

Deep Aquifers Study

Board of Supervisors
Presentation

September 10, 2024

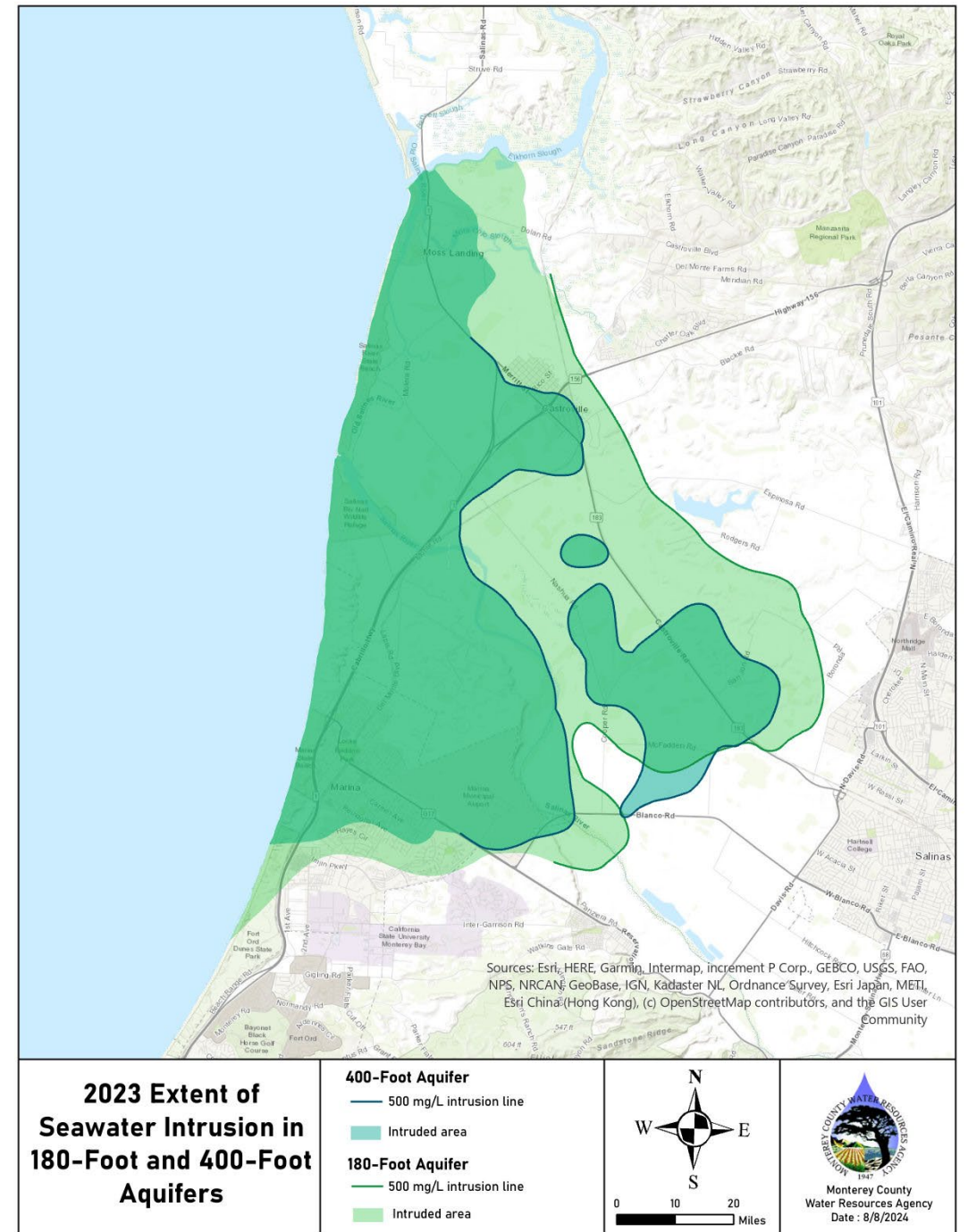
Year	Deep Aquifer Study Background
2017	Monterey County Water Resources Agency (WRA) issued “Recommendations to Address the Expansion of Seawater Intrusion in the Salinas Valley Groundwater Basin”
2018	County of Monterey issued interim ordinance no. 5302 (3) - Prohibited construction of new wells in the Deep Aquifers unless exempted by ordinance and directed WRA to complete a study
2020	Interim ordinance expired
2020/2022	Study identified as an action in the 180/400-Foot Aquifer Subbasin and Monterey Subbasin Groundwater Sustainability Plans
2022	Cooperative funding agreement executed, RFP issued by SVBGSA, consultant selected with partner agency input
2022-present	Two-year schedule to completed study, administrative draft review by Groundwater Technical Advisory Committee, public release in May 2024

Collaborative Funding Partners

Monterey County Water Resources Agency	\$ 340,000
Monterey County	\$ 170,000
Salinas Valley Basin Groundwater Sustainability Agency	\$ 89,250
City of Salinas	\$ 42,500
Marina Coast Water District Groundwater Sustainability Agency	\$ 42,500
Cal Water Service	\$ 12,750
Castroville CSD	\$ 12,750
Alco Water	\$ 8,500
Irrigated Agriculture	\$ 131,750
Total	\$ 850,000

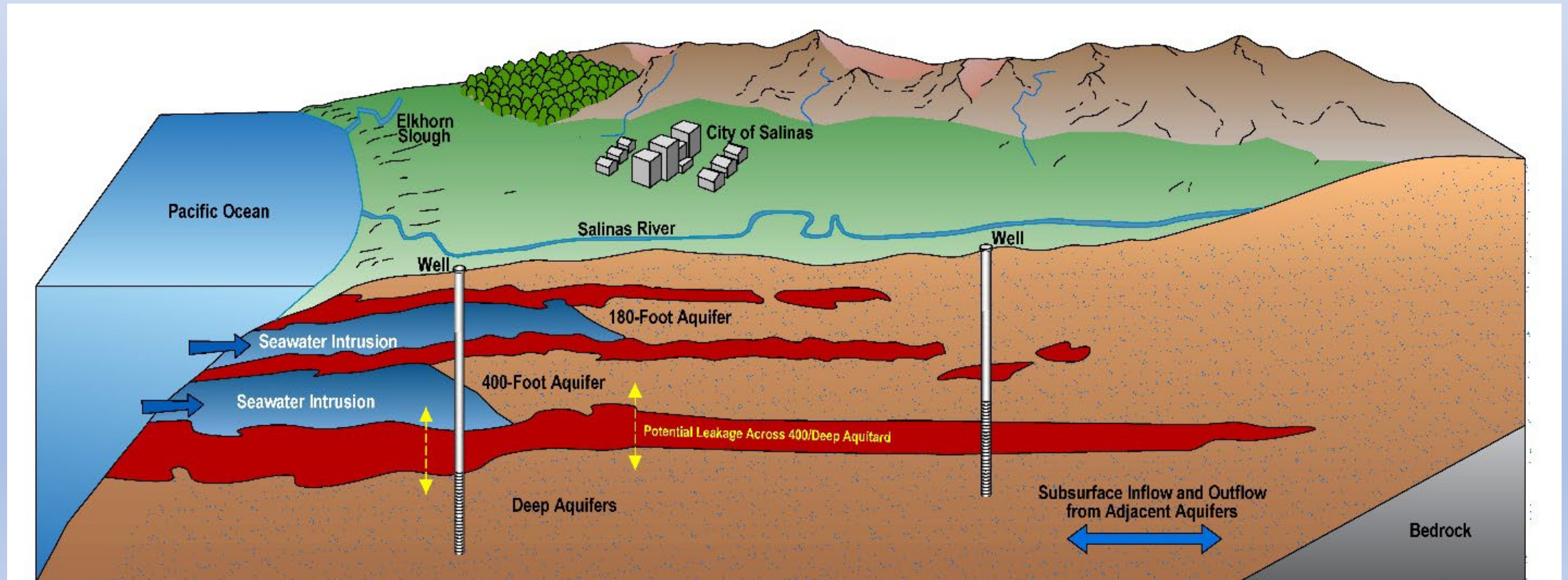
Study Purpose

- Study of Deep Aquifers related to addressing seawater intrusion in the 180/400-Ft. Aquifers
- Study needed to inform sustainable groundwater management actions in the Salinas Valley
- Scientific understanding to inform management

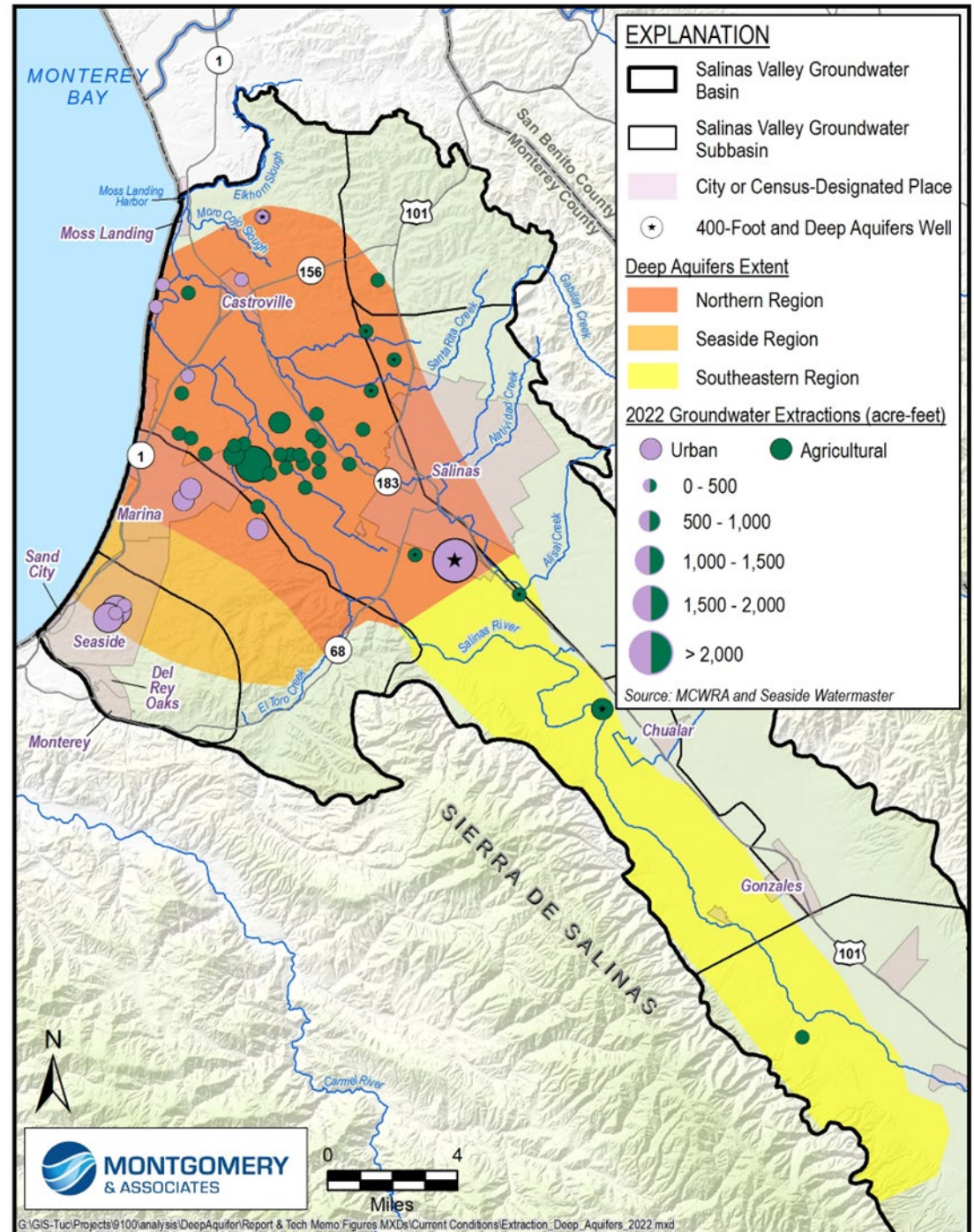
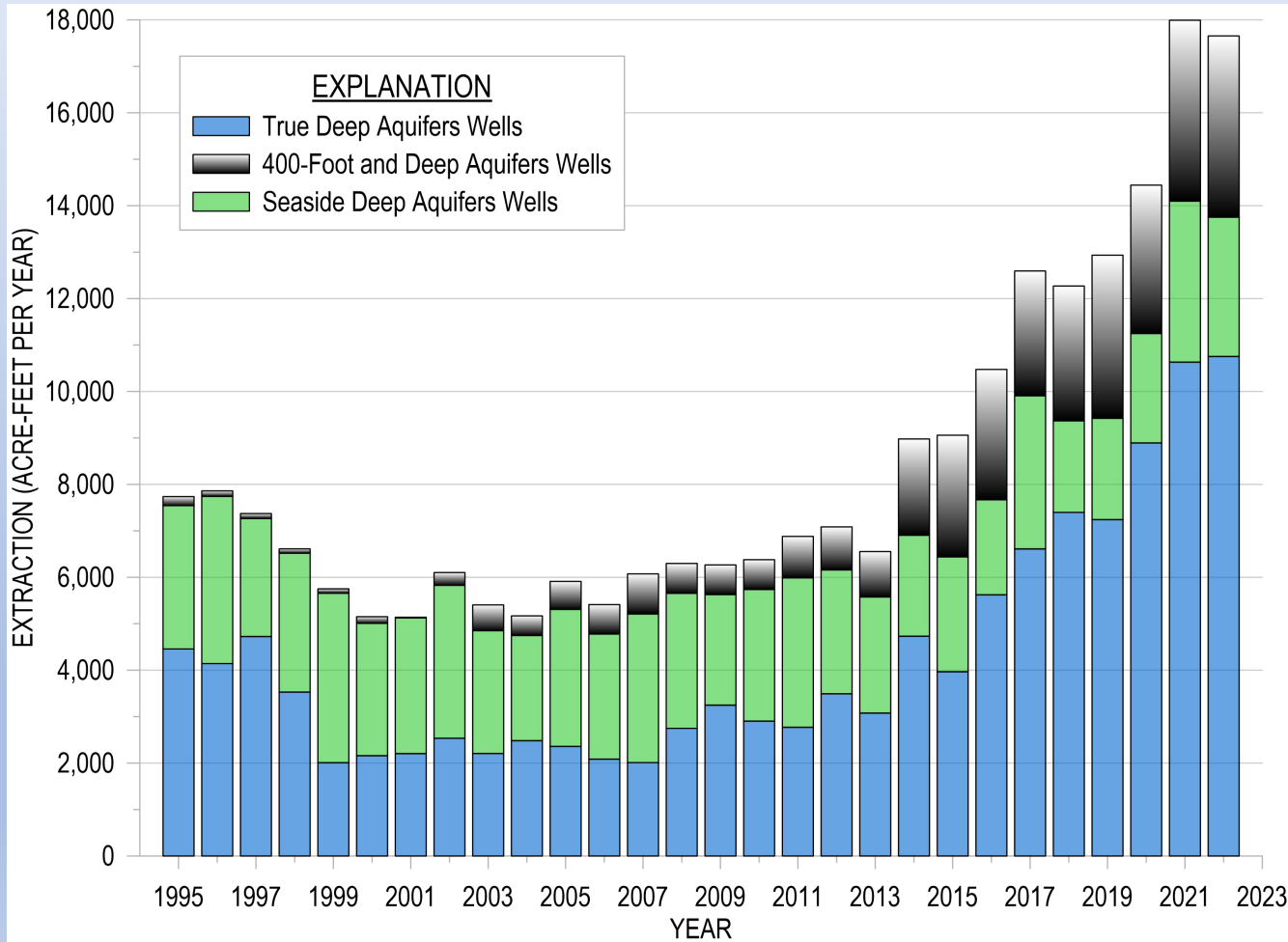


Deep Aquifers in Monterey County

- Key municipal and agricultural source of water
- Particularly important in seawater intruded areas

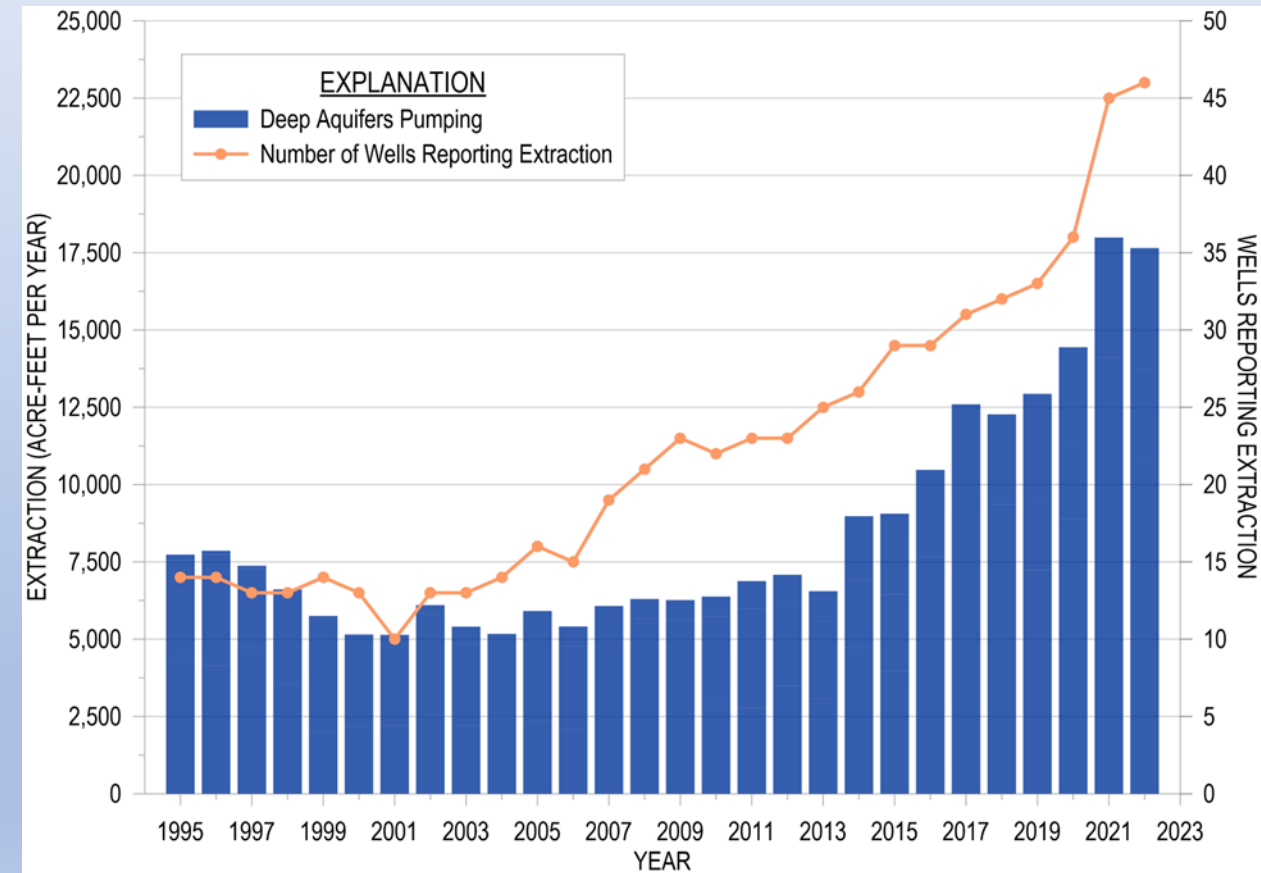


Extraction from the Deep Aquifers



Groundwater Elevations Declined as Wells and Extraction Increased

- Number of wells and pumping have more than doubled since 2015
- Groundwater elevations on a general downward trend over the last 2 decades
- Groundwater storage declining on average 9,000-9,600 AF/yr
- Risk of seawater intrusion from the overlying aquifers



Study confirms the Deep Aquifers are in overdraft

- Water budget shows a deficit of inflows vs. outflows
- Water chemistry shows that samples collected in 2024 are of groundwater recharged prior to 1953
- Earlier studies dated water to approximately 25,000 years old from a well installed near the coast
- Inflow to and outflow from the Deep Aquifers can come from adjacent aquifers
- But, due to depth, distance, and geology, inflows come in slowly
- Inflows not considered “recharge” in terms of being “usable”

Summary of Deep Aquifers Study Contributions



Developed definition, extent, and hydrogeologic conceptual model



Developed a water budget



Made monitoring recommendations



Provided guidance for management based on findings

Summary of Current Conditions

Analysis of historical and current conditions does not change conceptual understanding

Current conditions confirm previous conclusions that the Deep Aquifers are in overdraft and not being recharged, and they're at risk of seawater intrusion

Continued overdraft put the Deep Aquifers at risk for irreversible damage

Data is sufficient for moving forward with management

Regulatory Context for Management

Regulatory Context:

- Seaside Subbasin is Adjudicated
- Other subbasins subject to the Sustainable Groundwater Management Act (SGMA)
- Management must meet adjudication or SGMA regulatory goals

Agency Authority:

- Sufficient jurisdictional and legal authority exist to manage the Deep Aquifers (MCWRA, EHB, MCWD, SVBGSA, Seaside Watermaster, cities and County)
- Agencies should work collaboratively to manage across the extent of the Deep Aquifers and adjacent aquifers

Agencies Working Group Next Steps

- Staff from MCWRA, MCHD, MCWDGSA, SVBGSA
- Review legal and policy issues identified in the Study
- Determine each agencies' role and authorities to implement management actions
- Develop a recommendation on management actions based on the Deep Aquifer Study findings and guidance
- Develop a recommendation for how to proceed with necessary monitoring
- Plan to return to agencies boards with respective recommendations

Today's Recommendation

Receive the Deep Aquifers Study