

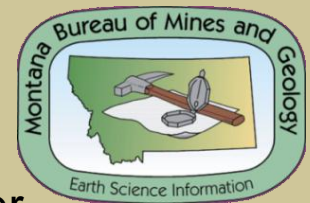
To Deplete or not to Deplete...

that is the question...



Groundwater Investigations Program

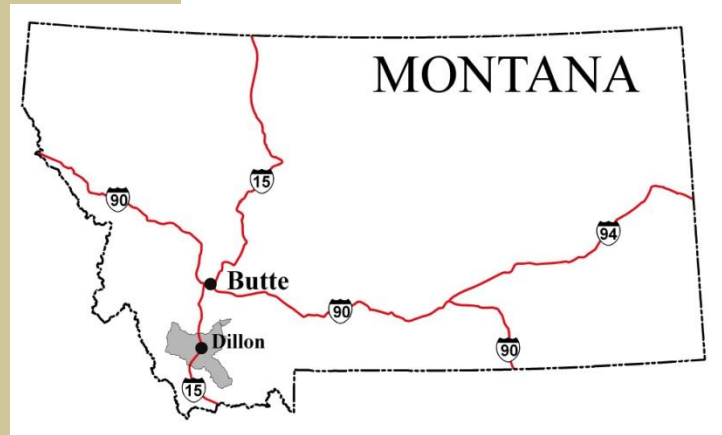
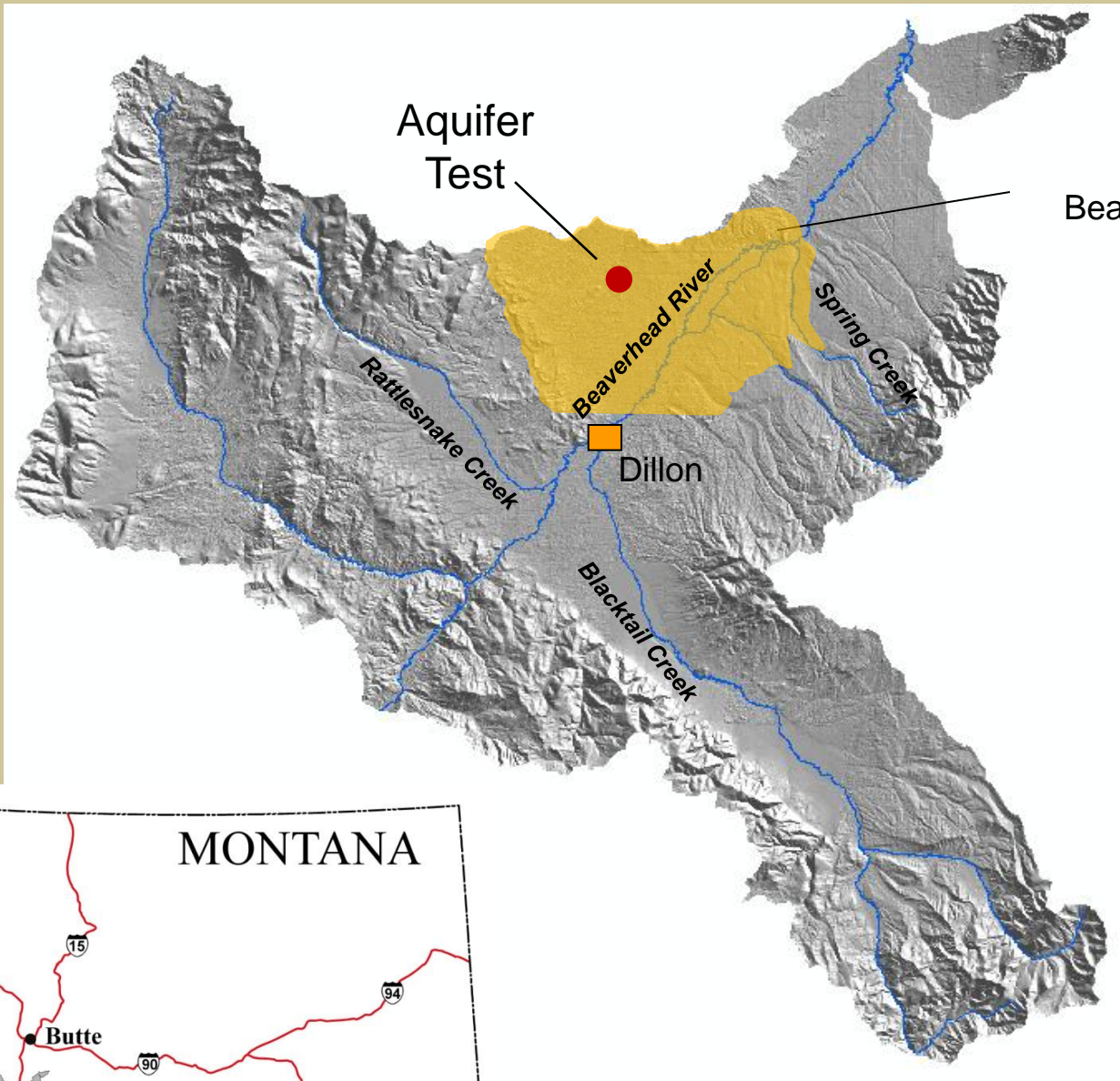
Ginette Abdo, Julie Ahern, Todd Myse, Dean Snyder
Jane Madison, Glenn Shaw



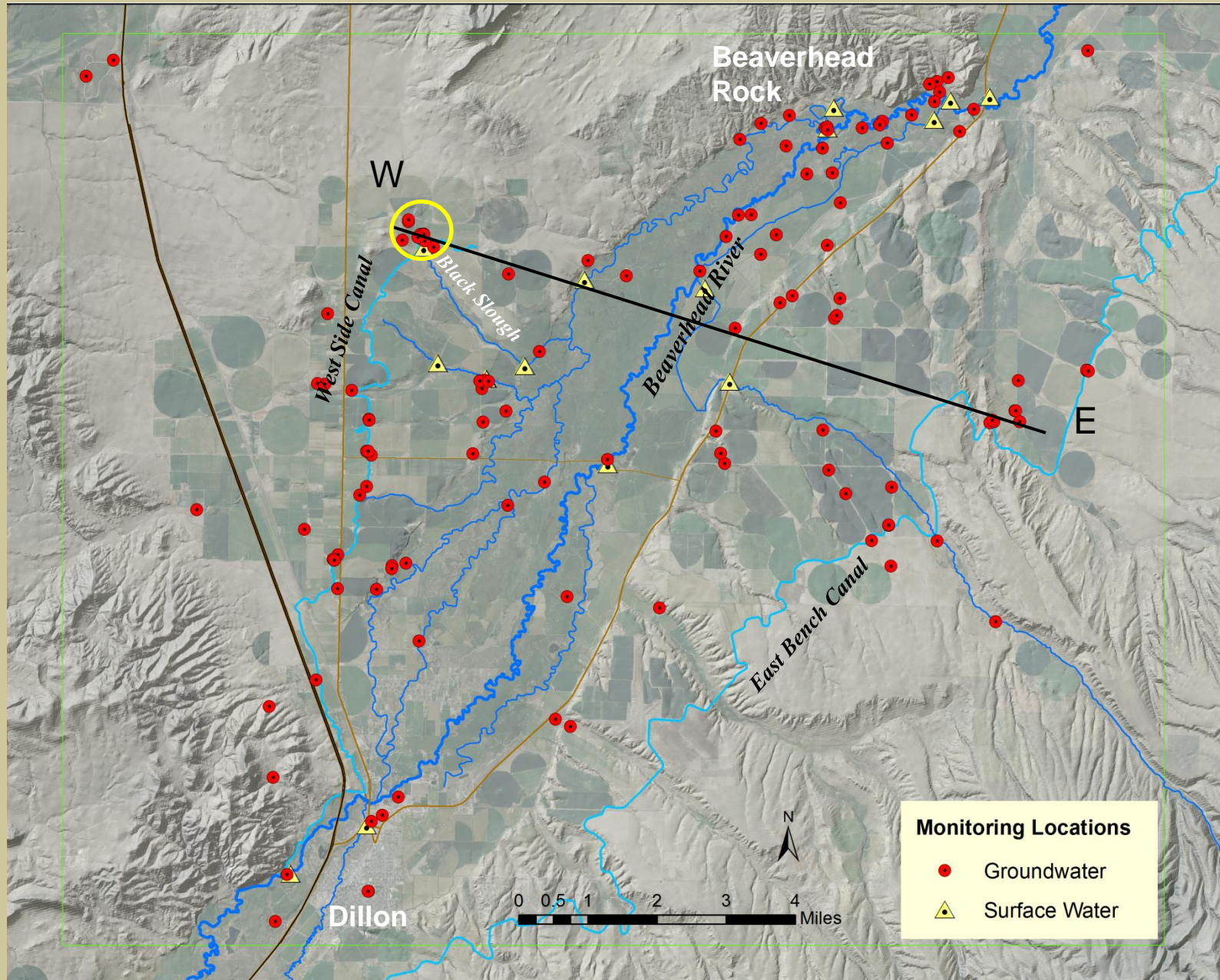
You Decide...



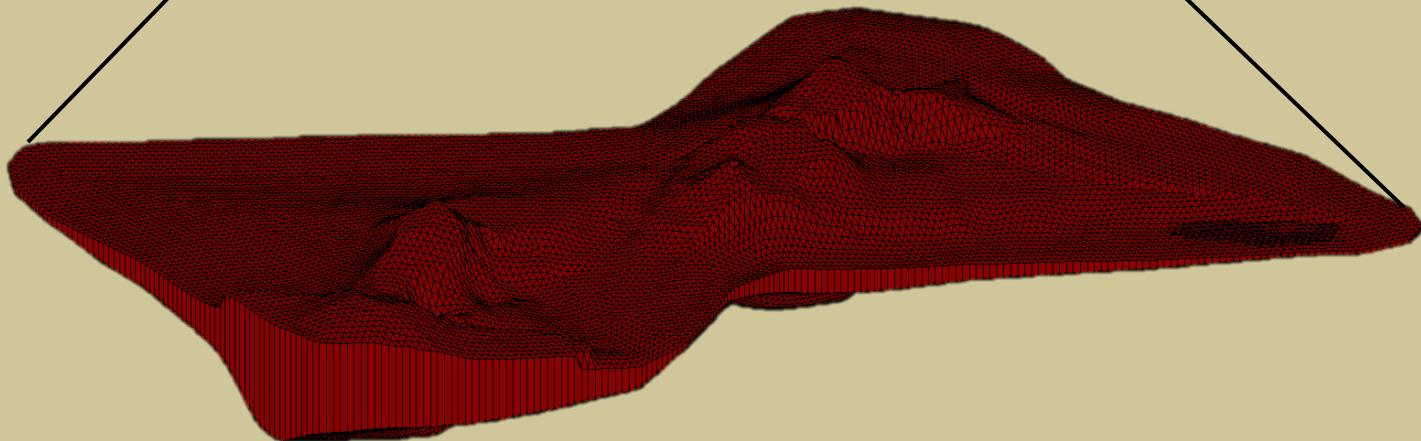
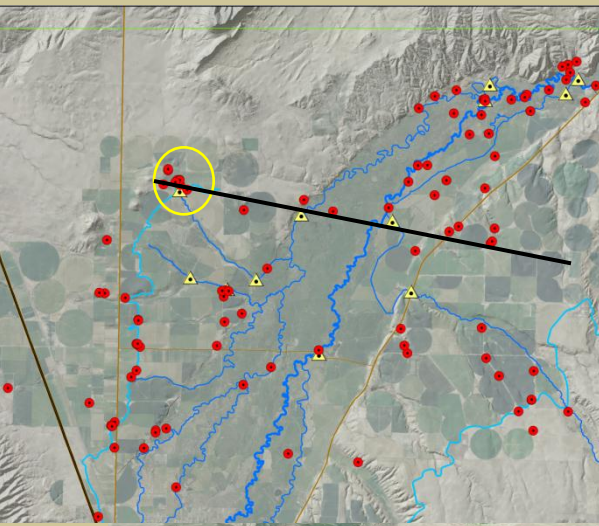
- Overall study design
- Aquifer test setting
- Groundwater and surface water response
- Summary



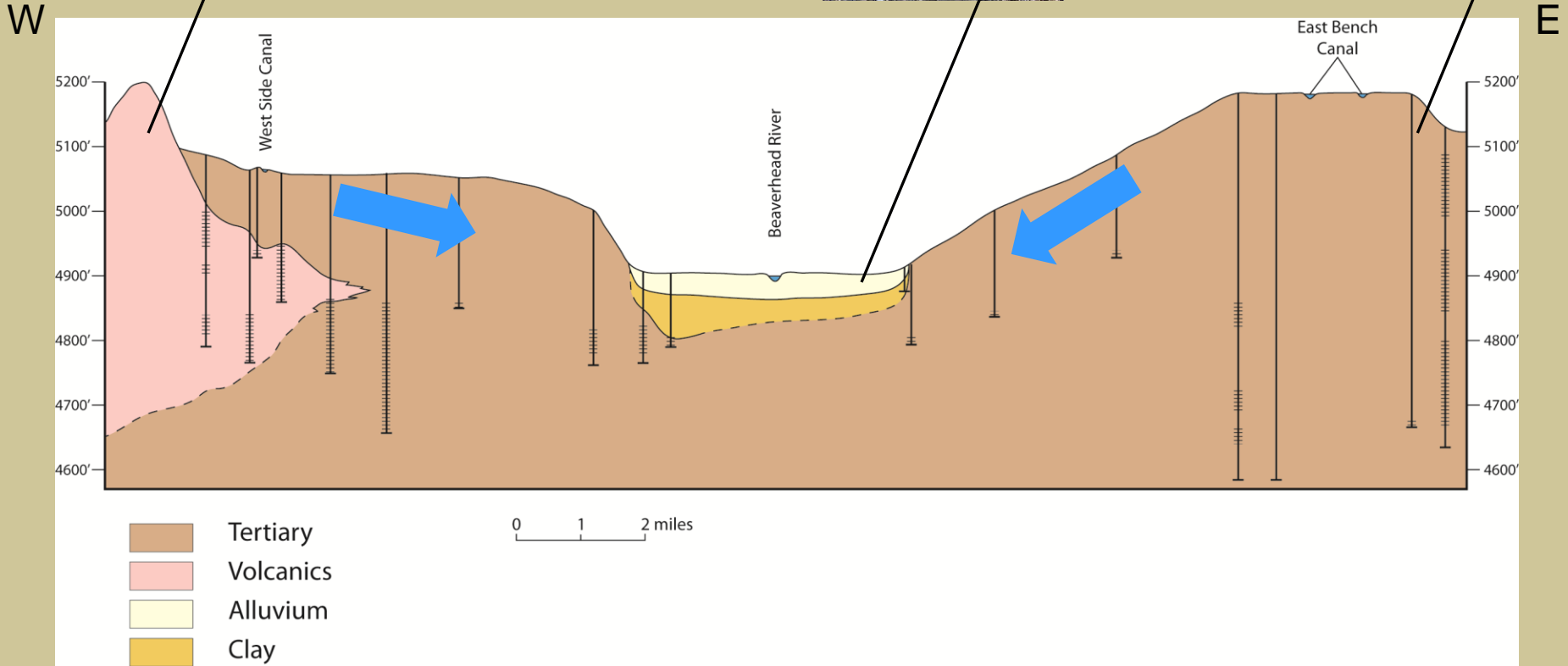
Setting the Stage



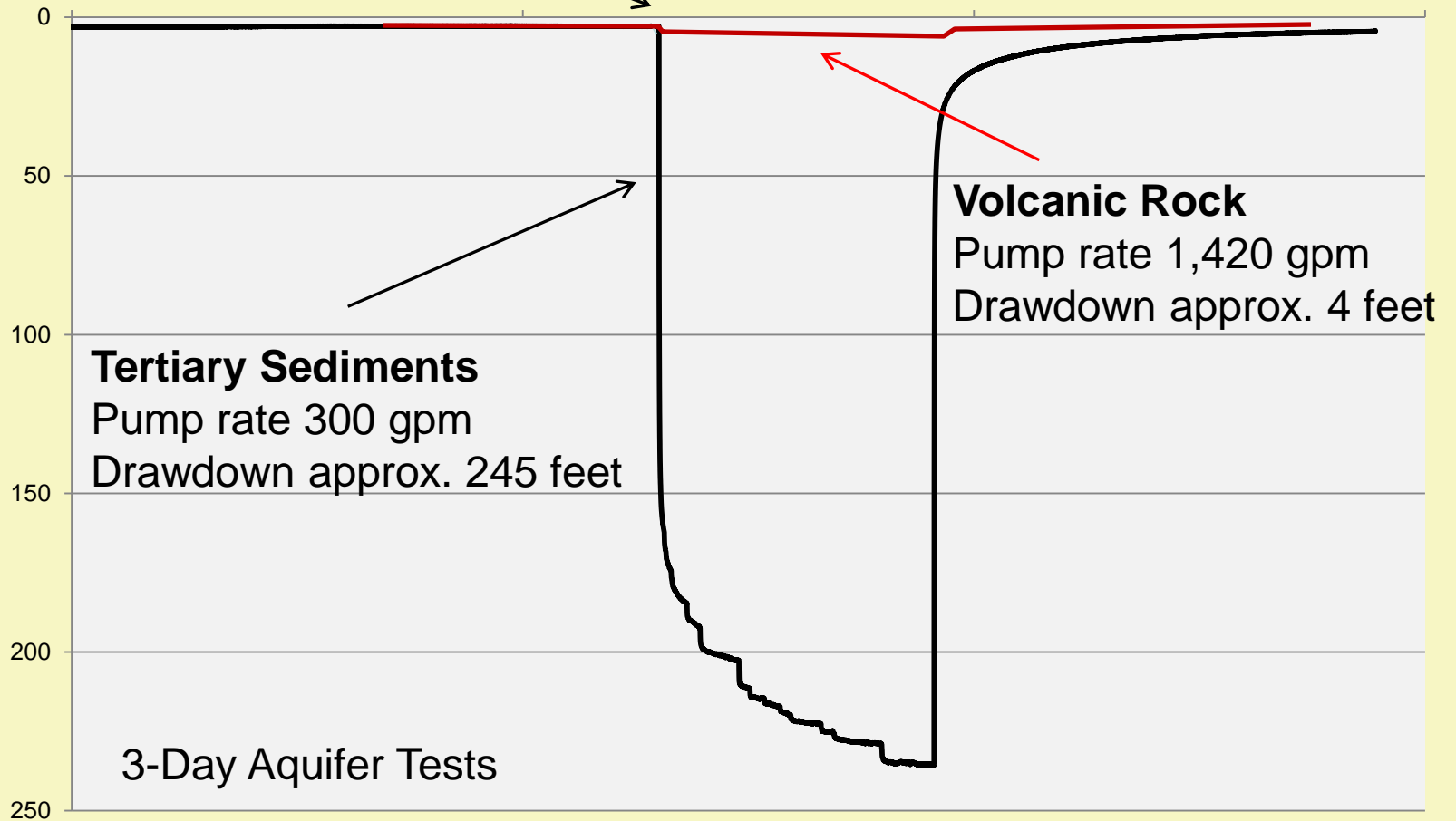
Aquifer Extent

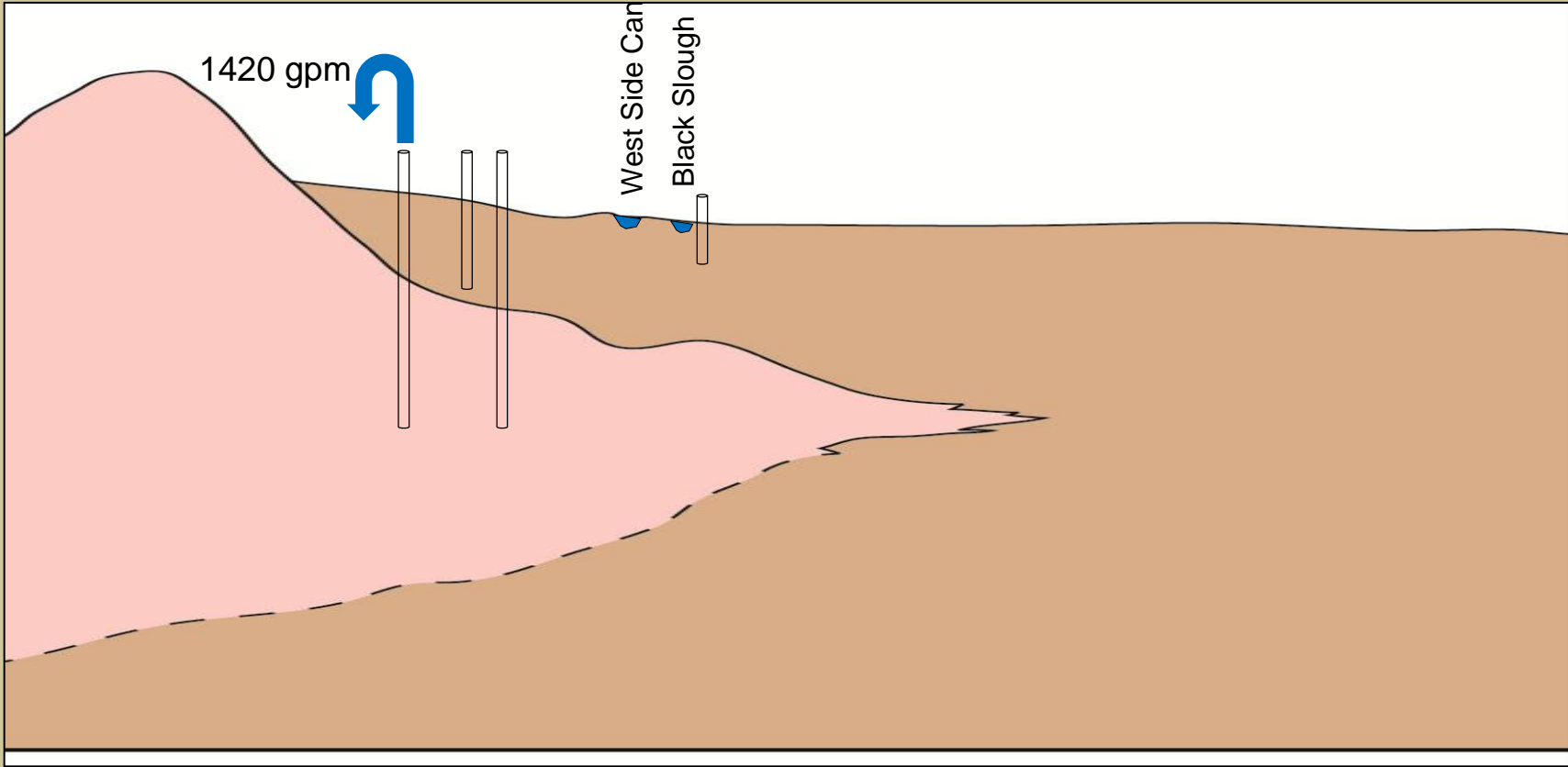


Geologic Framework



Start of aquifer test










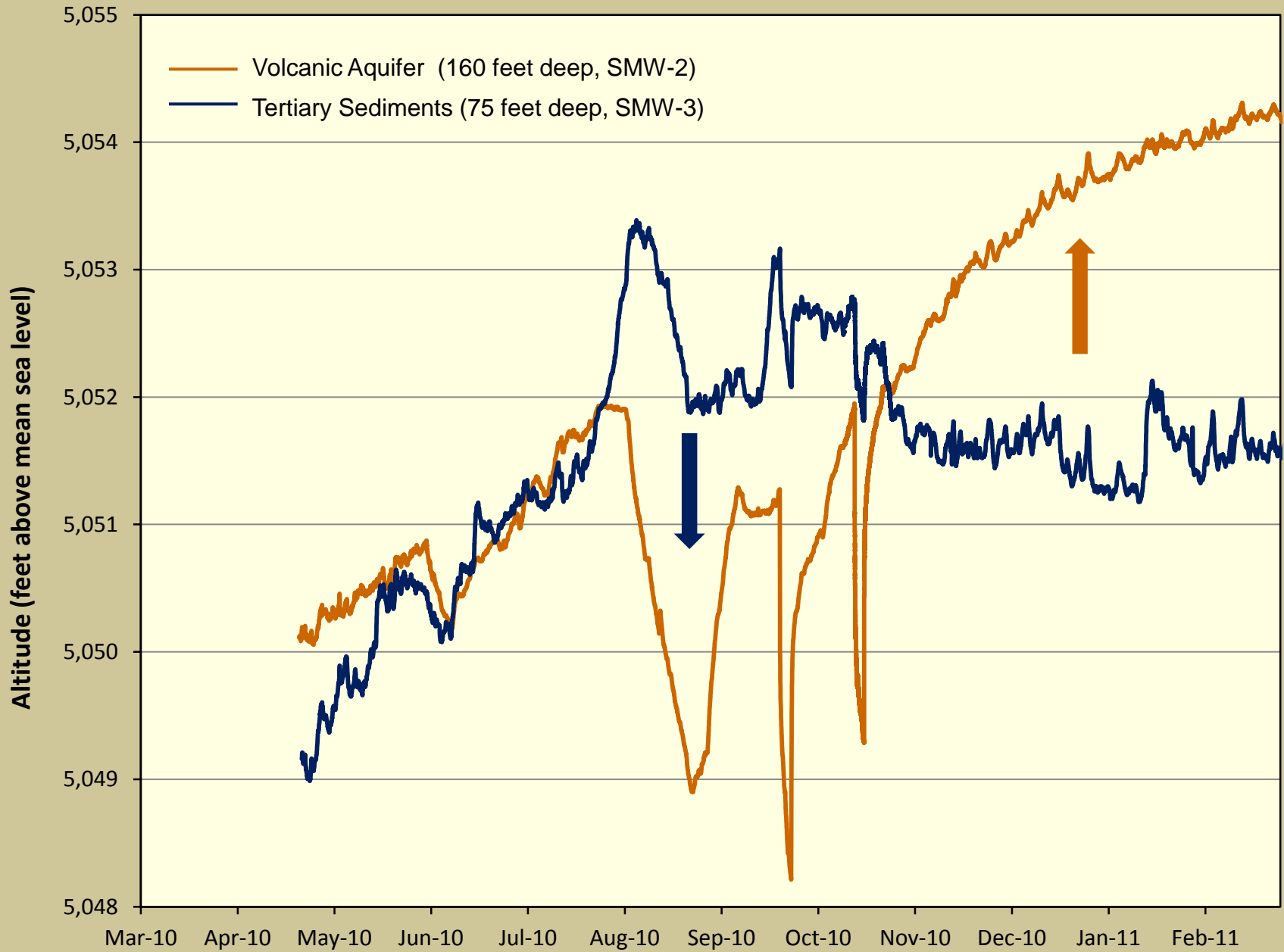
Pumped well

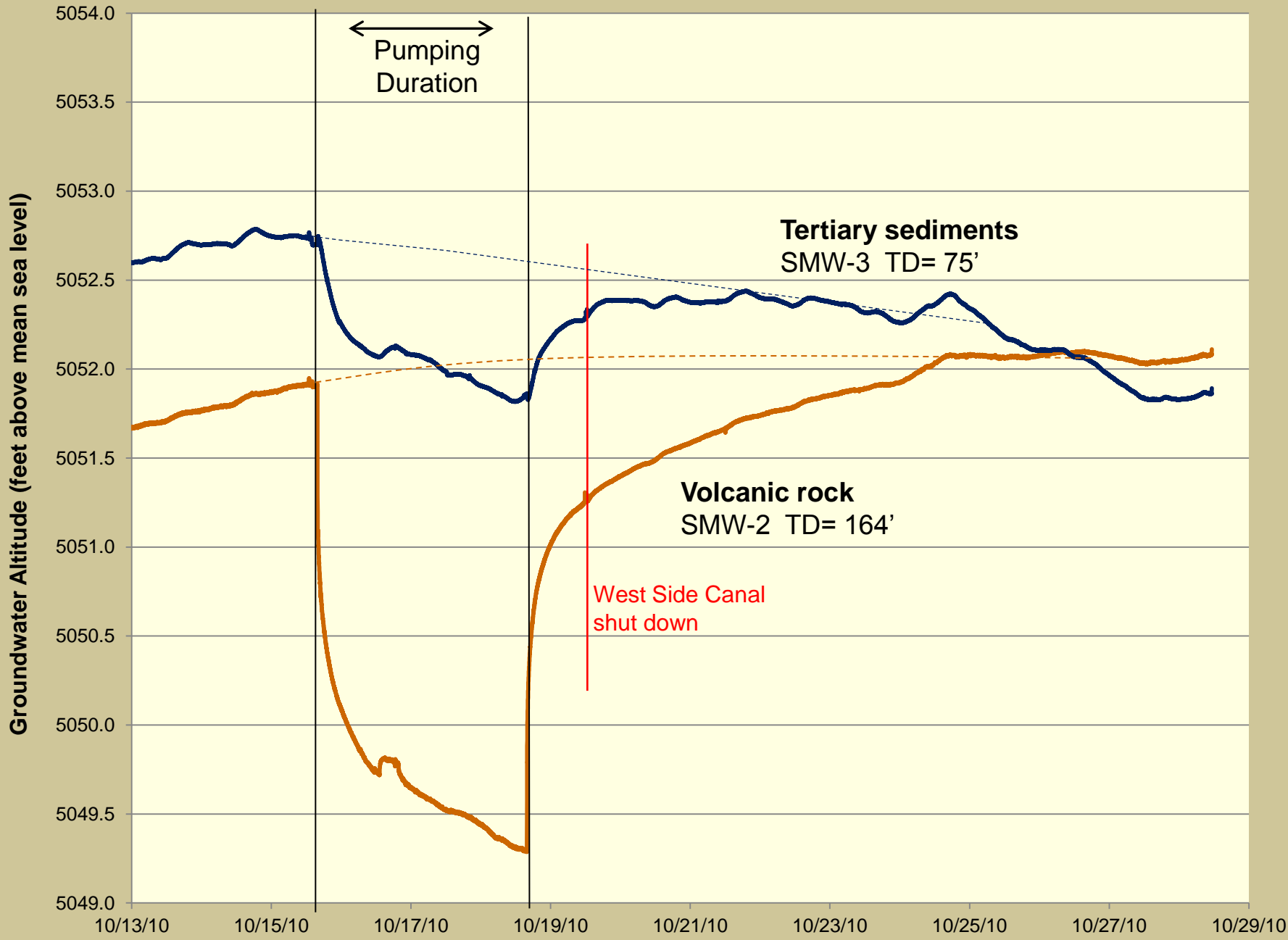


Monitoring Sites

-  Groundwater
-  Surface Water
-  Pumping Well





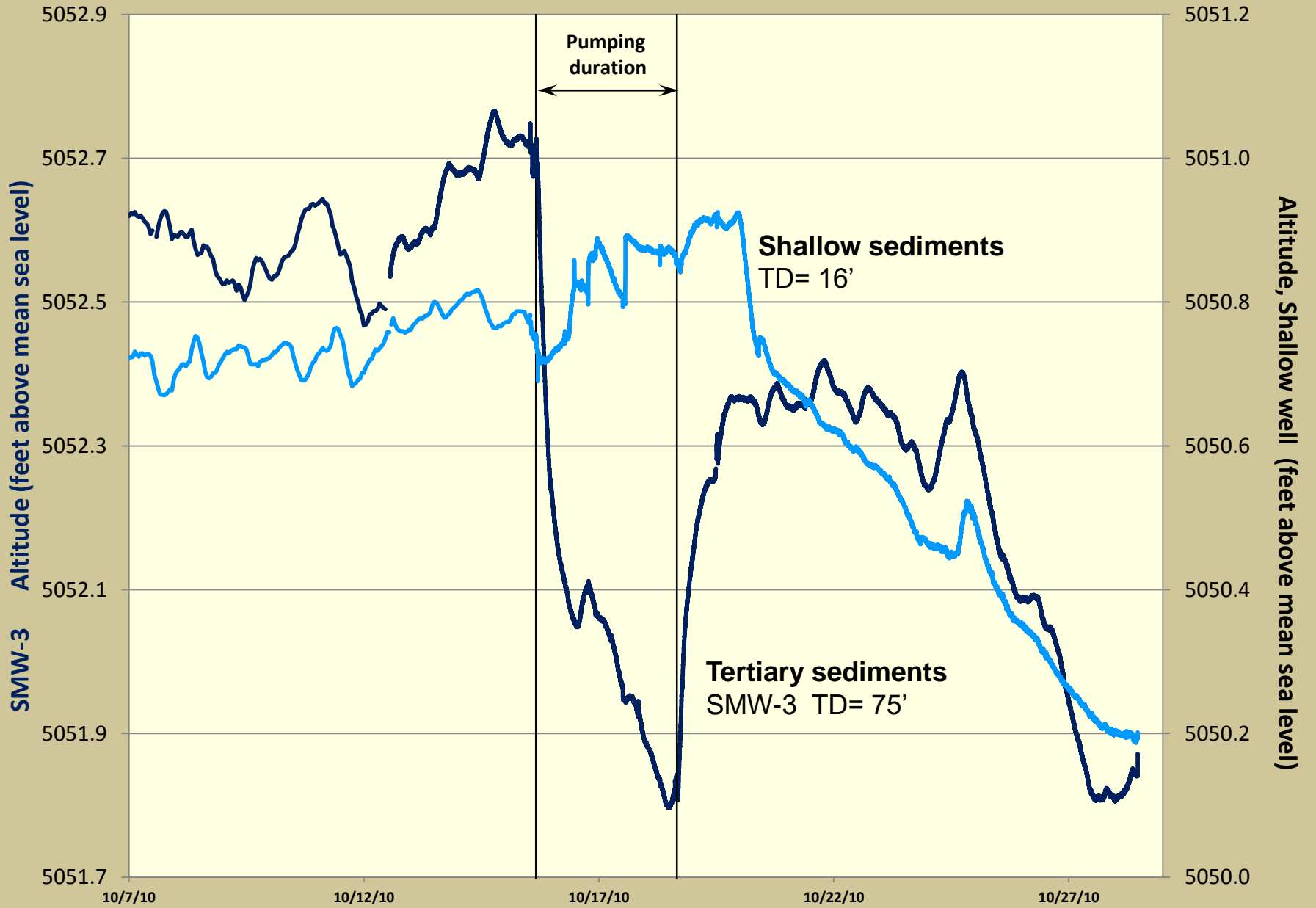


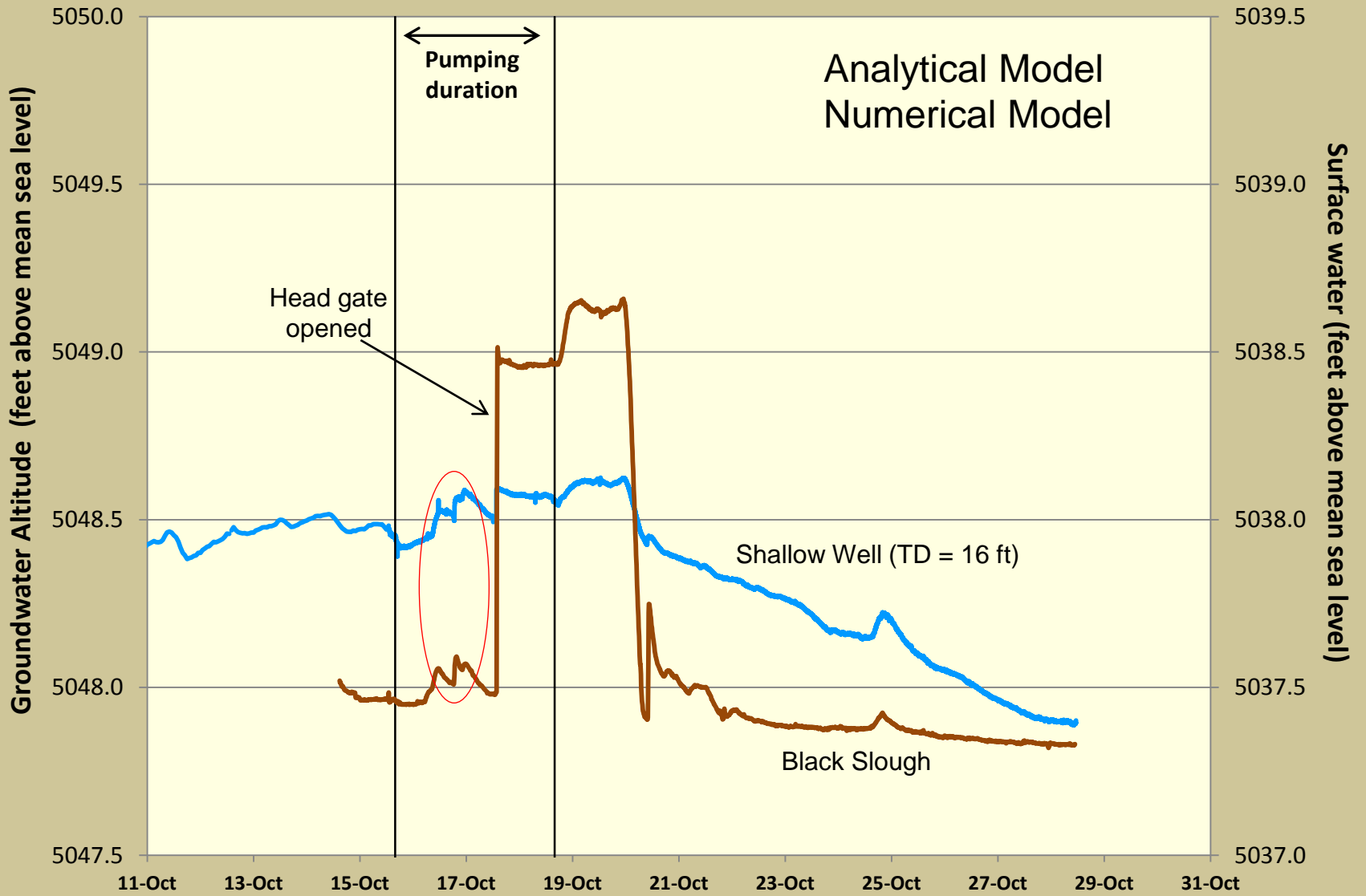
← Pumping Duration →

Tertiary sediments
SMW-3 TD= 75'

Volcanic rock
SMW-2 TD= 164'

West Side Canal
shut down





Summary

- Similar response for the different aquifers.
- Stage in Black Slough increased downstream about 0.2 feet after pumping ceased.
- The Colorado model indicates that depletion can occur within three days of pumping.
- A MODFLOW model also indicated that a very small depletion effect can occur in Black Slough within the first three days of the test.
- Stream depletion is difficult to quantify and document.

To deplete or not to deplete...

Can you answer the question?