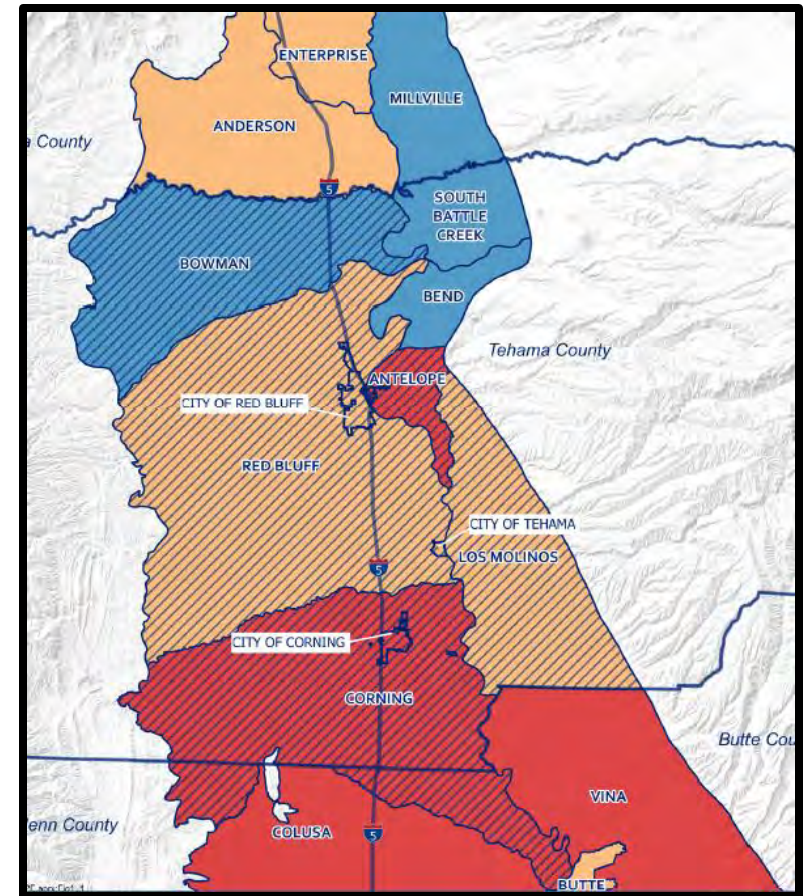




# Managing Our Groundwater for the Future

Implementing the Sustainable Groundwater Management Act (SGMA) in Tehama County

**Antelope Subbasin Tailgate**  
**October 14, 2020 (5:30 PM)**



# Multiple Opportunities to be Involved



## EMAIL UPDATES

Sign Up for the interested parties email list and/or to receive meeting agendas - contact [nbethurem@tcpw.ca.gov](mailto:nbethurem@tcpw.ca.gov)

## MEETINGS – October 2020

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(Specific to the Bowman, Red Bluff, Antelope, and Los Molinos Subbasins)

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Corning Subbasin tailgate meeting dates and locations TBD

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County-wide and subbasin-specific groundwater conditions

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[TehamaCountyPublicWorks.CA.gov](http://TehamaCountyPublicWorks.CA.gov) and [CorningSubbasinGSP.org](http://CorningSubbasinGSP.org)

# What is SGMA?



The Sustainable Groundwater Management Act (SGMA) -- law was passed in 2014



Values Local Control

Local responsible agencies = Groundwater Sustainability Agencies (GSAs)



Management plans = Groundwater Sustainability Plans (GSPs)



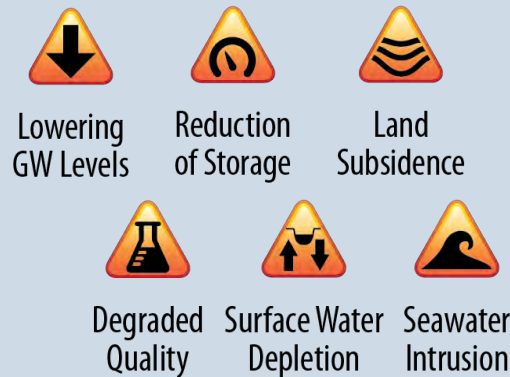
GSPs submitted to the State by January 31, 2022



Sustainability must be achieved within 20 years (by 2042)

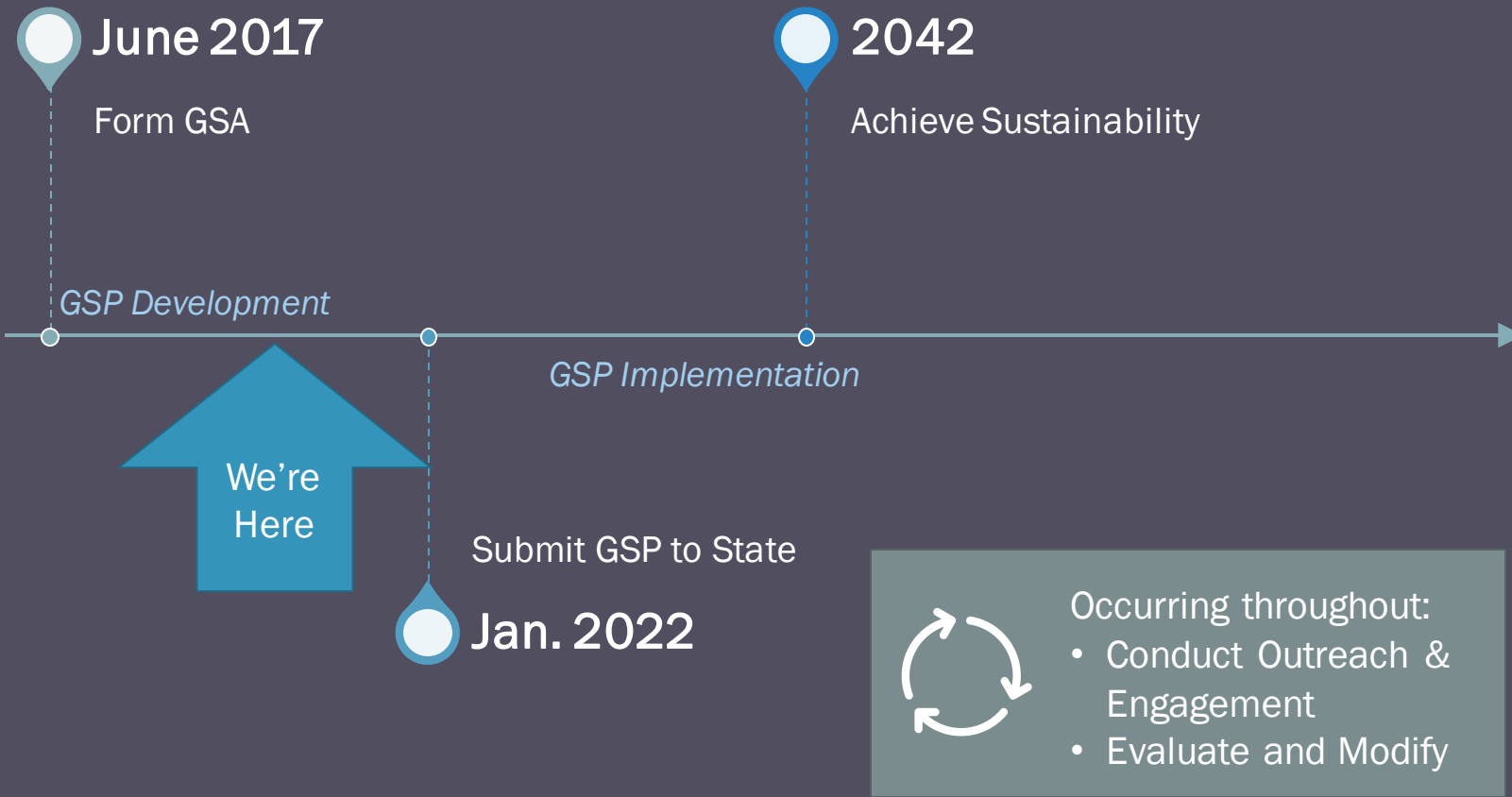
# What is the purpose of SGMA?

- Promote sustainable management of groundwater basins
- Enhance local management of groundwater (State to step in if necessary)
- Improve data collection and understanding of groundwater resources and management
- Avoid or minimize undesirable results to groundwater



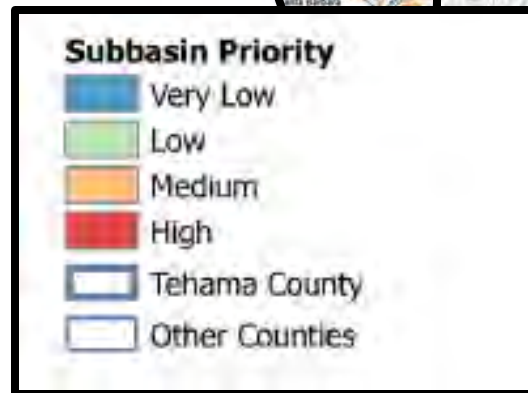
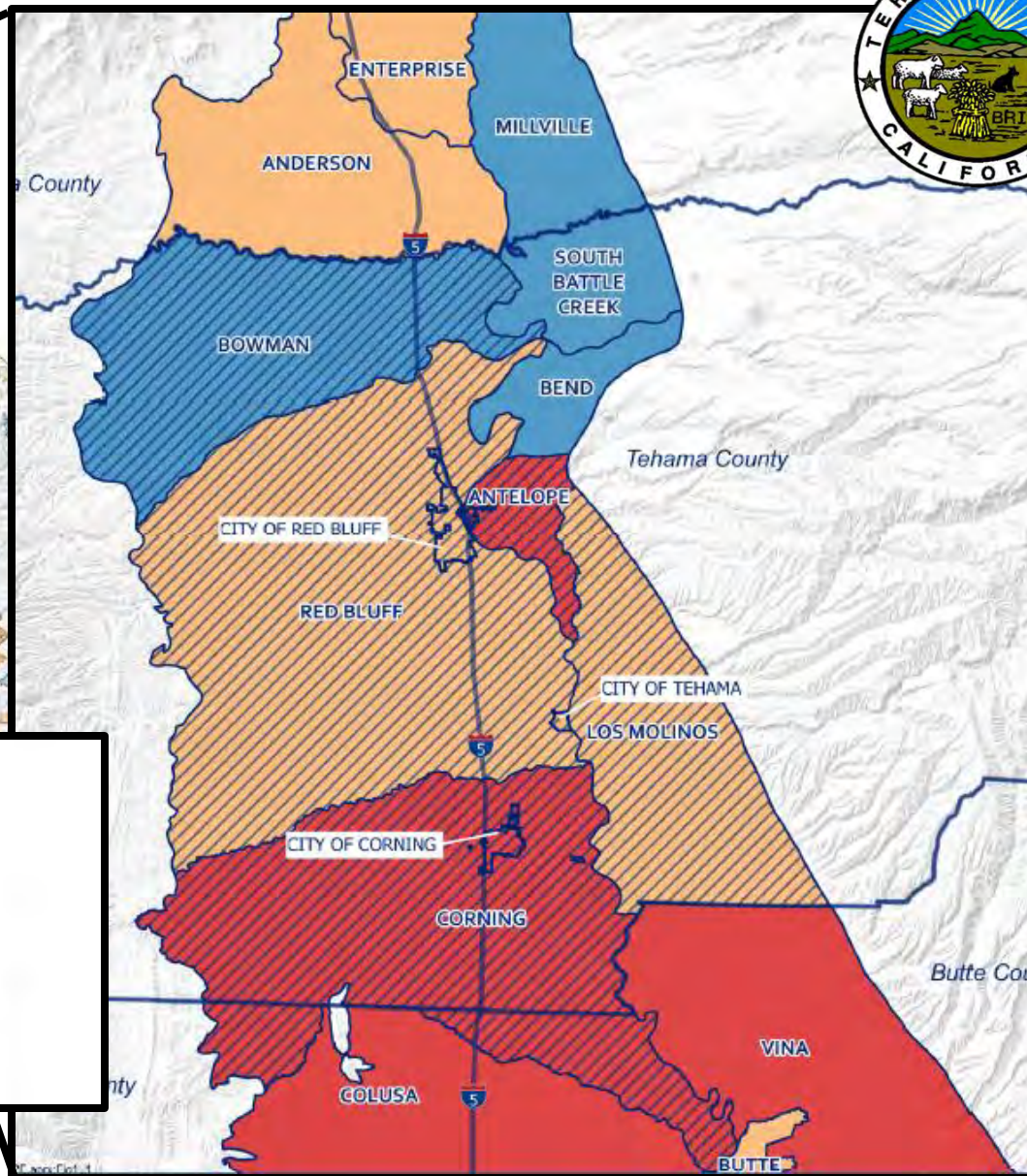
## Undesirable Results





## What is the SGMA Implementation Timeline?

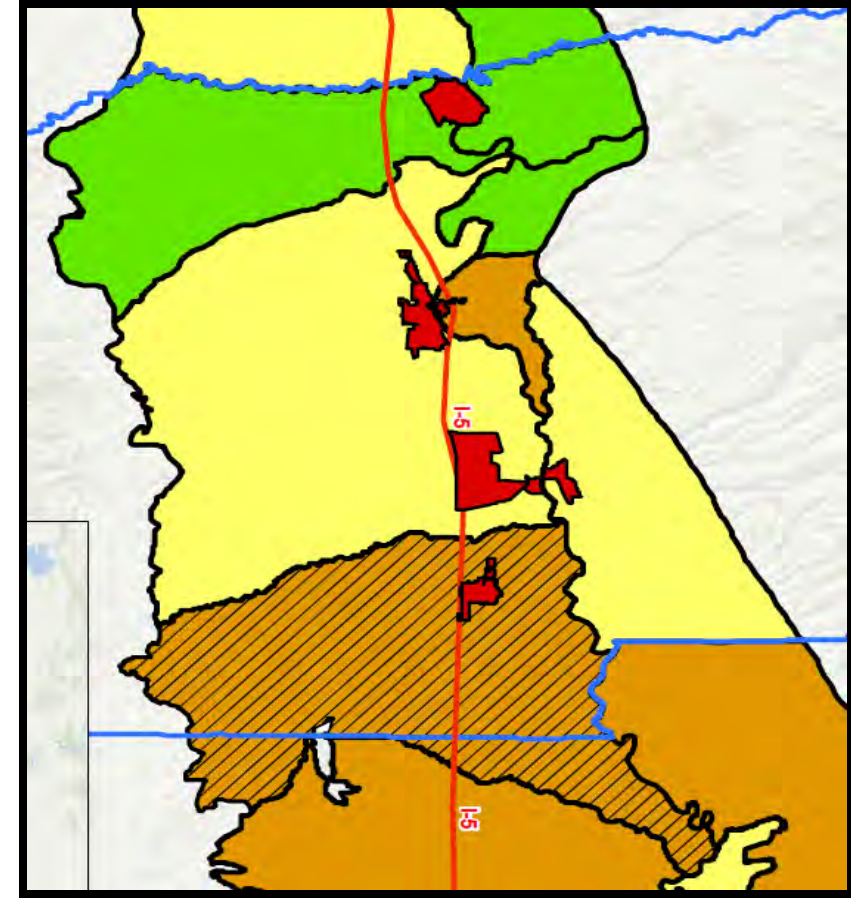
# What are our subbasins?





# Tehama County GSA Governance Structure

- **Governing Board** – Tehama County Flood Control & Water Conservation District Board of Directors (County Board of Supervisors)
- **Groundwater Commission** (similar to Planning Commission)
  - The Commission is made up of 11 members
  - Six agencies will have designated seats on the Commission and appoint their own members.
    - 1 – City of Corning
    - 1 – City of Red Bluff
    - 1 – City of Tehama
    - 1 – El Camino Irrigation District
    - 1 – Los Molinos Community Services District
    - 1 – Rio Alto Water District

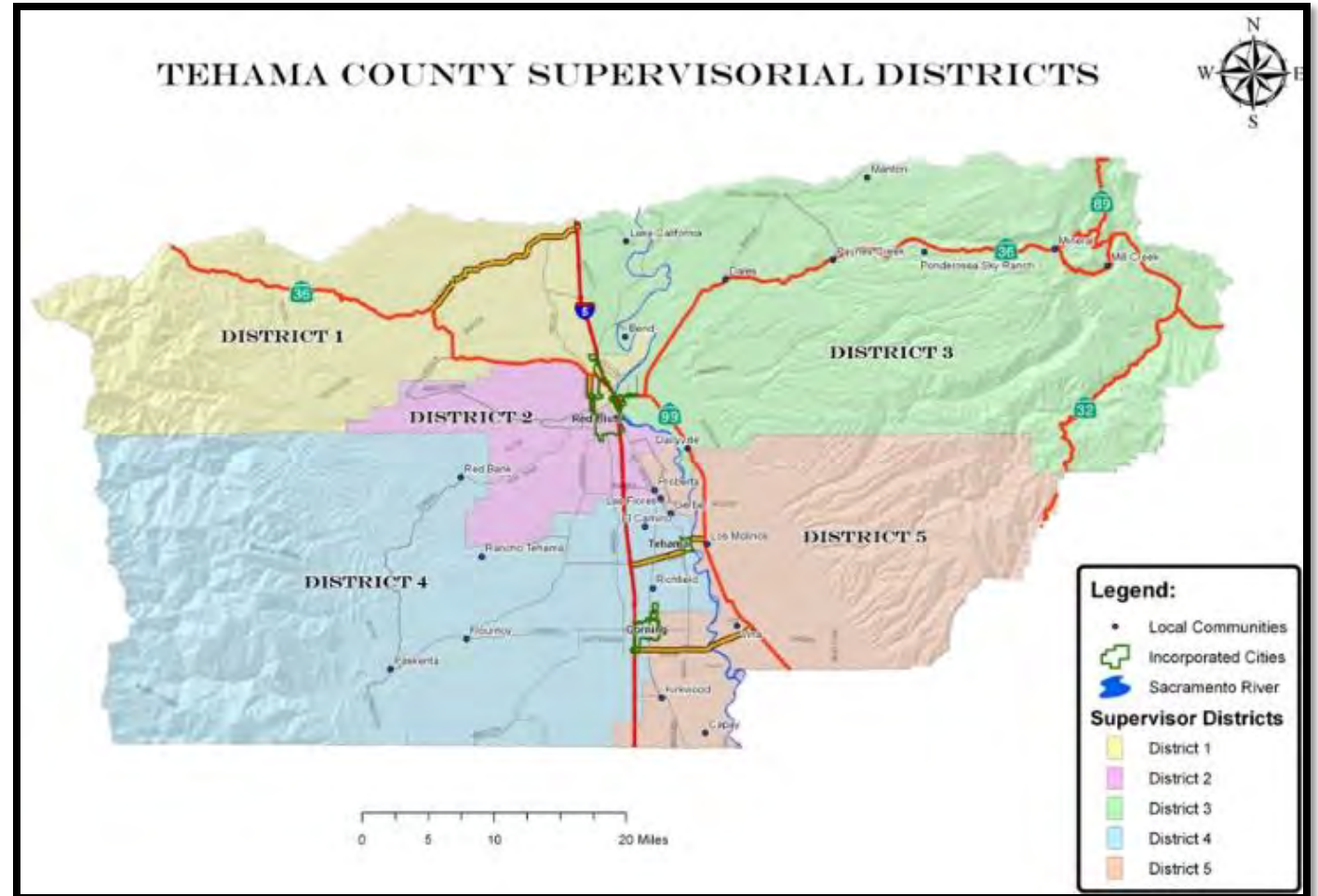


# Groundwater Commission Membership (*continued*)



## Additional Members will Include 1 Representative from each County Supervisorial District

- Members should be a resident, property owner, or groundwater user within Tehama County;
- 2 members should represent surface water agencies/districts;
- 2 members should represent private pumpers;
- 1 member should represent the general public.



# Groundwater Commission Members



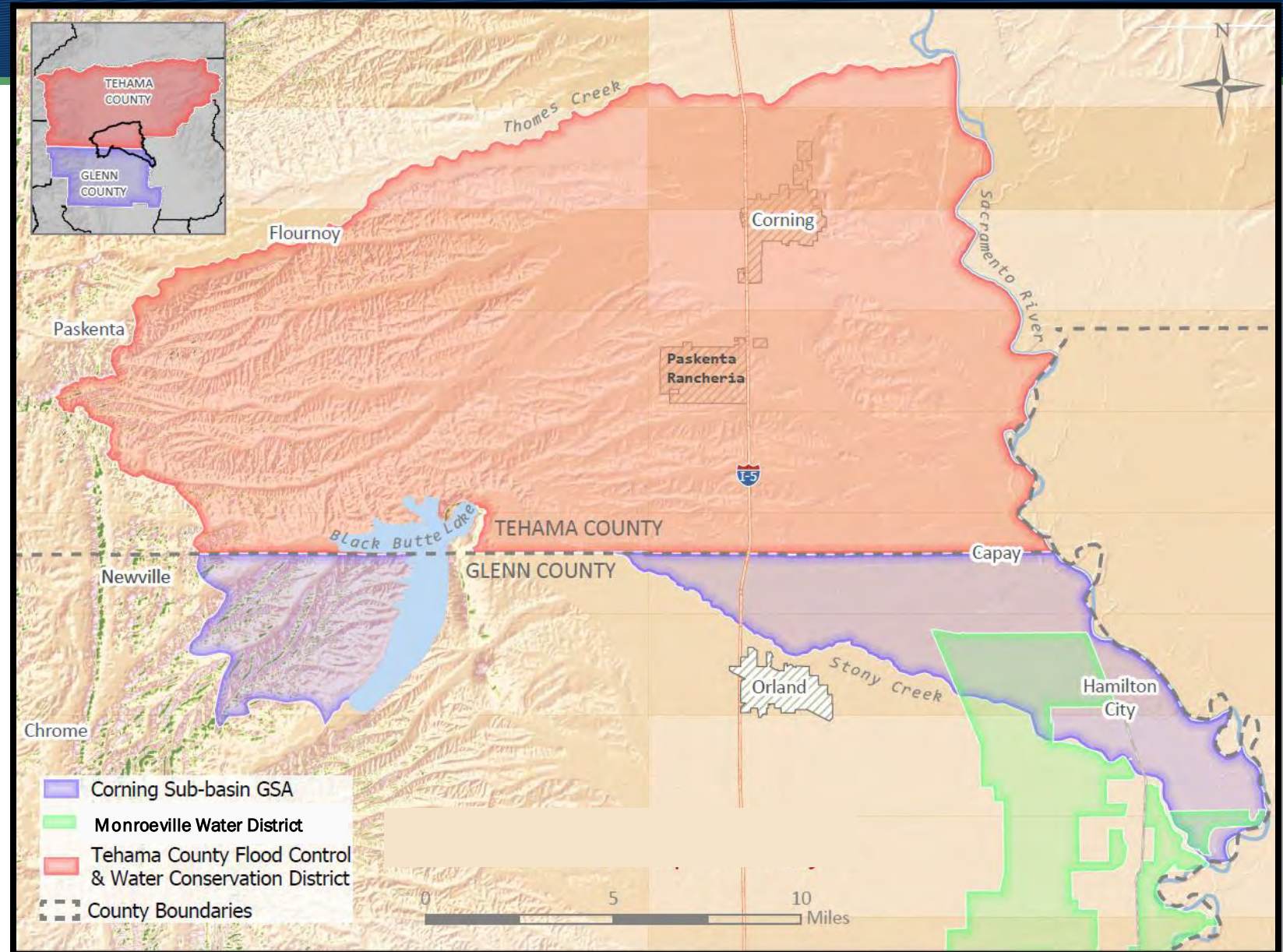
- City of Corning – Kristina Miller
- City of Red Bluff – Clay Parker
- City of Tehama – Bill Borrer
- El Camino Irrigation District – Kris Lamkin
- Los Molinos Community Services District – Todd Hamer
- Rio Alto Water District – Martha Slack
- District 1 – Harley North, private pumper
- District 2 – Sam Mudd, general public
- District 3 – Bart Fleharty, surface water agency/district
- District 4 – Hal Crain, surface water agency/district
- District 5 – David Lester, private pumper



# Corning Subbasin

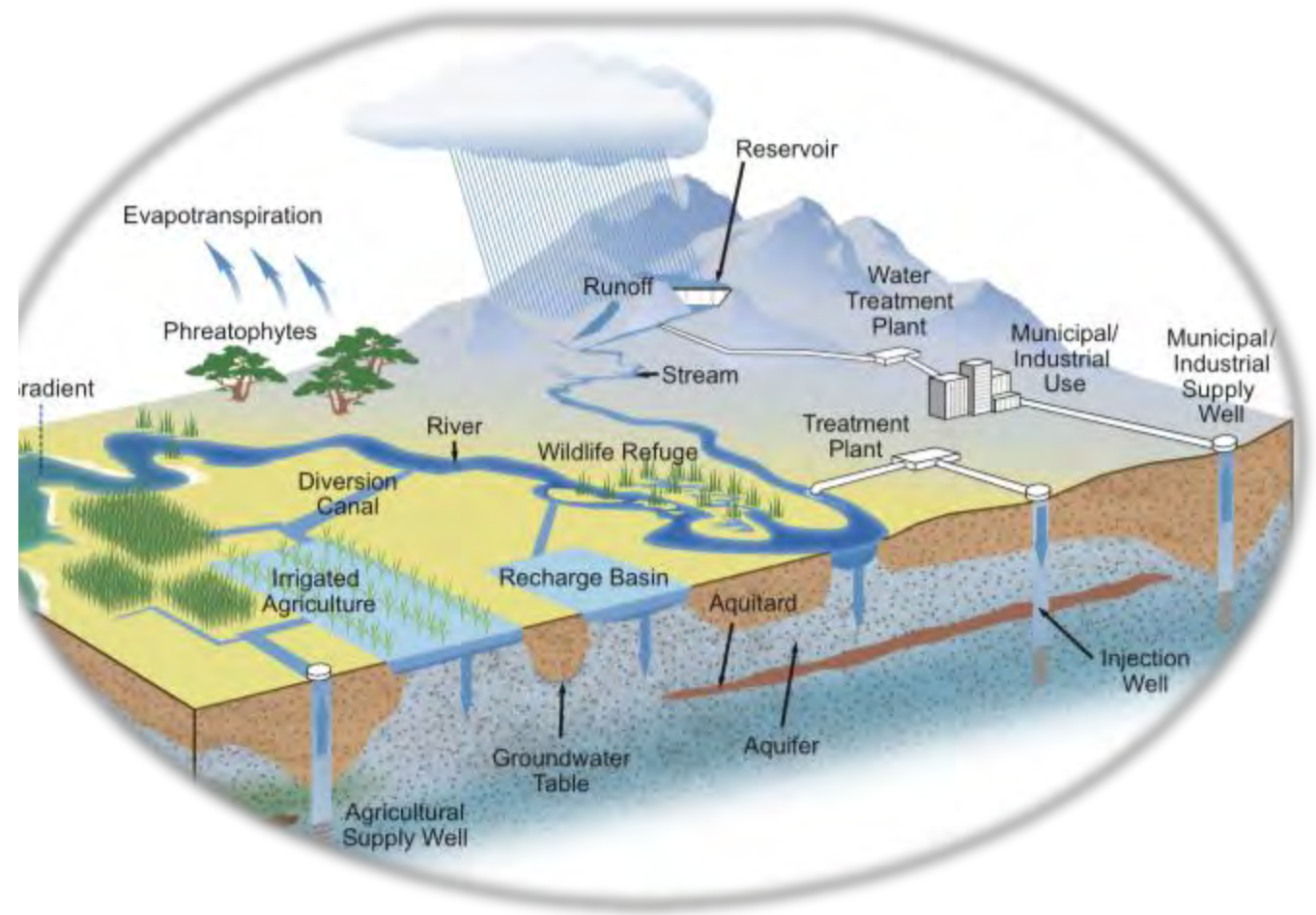
- 2 GSA Agencies
- Co-Management of the Subbasin
- Develop 1 GSP
- Separate Prop 1 Grant

[CorningSubbasinGSP.org](http://CorningSubbasinGSP.org)



# Understanding the Hydrogeologic Setting

- Graphical and narrative description of the physical components of the basin
- At least two scaled cross-sections
- Map(s) of physical characteristics
  - Topographic information
  - Surficial geology
  - Soil characteristics
  - Delineation of existing recharge areas that substantially contribute to the replenishment of the basin, potential recharge areas, and discharge areas
  - Surface water bodies
  - Source and point of delivery for local and imported water supplies



# Account for Water with a “Budget”

## Inflows

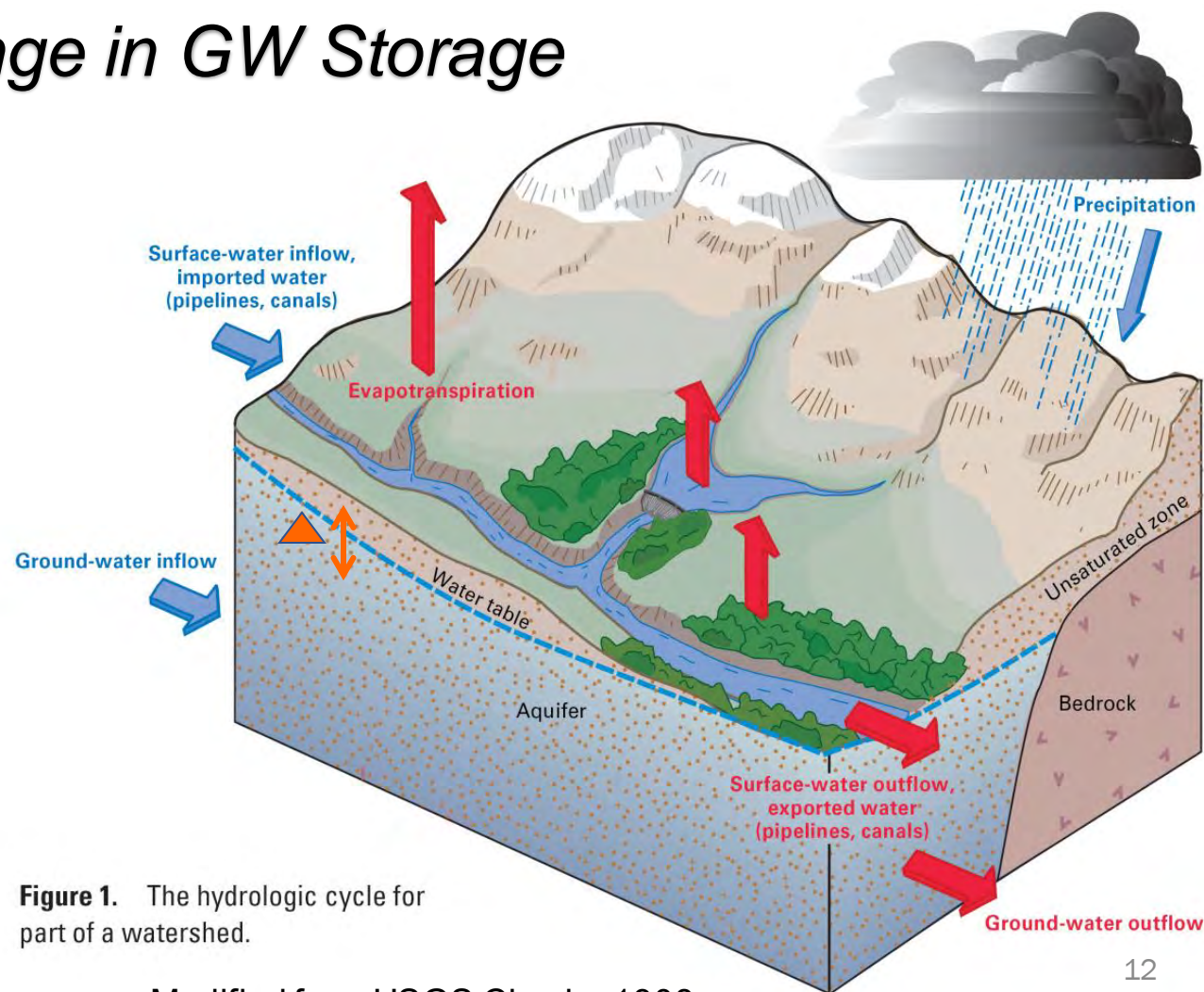
- Precipitation;
- SW inflow & infiltration;
- Intentional recharge (ponds, ditches, etc.);
- Applied water, net recharge (e.g., irrigation);
- Unintentional recharge (leaky pipelines);
- Subsurface inflows from outside basin.

## Outflows

- GW extraction by wells;
- GW discharge to SW/springs;
- Evapotranspiration; and
- Subsurface outflow from basin.

$$\text{Inflows} - \text{Outflows} = \Delta S$$

*Change in GW Storage*

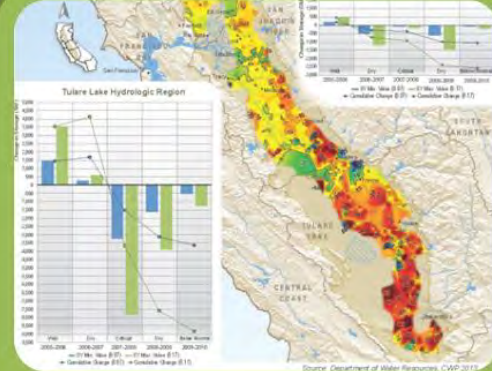



**Figure 1.** The hydrologic cycle for part of a watershed.

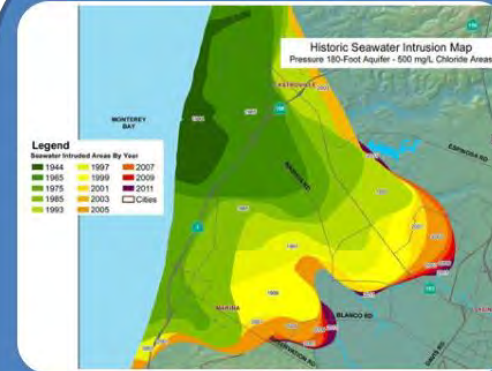
# Avoiding Undesirable Results for Six Sustainability Indicators




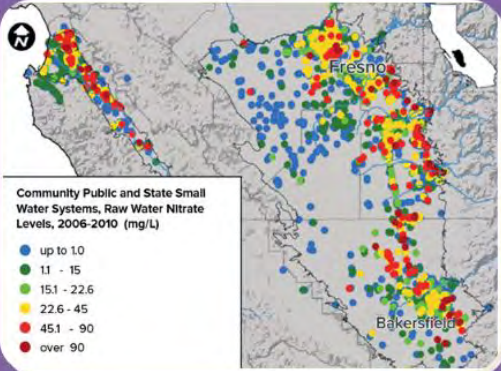
 Lowering of GW Levels





 Reduction of GW Storage




 Seawater Intrusion



 Degraded Water Quality



 Land Subsidence

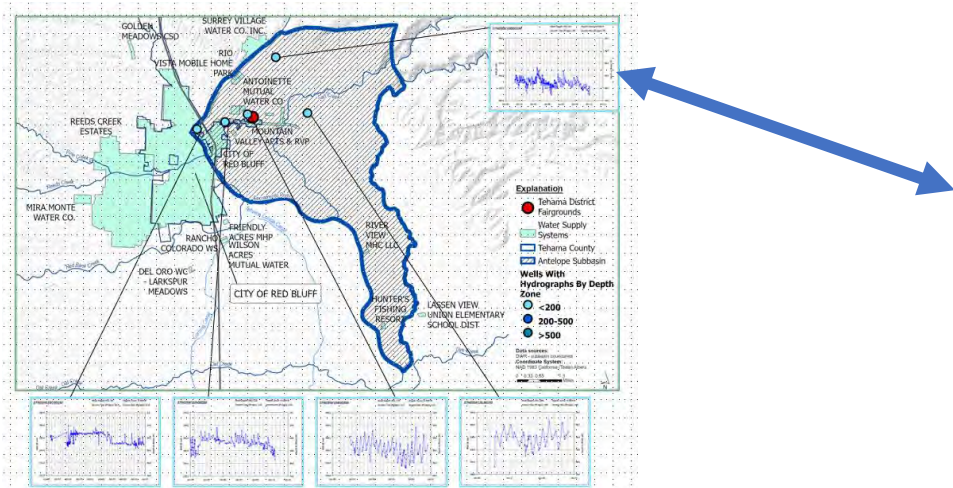


 Depletion of Interconnected Streams





# Antelope Subbasin Hydrographs



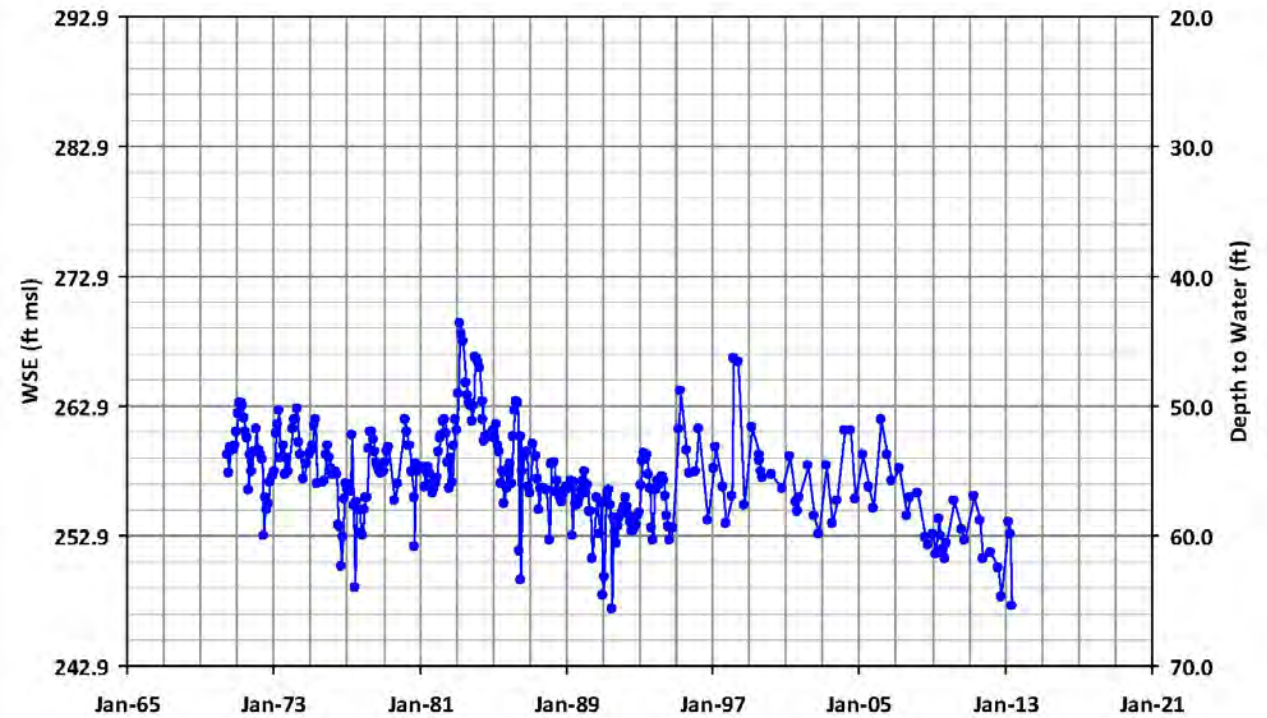
27N03W10B001M

Well Depth (ft): 92

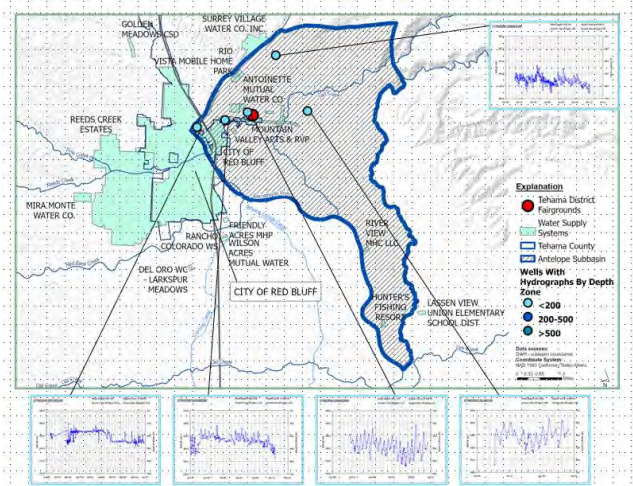
Depth Zone: 0-200 ft

Screen Top (ft bgs): 80

Screen Bot (ft bgs): 92



# Antelope Subbasin Hydrographs



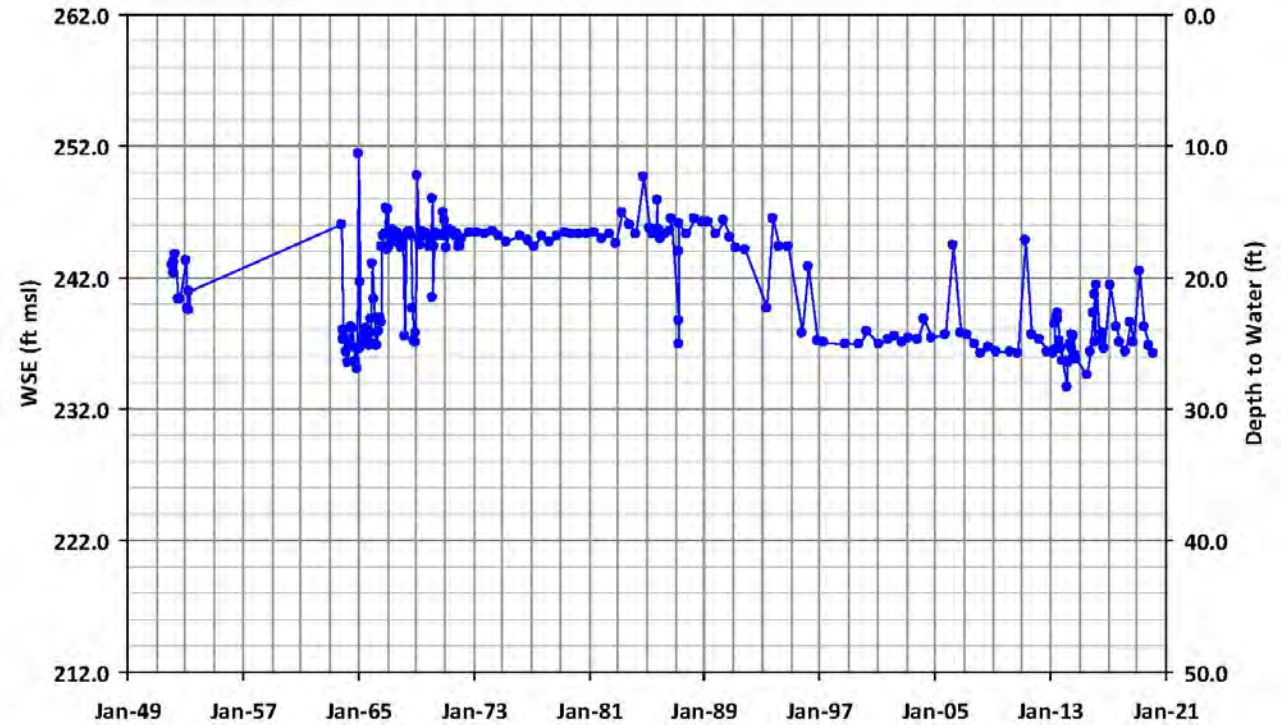
27N03W20C001M

Well Depth (ft): 50

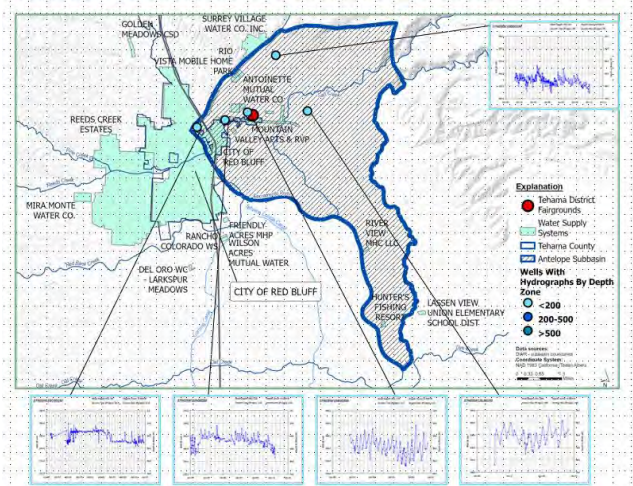
Depth Zone: 0-200 ft

Screen Top (ft bgs): N/A

Screen Bot (ft bgs): N/A



# Antelope Subbasin Hydrographs



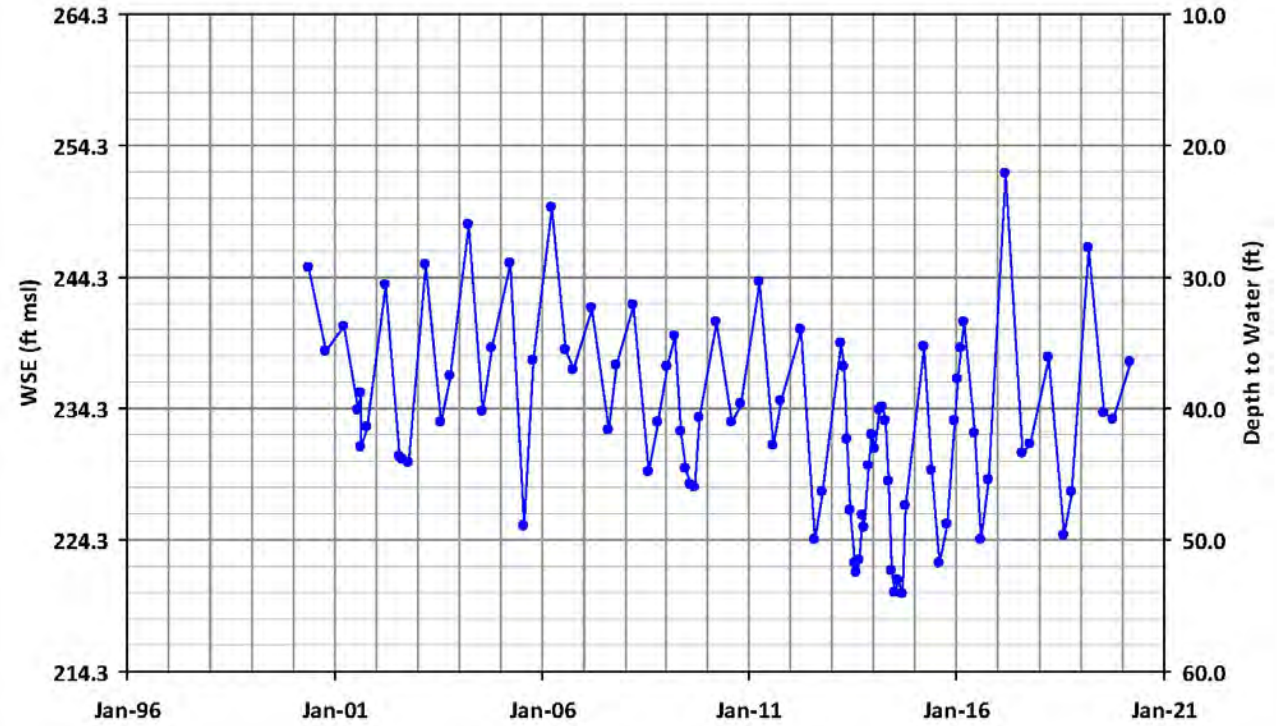
27N03W16K003M

Well Depth (ft): 137

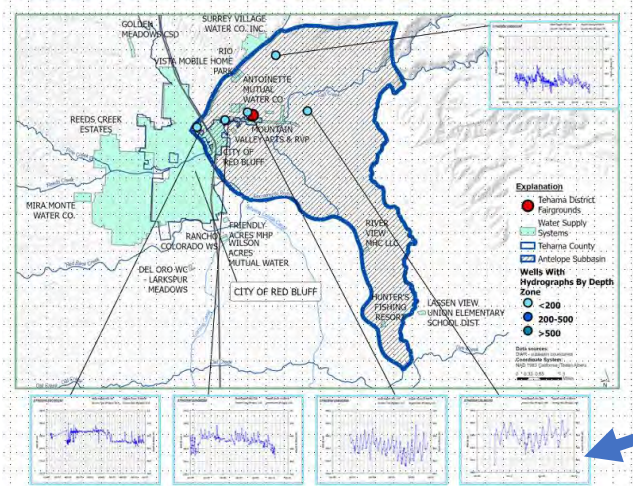
Depth Zone: 0-200 ft

Screen Top (ft bgs): 117

Screen Bot (ft bgs): 137



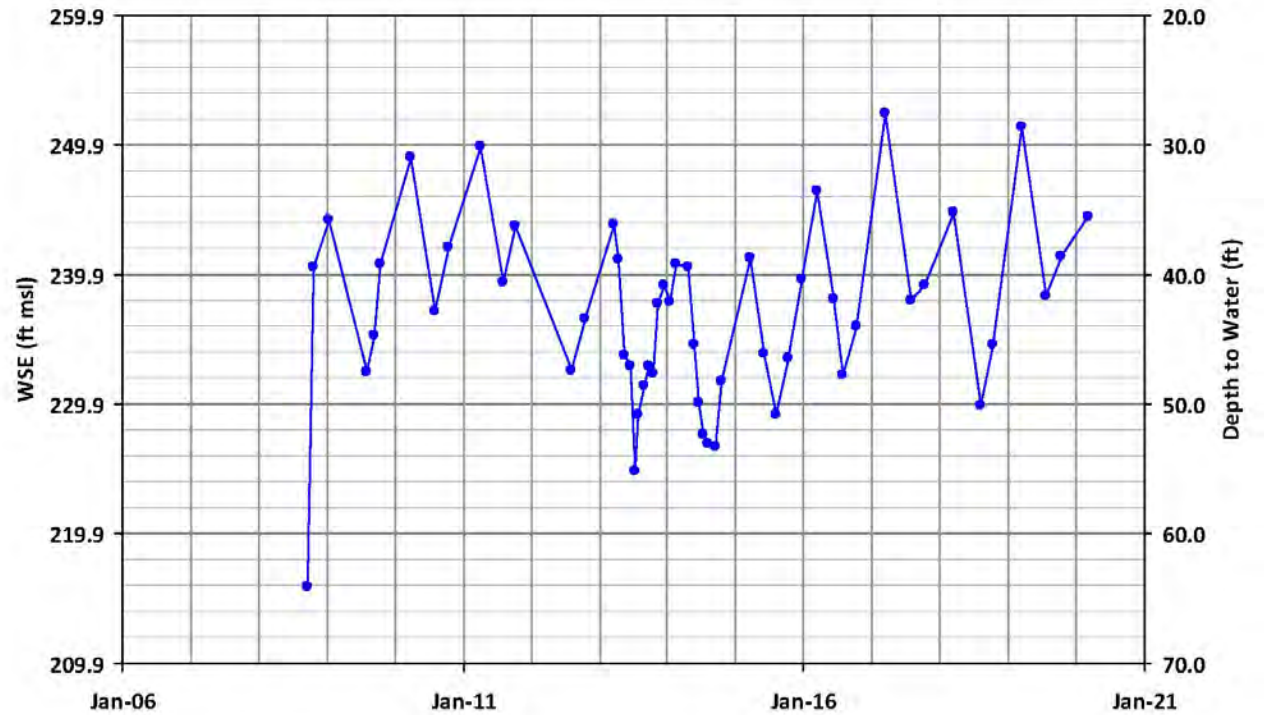
# Antelope Subbasin Hydrographs



27N03W14L001M

Well Depth (ft): 200  
Screen Top (ft bgs): 140

Depth Zone: 0-200 ft  
Screen Bot (ft bgs): 180



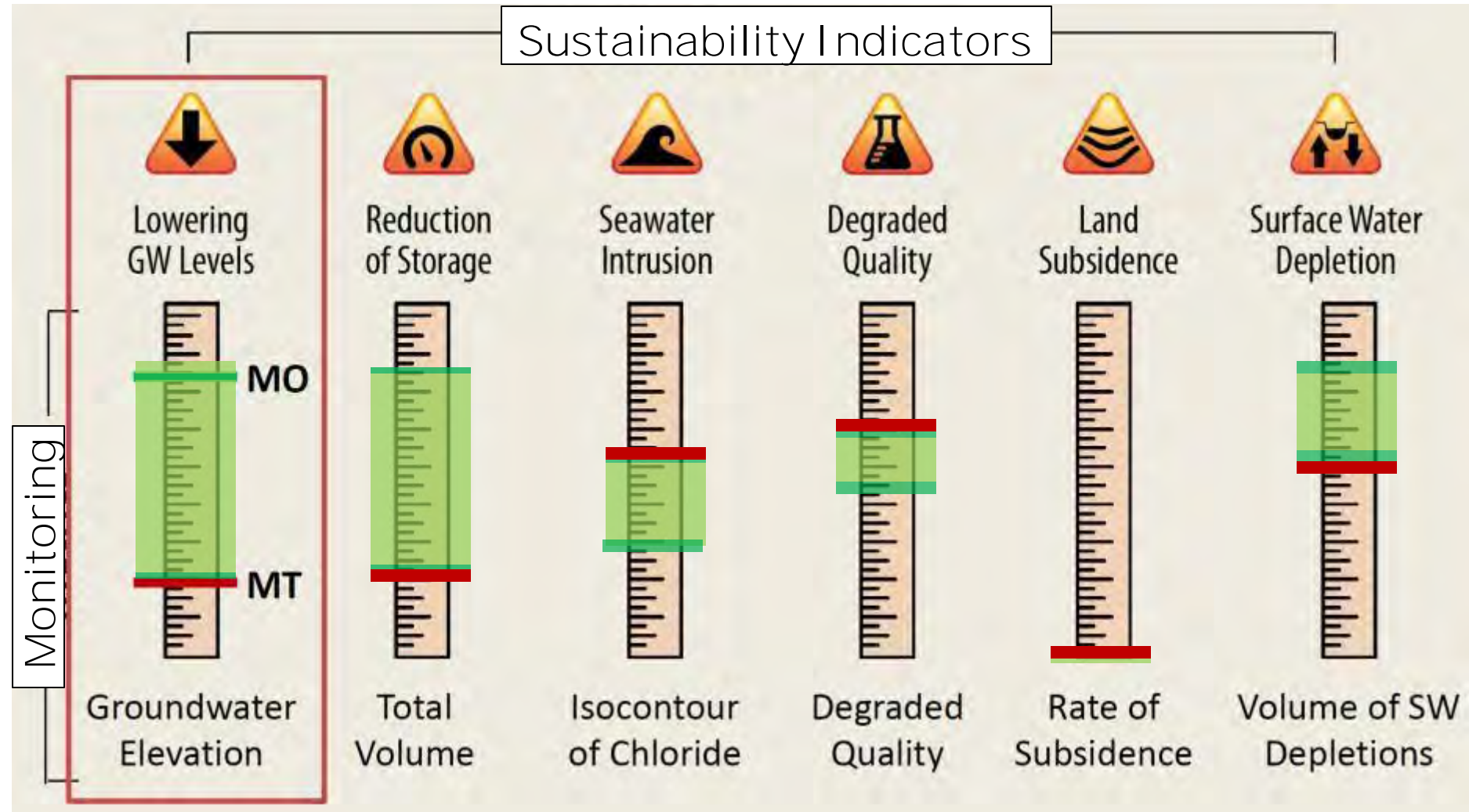
# SGMA Terms Explained

## MINIMUM THRESHOLD METRICS - STATEWIDE FRAMEWORK -



# SGMA Terms Explained

Sustainable Management Criteria for all applicable Sustainability Indicators

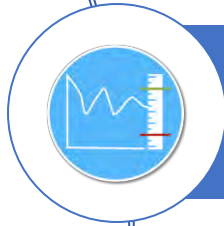


# Tehama Subbasins Groundwater Sustainability Plan



**Describe the Basin Conditions**  
Plan Area, Subbasin Setting & Water Supplies

**What water sources are used in the basin and what are the basin conditions related to those uses?**



**Define Basin Sustainability**  
Sustainable Management Criteria & Monitoring

**What is sustainable groundwater management?**



**Develop Projects/Management Actions & Implementation Plan**

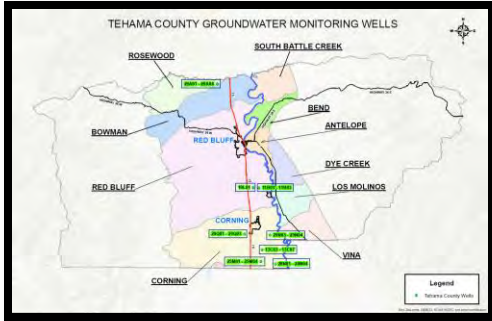
**How can we ensure groundwater sustainability?**



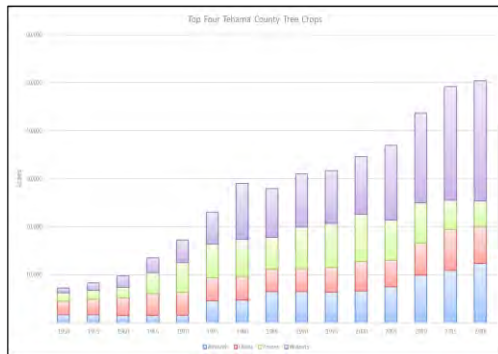
**Develop & Adopt GSP**  
Submit GSP to DWR: January 31, 2022

**Will this plan meet our sustainability goals?**

# GSP Section Preparation

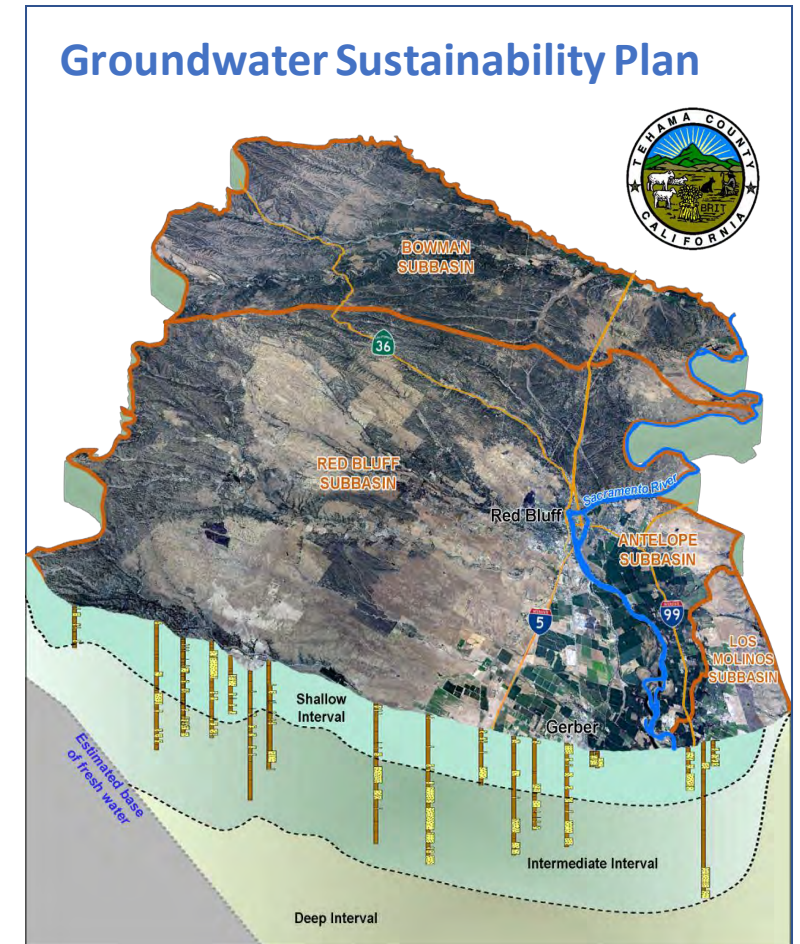


- A friendly, “good read”
- Supported by Technical Memorandums and other appendices
- Draft Sections: Periodic Review in Advance of Full Draft GSP Delivery



# Looking Ahead: Draft GSP in 2021

- Outreach (Oct. and Nov. 2020)
- Draft GSP Sections (Jan. – July 2021)
- Modeling: anticipate completion of model calibration and running project-related and future conditions scenarios in Fall 2020/Spring 2021
- Draft GSPs Early Fall 2021



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# Thank you! | General Questions?



## Project Team

Tehama County GSA

- Ryan Teubert, GSA Project Manager
- [rteubert@tcpw.ca.gov](mailto:rteubert@tcpw.ca.gov) or 385-1462 x3020

Technical Consultants, LSCE

- Eddy Teasdale

## COMMON TERMS

**SGMA** (“*Sigma*”): Sustainable Groundwater Management Act • **GSA**: Groundwater Sustainability Agency • **GSP**: Groundwater Sustainability Plan