

SALINAS VALLEY DEEP AQUIFERS STUDY



**MONTGOMERY
& ASSOCIATES**

Water Resource Consultants

**A Brief Overview of
Study and Approach**
January 24, 2022

WHY THIS STUDY IS NEEDED

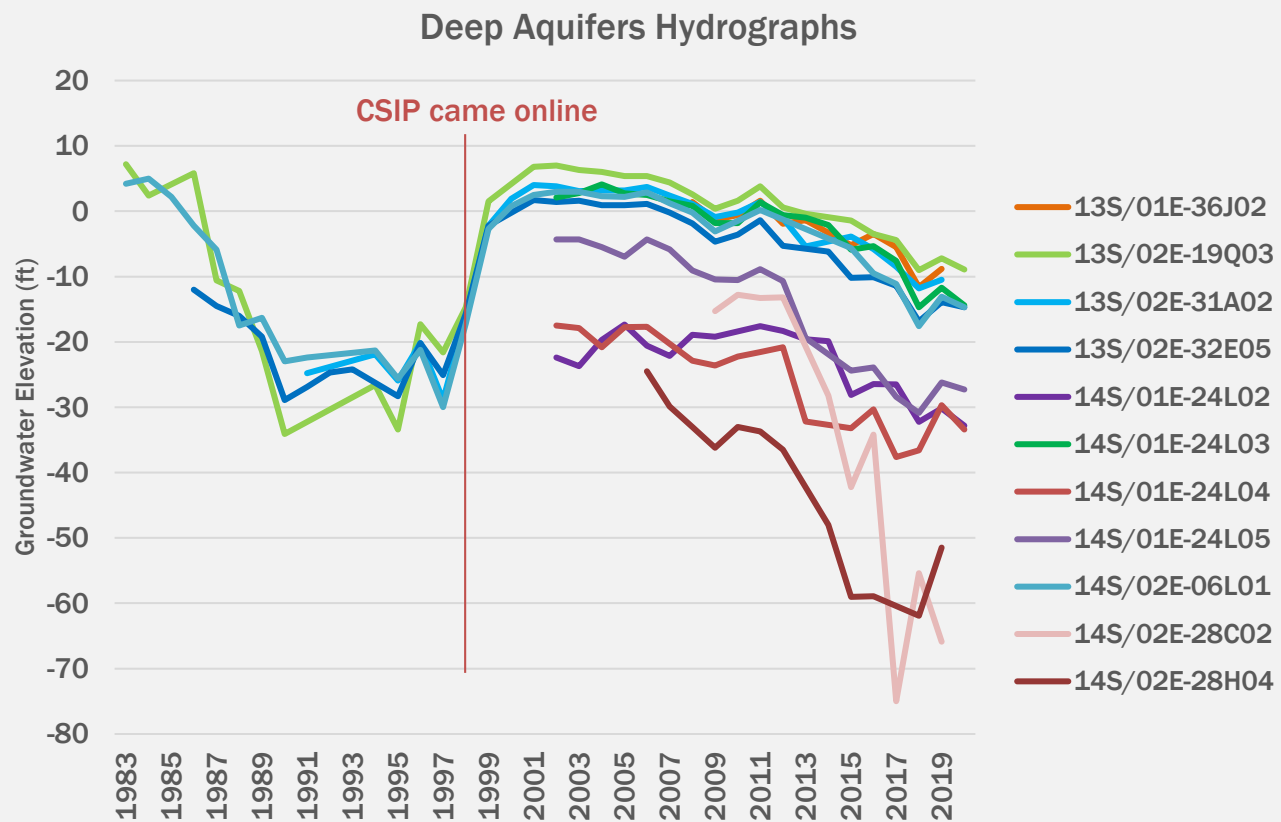
Declining groundwater levels

New well installations & increasing extraction

Uncertain if/from where there is recharge

Threat of seawater intrusion and subsidence

Need to manage per SGMA



Screen in 900-ft Aquifer

Screen in 1100-ft Aquifer (or 800/900 to 1100)

Screen in 1500-ft Aquifer (or from 1100 to 1500)

Screen through 800-ft to 1500-ft Aquifers

Screen deeper than 1500-ft (~1800)

Still 1500-ft Aquifer?

WELL INSTALLATIONS & EXTRACTION

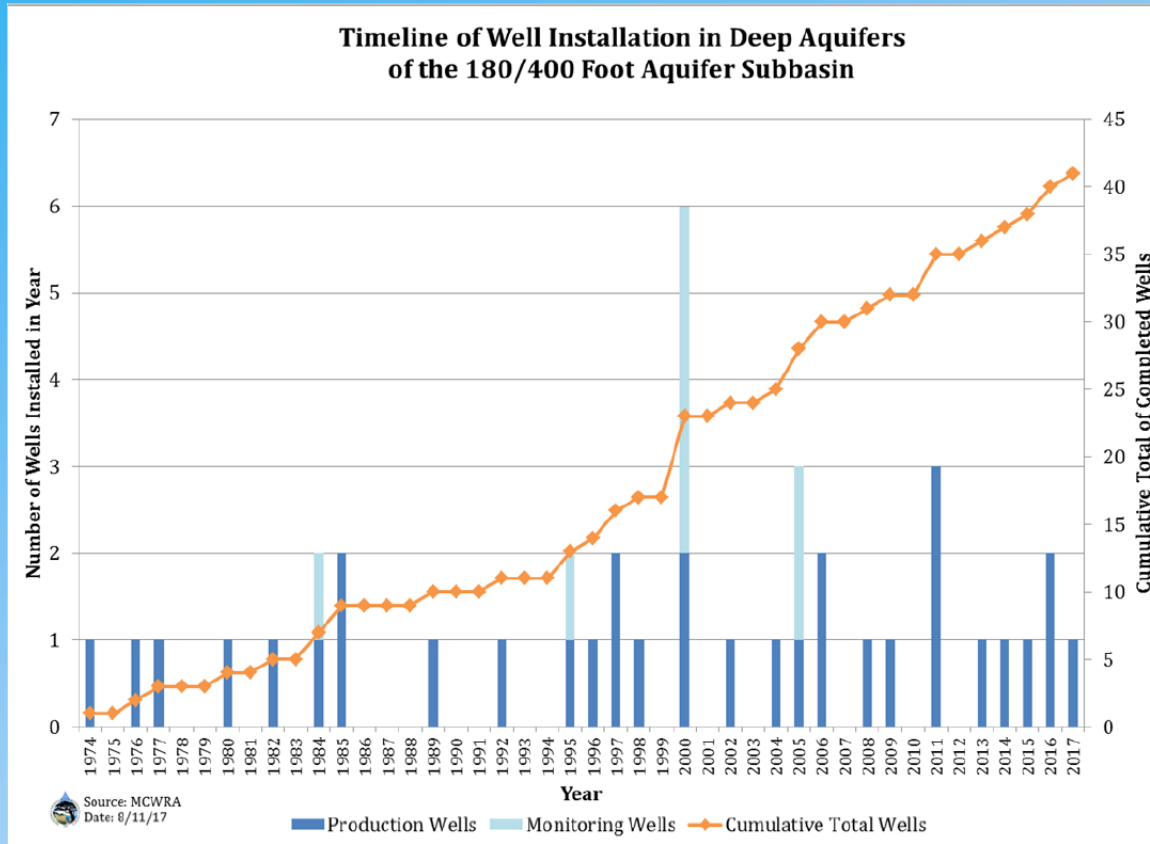


Figure 19 - Timeline of Well Installation in Deep Aquifers of the 180/400 Foot Aquifer Subbasin

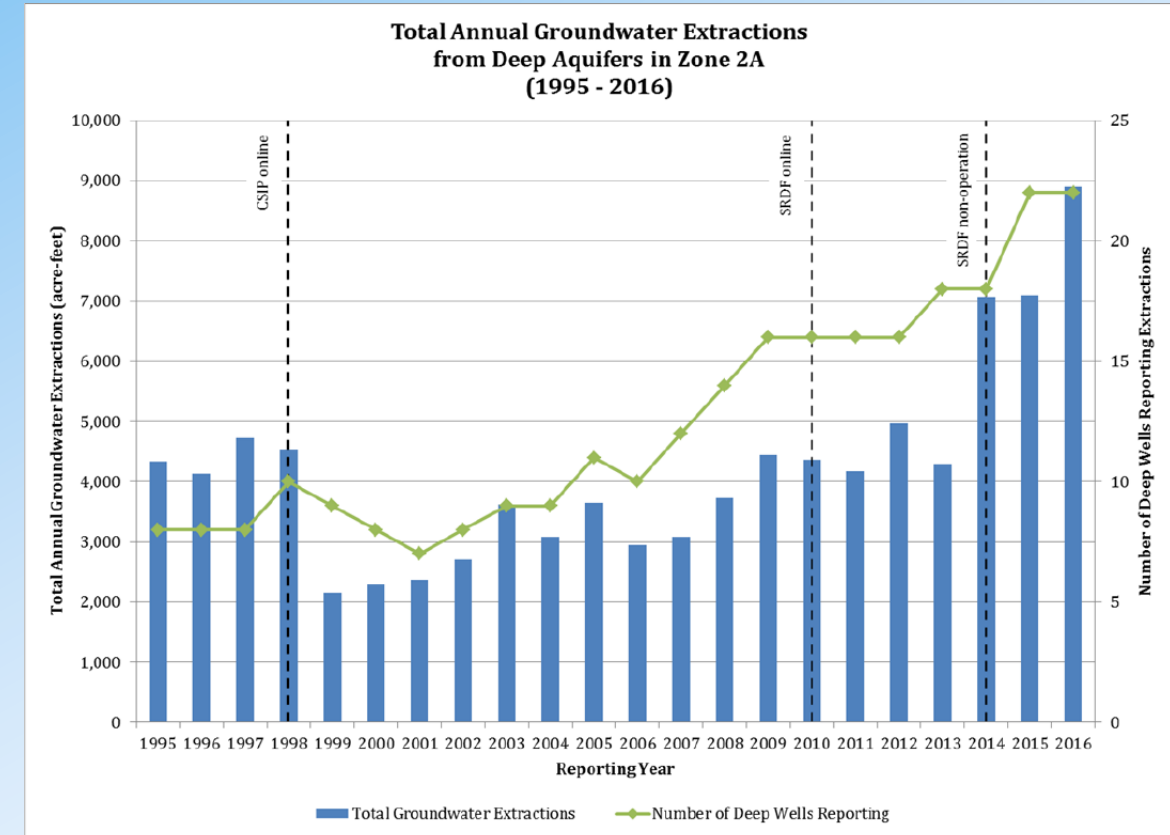


Figure 23 - Total Annual Groundwater Extractions from Deep Aquifers in Zone 2A (1995-2016)

Recommendations to Address the Expansion of Seawater Intrusion in the Salinas Valley Groundwater Basin, Monterey County Water Resources Agency, October 2017

UNDERSTANDING OF KEY QUESTIONS FOR MANAGEMENT



How should the Deep Aquifers be defined?

What is the lateral extent?

What is the connectivity with overlying aquifers and recharge?

What is the water budget?

How should monitoring be focused?

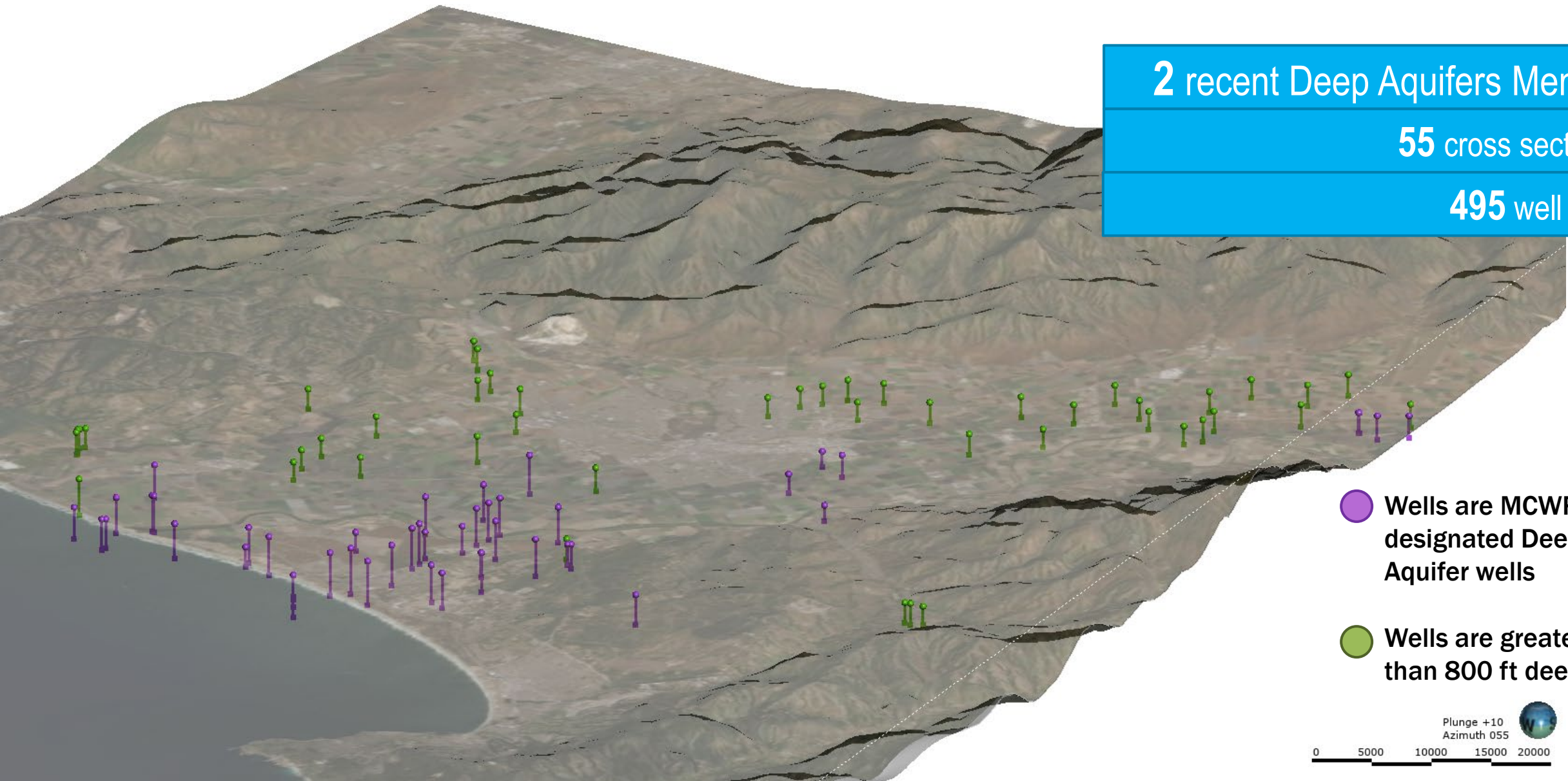
What principles should guide management?

BUILD OFF DEEP AQUIFERS DATA

2 recent Deep Aquifers Memos

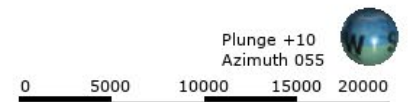
55 cross sections

495 well logs



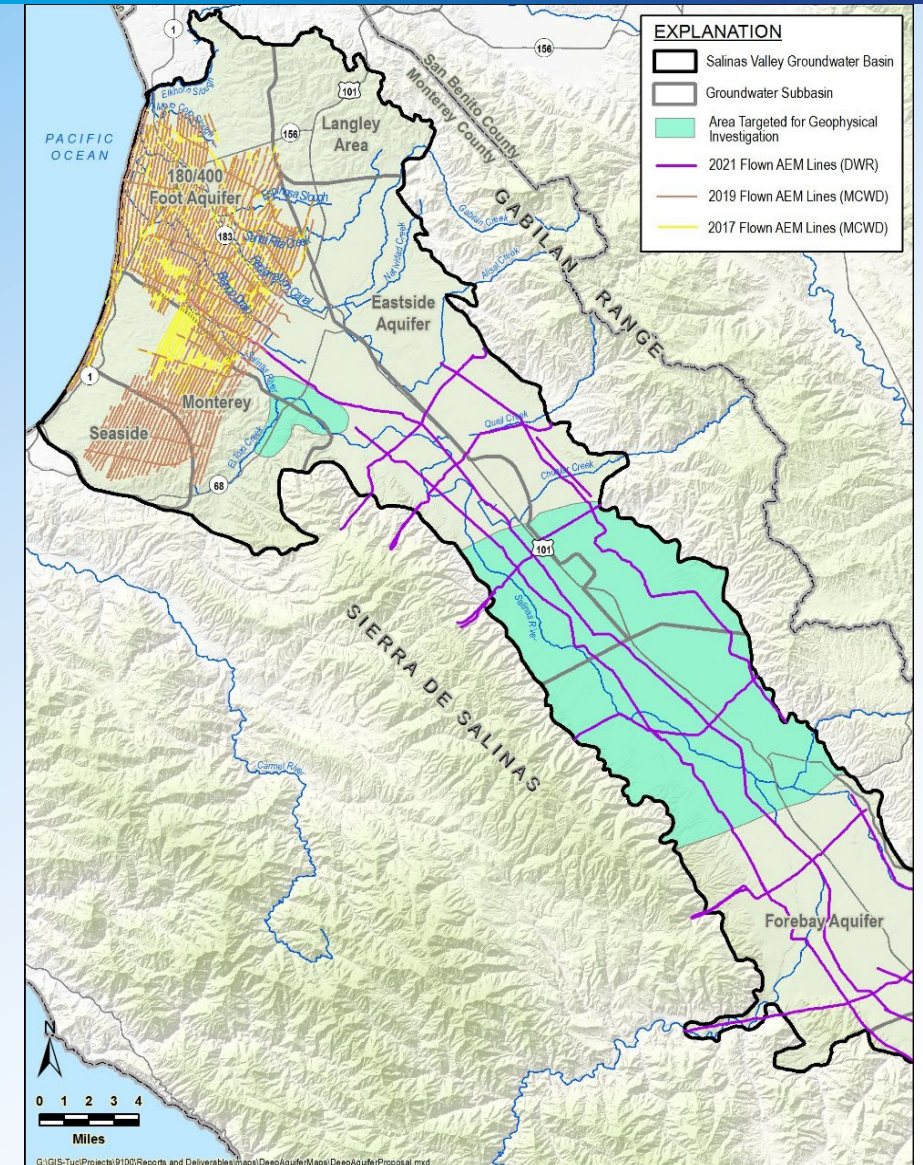
● Wells are MCWRA-designated Deep Aquifer wells

● Wells are greater than 800 ft deep

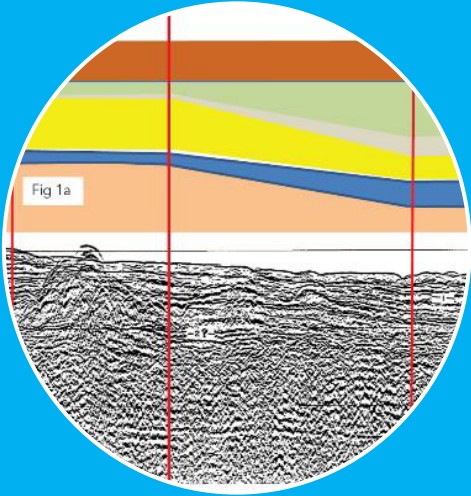


PHASE 1: PRELIMINARY INVESTIGATION

- Define the Deep Aquifers
- Scrutinize existing data with respect to new definition and to define field study locations and techniques
- Develop interim monitoring and management recommendations



PHASE 2: FIELD STUDIES



Geophysics
maps important
geologic features



Aquifer testing
provides data on
groundwater movement
and storage



**Groundwater
quality samples**
identify aquifer
connectivity and
recharge areas

Early phase
results will
guide what
additional data
are useful, and
which tools are
necessary

RAMBOLL

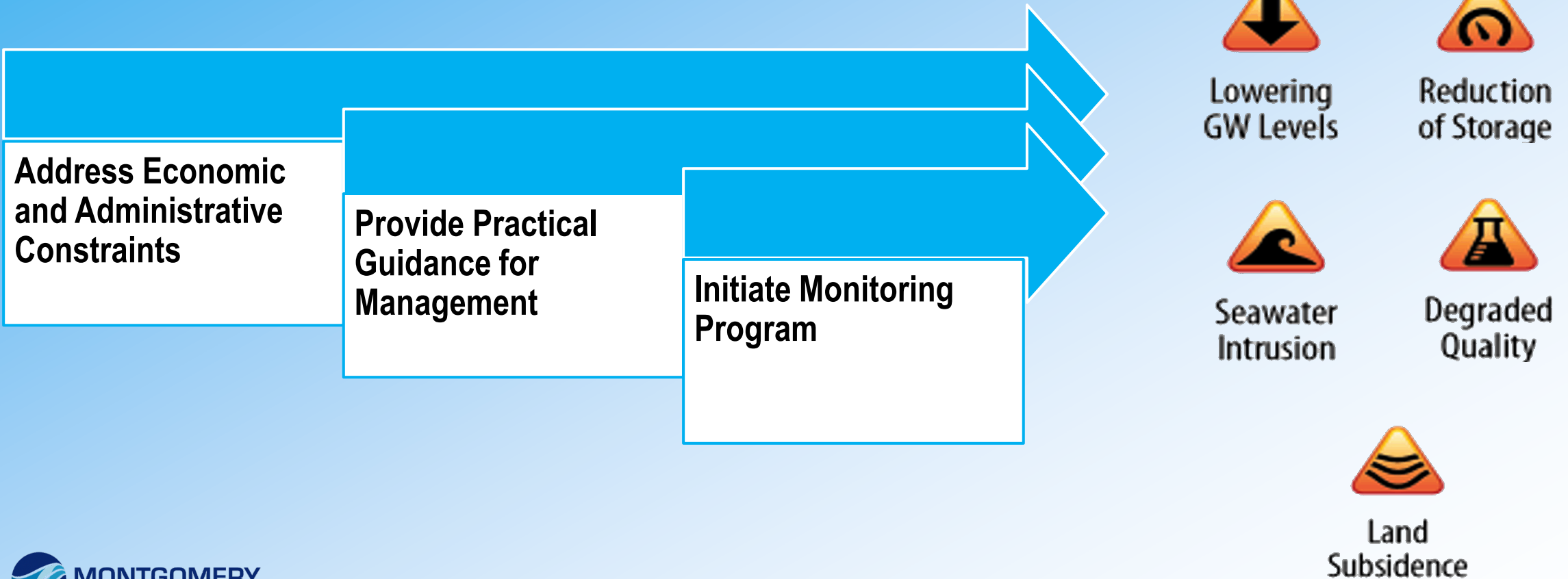


PHASE 3: BRINGING IT ALL TOGETHER



What are the Deep Aquifers
and how do we manage
them sustainably?

INCORPORATE INTO SUSTAINABLE MANAGEMENT

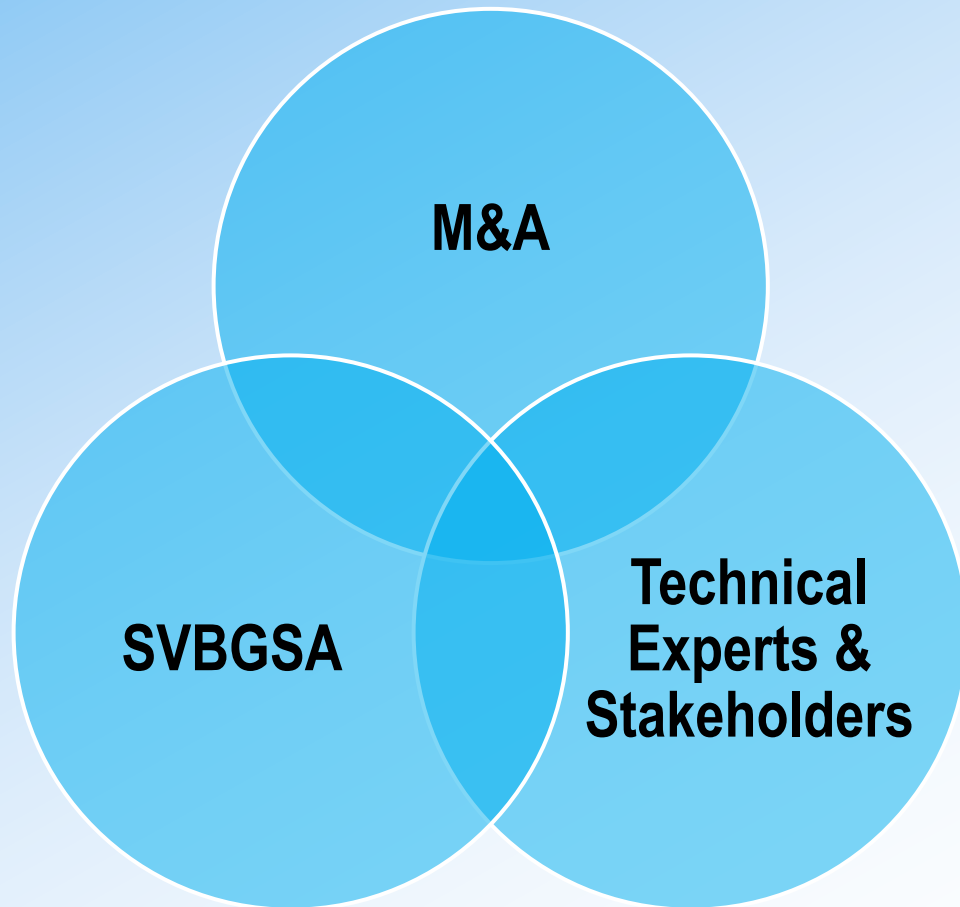


WE'RE NOT ALONE – KEY POINTS OF ENGAGEMENT

4 Technical Meetings to get feedback on key parts of the study:

- Conceptual definition of the Deep Aquifers
- Field Study Results & HCM
- Draft Water Budget
- Draft Management Guidance

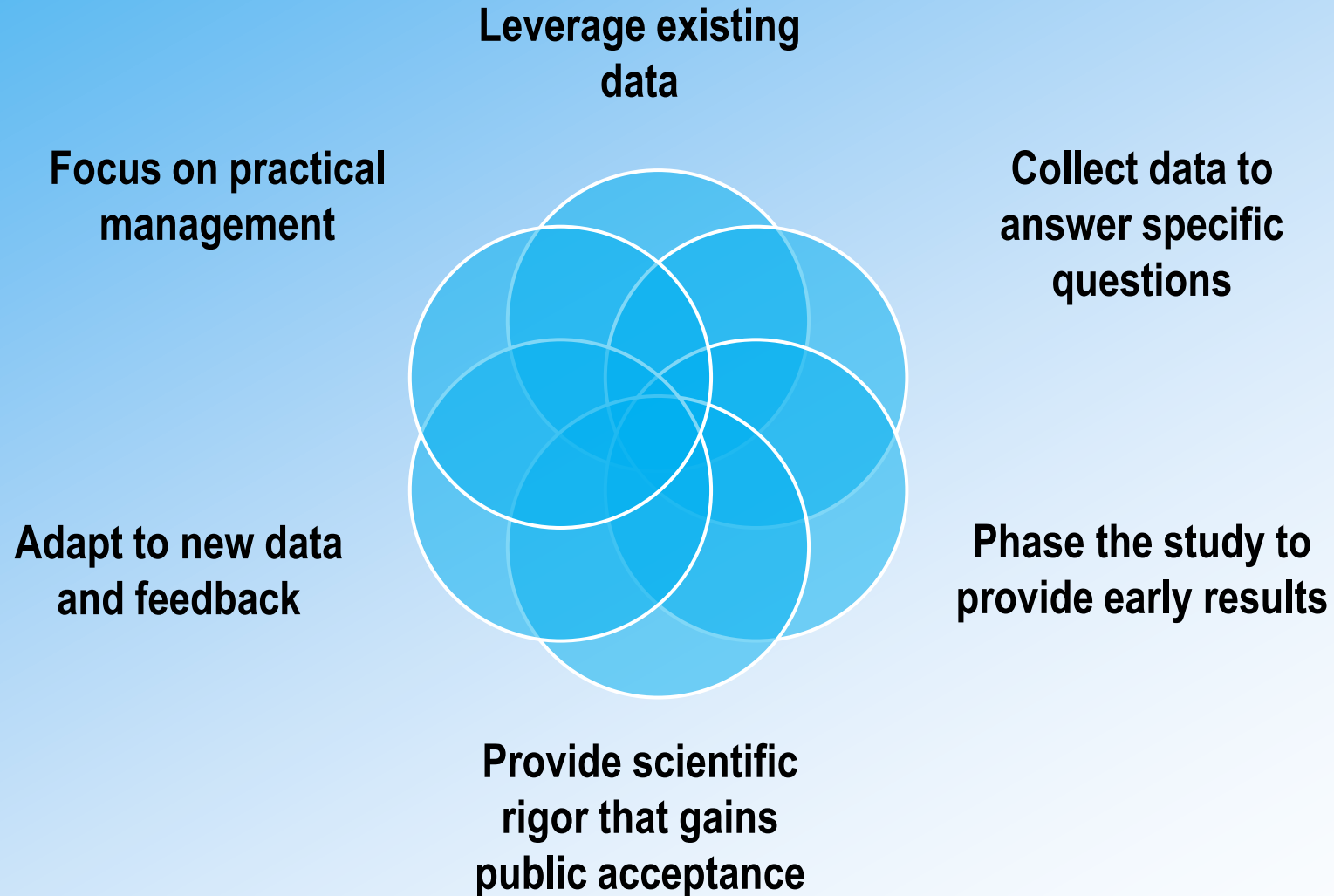
Update on Preliminary Investigation and Interim Monitoring and Management Recommendations to the Board (summer 2022)



THIS STUDY WILL PROVIDE

- Defined extent of the Deep Aquifers
- Hydrogeologic Conceptual Model of the Deep Aquifers, that builds on existing data, fills in key data gaps with new data, and informs the:
 - Lateral extent
 - Connectivity with overlying aquifers
 - Risk of seawater intrusion
- Water budget for the Deep Aquifers
- Guidance for management based on science
- Proposal for Deep Aquifers monitoring

GUIDING PRINCIPLES OF APPROACH



QUESTIONS?