

Sierra Valley Board meeting

May 17, 2021



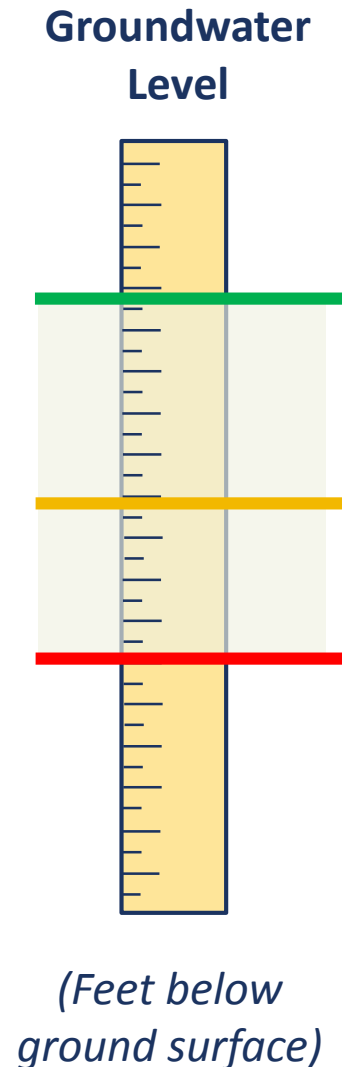
Agenda

- Review of material presented at the TAC meeting
- Review of groundwater level criteria
- Groundwater Dependent Ecosystems
- Interconnected Surface Water



Sustainable Management Criteria (SMC) for groundwater level

- A **ruler** to measure significant and unreasonable impacts to beneficial users/uses.
- Groundwater level SMC is perhaps the most important Sustainability Indicator because it is directly measurable and can be used as a proxy for **groundwater storage**, **interconnected surface water**, and **GDEs**.



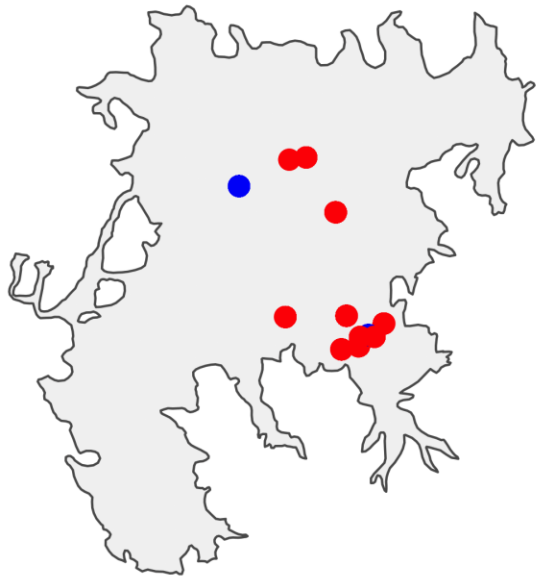
**Example SMC*

Measurable Objective: Avg post-2015 groundwater level

Action Trigger: Average post-2015 fall groundwater level

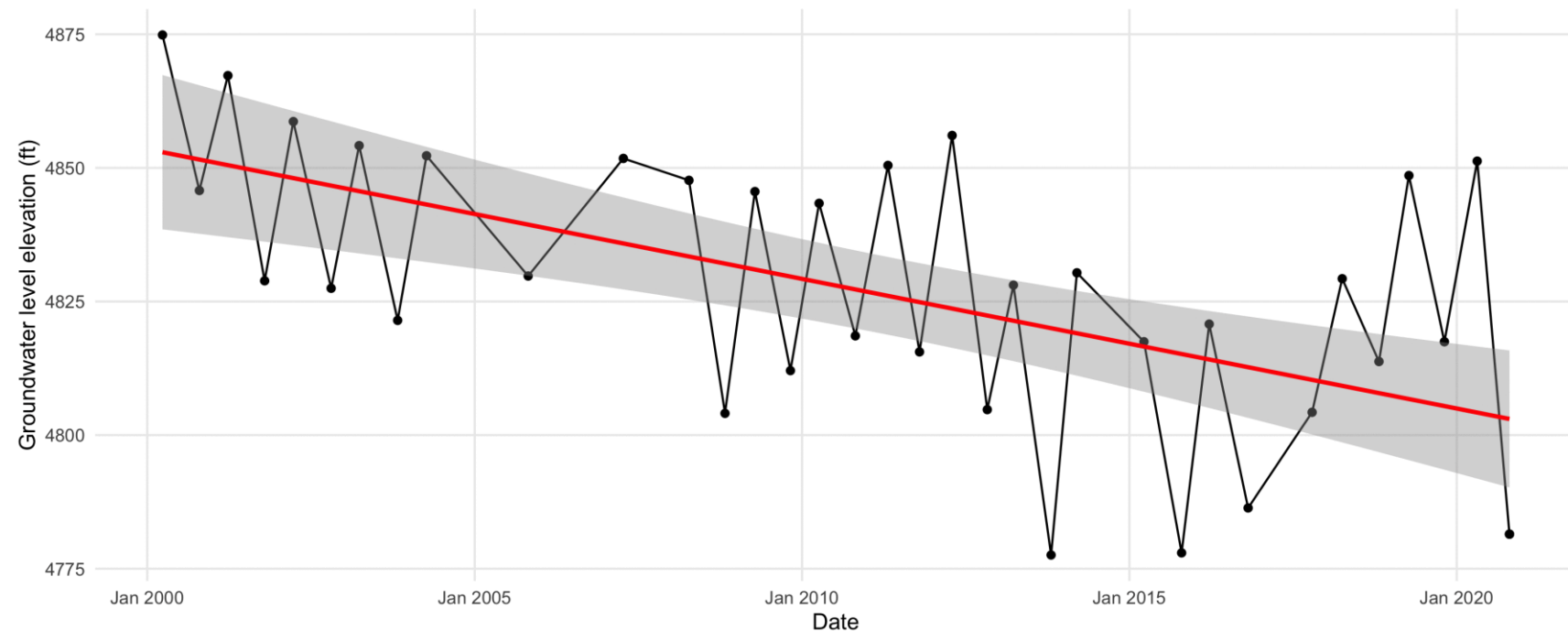
Minimum Threshold: 10 year projected groundwater level or the post 2015 groundwater low, whichever is lower

Most groundwater elevations are decreasing (2000-2020)



(39.7527403, -120.2566675)

Well ID: 100 // Depth: 800 ft // Perforated interval: 435 - 740 ft



- increasing
- decreasing

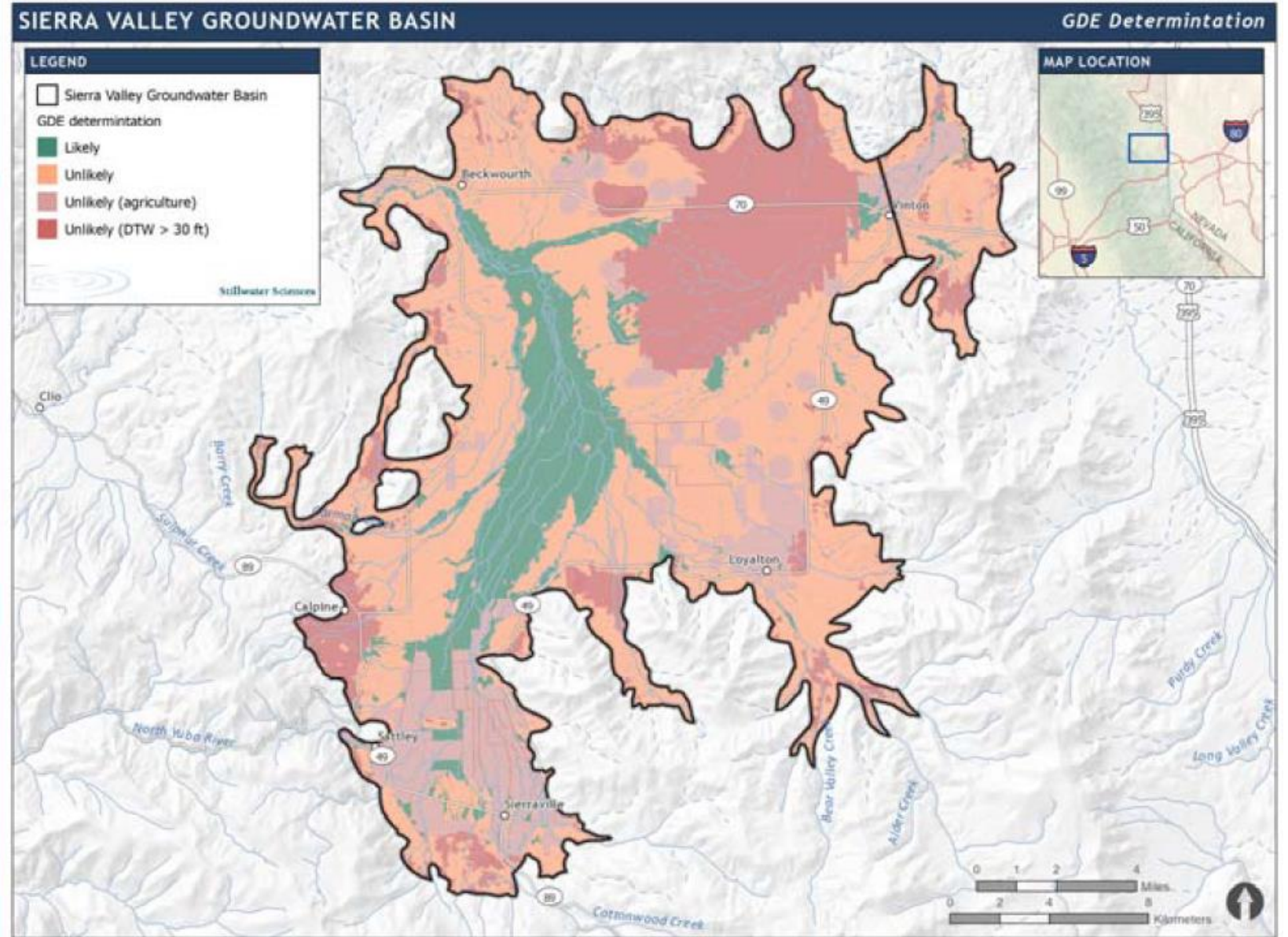
All groundwater level data is available in the Data Management System.

Summary

- Analysis of the data is still ongoing, but the suggested SMC (obtained with either a gradual reduction of the decline or keeping stable) are tailored to account for the different conditions in the Eastern and Western part of the basin
- The Western part of the basin is expected to keep current levels, which are generally never lower than 2015
- This proposed SMC has been already compared with the domestic wells analysis
- And will be now compared with the results for the GDE and ISW SMC

Potential GDEs (Draft)

- There are 17,784 acres of likely GDEs in Sierra Valley
- Most of the GDEs include the wetlands in the eastern half of the basin
- Need to update GDEs on the basin margin
- GDE mapping is limited by relatively low-quality vegetation mapping



Summary

- Vegetation mapping is fair quality, a new map might be available by the 5-year update
- There are over 17,000 acres
- GDEs are concentrated in the western half of the basin
- There are 56 sensitive species in the basin, we are currently determining their groundwater dependence
- Remote sensing data can be used to assess changes in GDE health





Sierra Valley Groundwater Sustainability Plan Interconnected Surface Water (ISW)



Balance
Hydrologics

Sierra Valley GSP

10 May 2021

Outline

01

Existing Available Data

02

Field Evaluation and Verification

03

ISW Identification Approach

04

ISW Monitoring Approach

05

Initial Data Gaps Summary

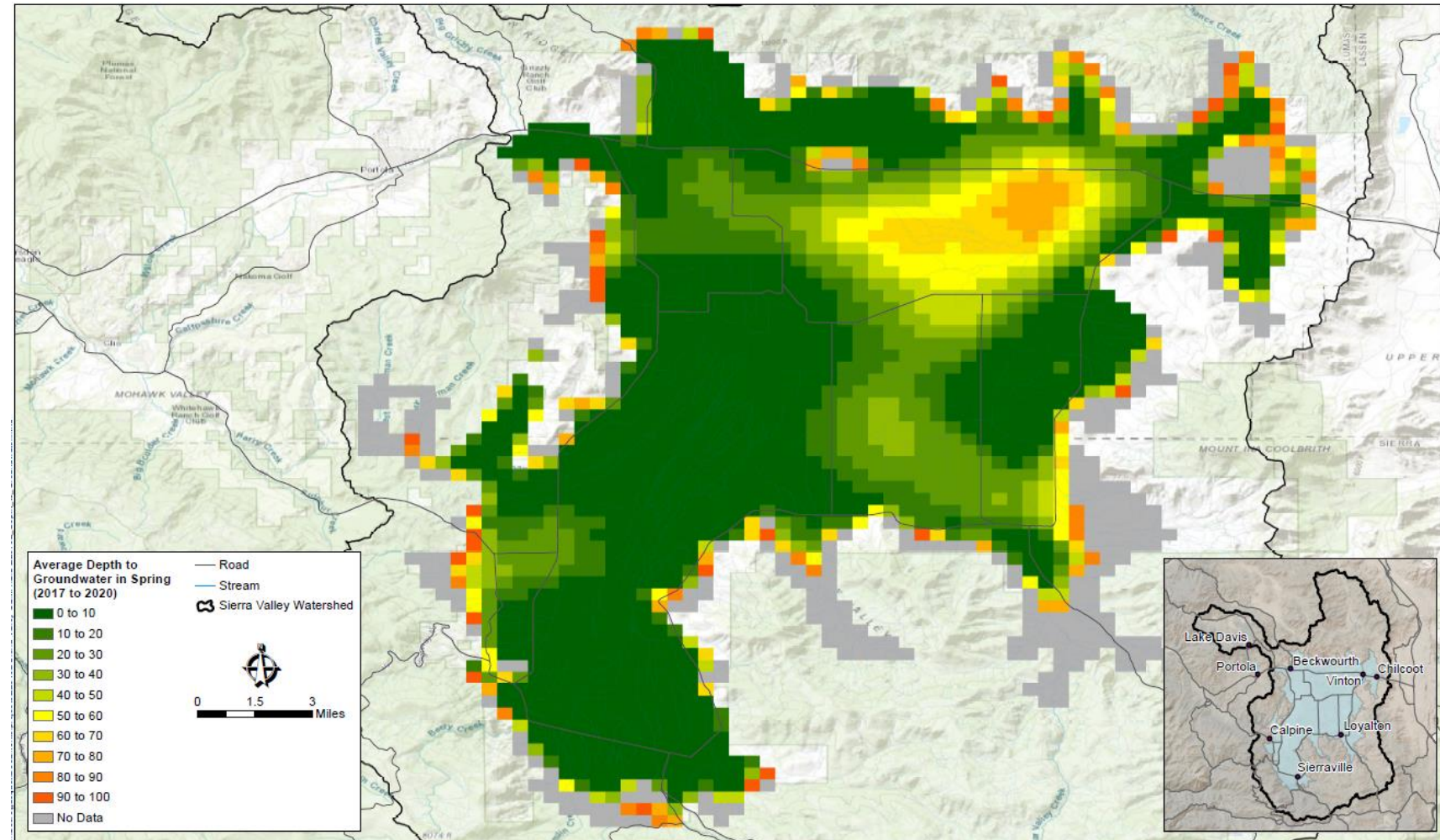


Balance
Hydrologics

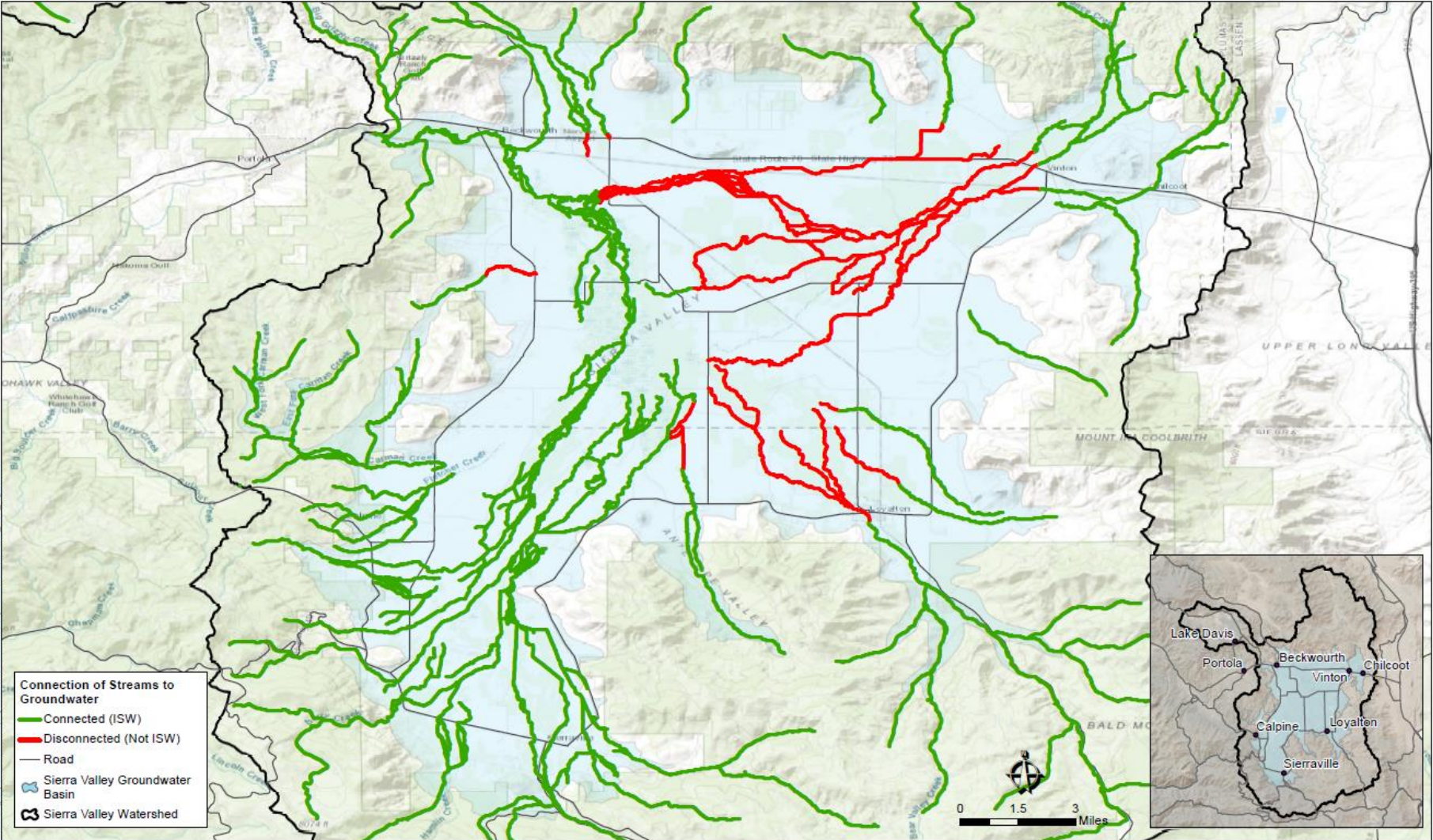
ISW Identification Approach

Approach

- ❑ Identify surface water bodies
- ❑ Identify where groundwater is within 5-feet of the surface
- ❑ Use vertical hydraulic gradient in nested monitoring wells to verify



Preliminary ISW Identification - DRAFT



□ Next step: Refine and combine with GDE Mapping