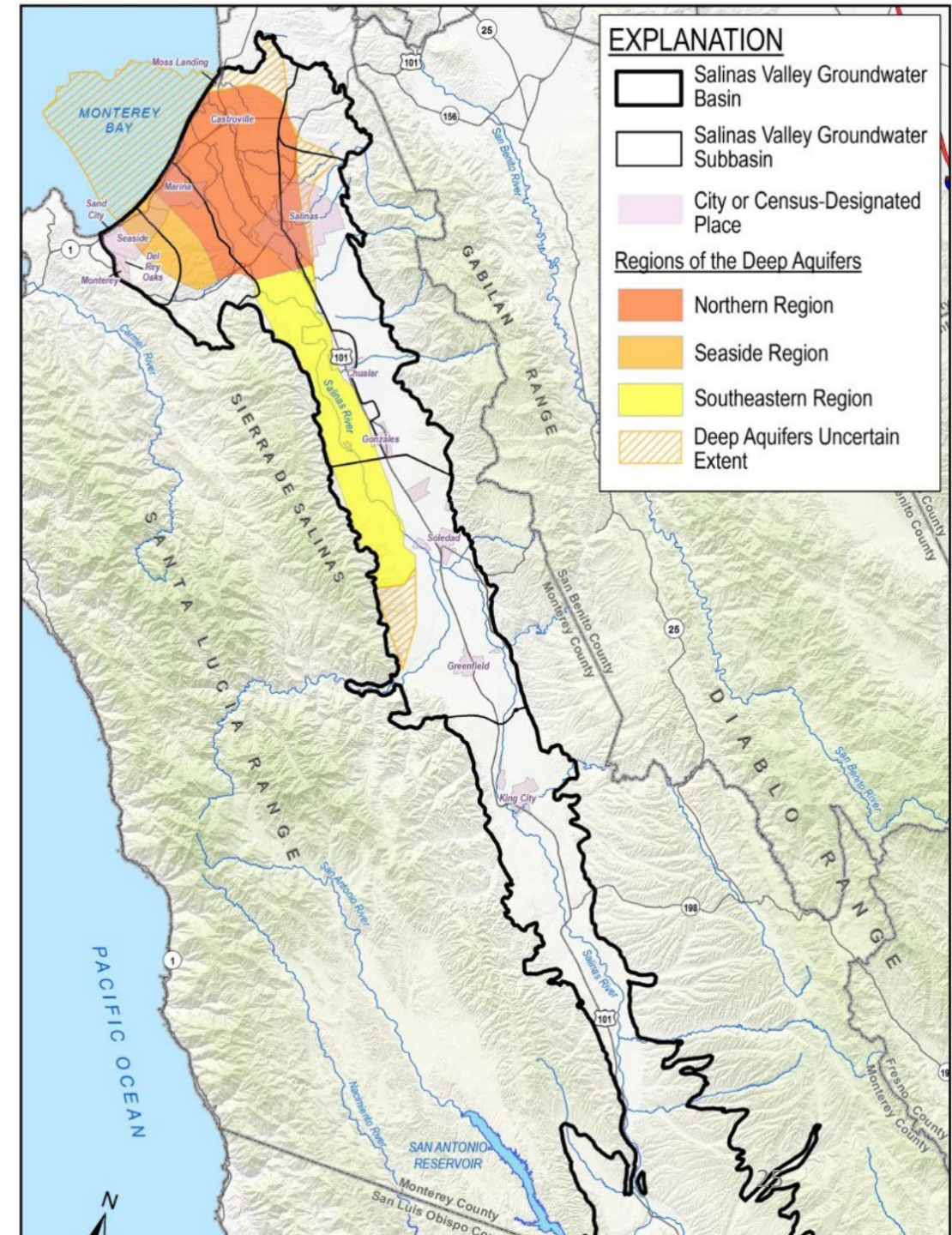
Questions on Long-Term Projects?

Study-Based Management Considerations and Implementation Pathways



Considerations

- Several local agencies have groundwater management authorities within the Deep Aquifers extent:
 - County of Monterey
 - Marina Coast Water District and MCWDGSA
 - Monterey County Water Resources Agency
 - Salinas Valley Basin GSA
 - Seaside Groundwater Basin Watermaster
 - Monterey Peninsula Water Management District
- DWR concerns about Critically Overdrafted 180/400-Foot Aquifer Subbasin, including seawater intrusion and Deep Aquifers undesirable results



Implementation Pathways

- Actions to manage the Deep Aquifers through established public processes.
- Implementation pathways for selected actions include:

Incorporation of new or refined projects and management actions into GSP updates.

Adjustment of SMC through formal amendment processes.

Development of technical studies to evaluate project feasibility.

Use of existing permitting and regulatory authorities.

Coordination through existing interagency agreements and monitoring frameworks.

Next steps



Thank you for joining us.

Resources:

- Deep Aquifers Study
- Deep Aquifers Management Recommendations Memo

Available at <https://svbggsa.org/deep-aquifer-study/>