

Wyandotte Creek Subbasin Regional Conjunctive Use Stakeholder Meeting

Prepared by

The LWA Team in coordination with the Wyandotte Creek GSA

Funding provided by the California Department of Water Resources

November 2024



Outline

- Current Groundwater Conditions
- Regional Conjunctive Use Program Overview
- Example and Potential Projects
- Questions

Water Budget

- Medium Priority Subbasin
- GSP completed January 2022
- GSP estimates an average annual volume of combined increased recharge or decreased pumping to achieve sustainability
 - 1,000 acre-feet without climate change
 - 2,000 acre-feet with 2070 climate change

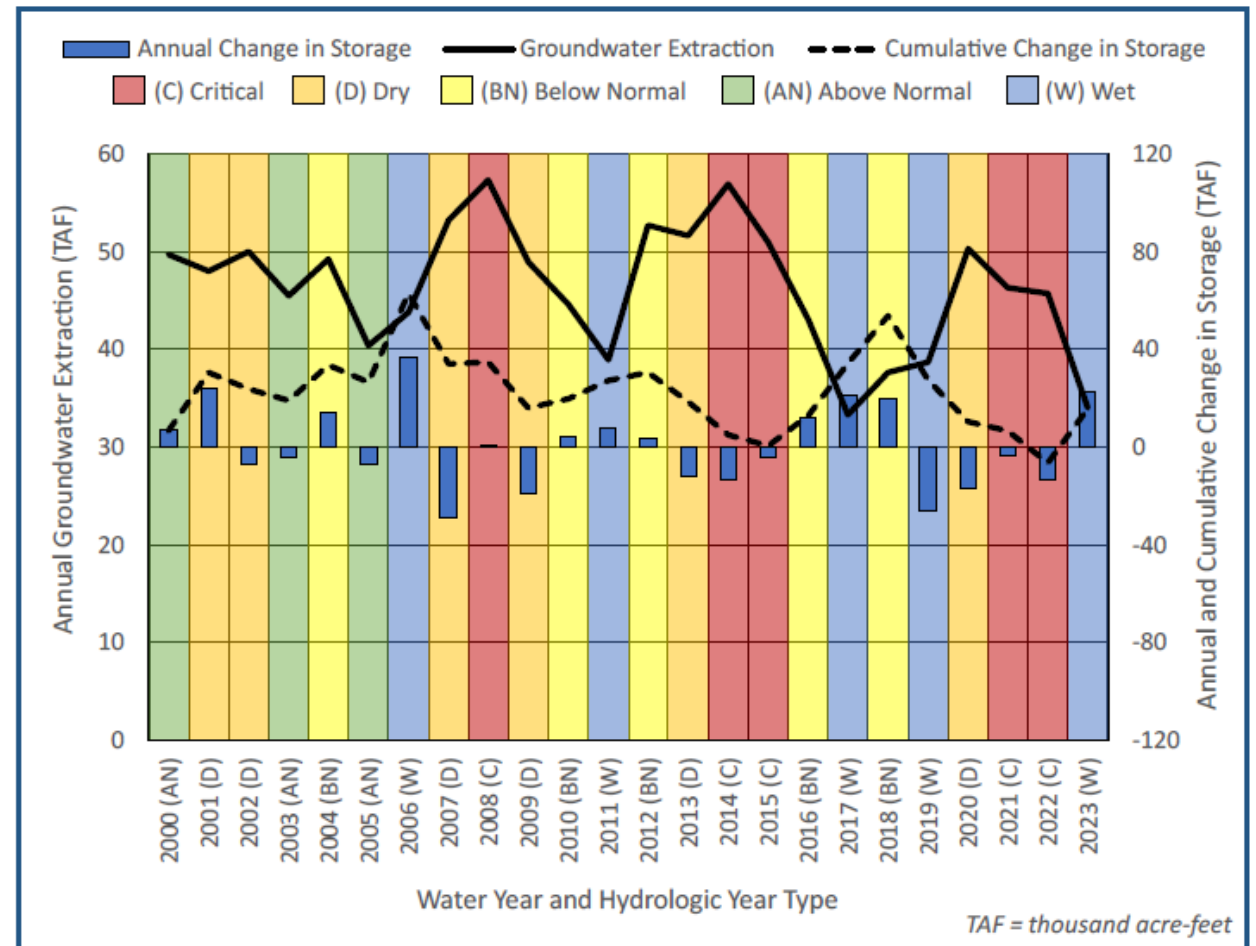
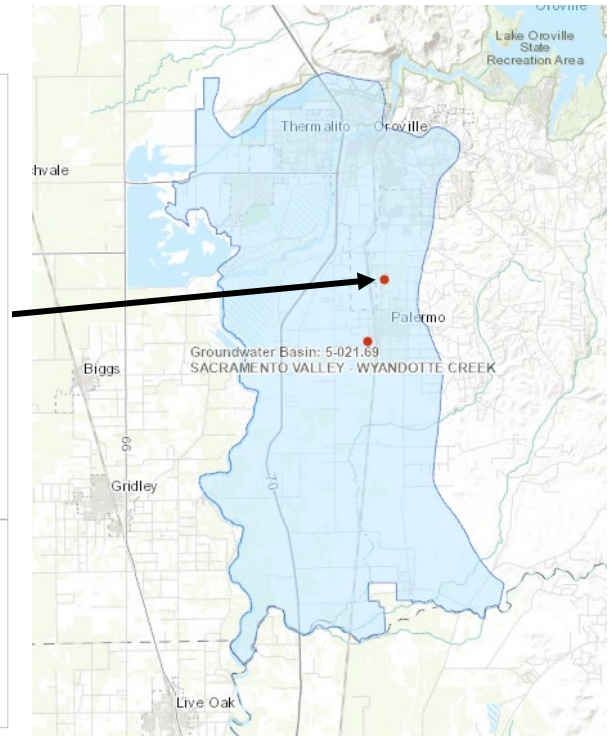
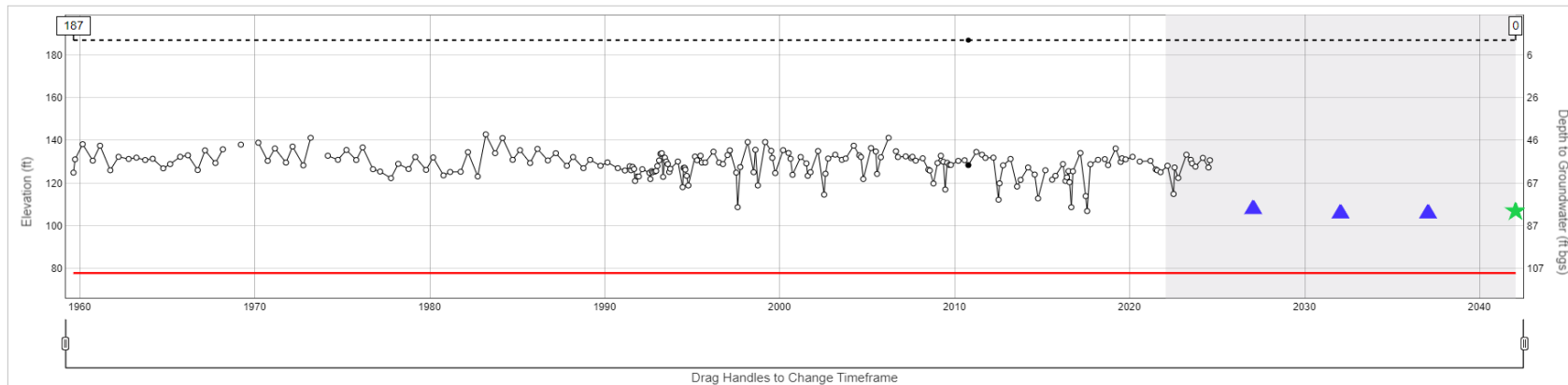


Figure ES-2. Groundwater Pumping, Annual and Cumulative Change in Storage from WY 2000 to WY 2023

Palermo Area Groundwater Levels

Well: 19N04E32P001M



Date: 10/20/2010 00:00

- Ground Surface: 187
- Groundwater Elevation: 128.5
- Depth to Groundwater:

Sustainable Management Criteria
(Elevation, feet)

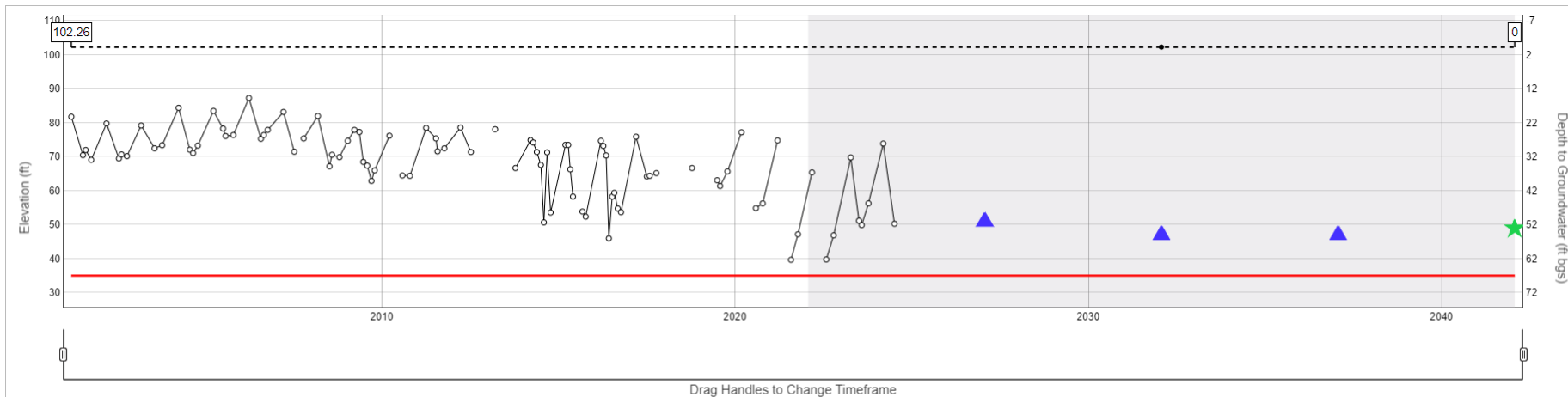
- Minimum Threshold: 78
- ★ — Measurable Objective: 107
- ▲ Interim Milestone
- 5-Year : 108
- 10-Year : 106
- 15-Year : 106

Sustainable Management Criteria
(Depth to Groundwater, feet below ground surface)

- Minimum Threshold bgs: 109.00
- ★ Measurable Objective bgs: 80.00
- ▲ Interim Milestone
- 5-Year bgs : 79.00
- 10-Year bgs : 81.00
- 15-Year bgs : 81.00

Honcut Creek Groundwater Levels

Well: 17N04E09N002M



Date: 1/28/2023 11:24

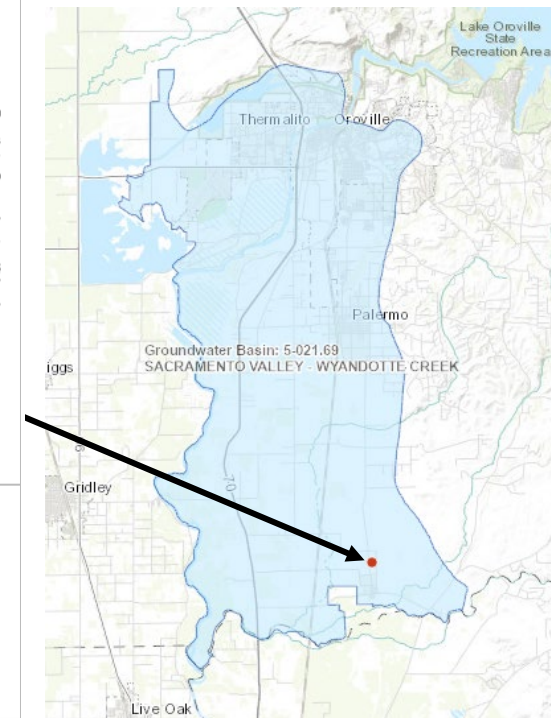
- Ground Surface: 102.26
- Groundwater Elevation:
- Depth to Groundwater:

Sustainable Management Criteria
(Elevation, feet)

- Minimum Threshold: 35
- ★ — Measurable Objective: 49
- ▲ Interim Milestone
- 5-Year : 51
- 10-Year : 47
- 15-Year : 47

Sustainable Management Criteria
(Depth to Groundwater, feet below ground surface)

- Minimum Threshold bgs: 67.26
- ★ Measurable Objective bgs: 53.26
- ▲ Interim Milestone
- 5-Year bgs : 51.26
- 10-Year bgs : 55.26
- 15-Year bgs : 55.26



Regional Conjunctive Use Project

1. Intra-Basin Water Exchange Feasibility Study: Planning and Feasibility

- *To work with water purveyors with service areas within and outside the Subbasin to enhance their ability to divert supply and make it available to agricultural users within the subbasin*

2. Agricultural Surface Water Supplies Feasibility Study: Planning and Feasibility

- *To expand surface water use for irrigation among agricultural groundwater users*

3. Agricultural Irrigation Efficiency Pilot Program

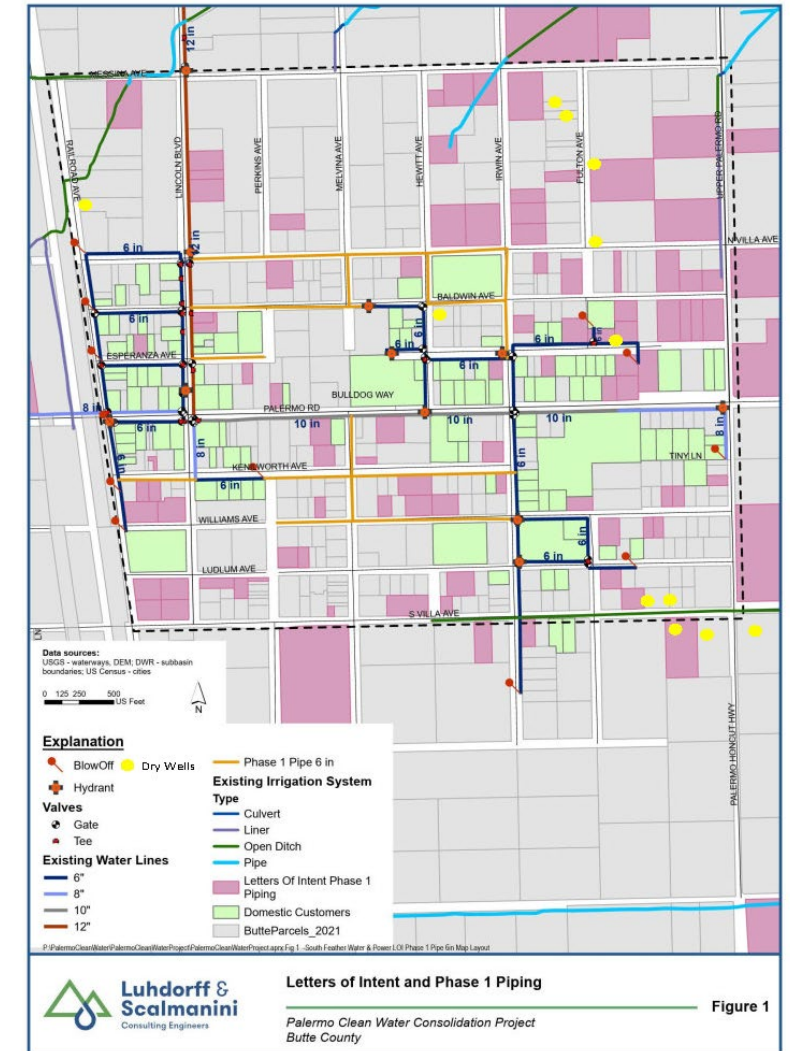
- *To reduce non-beneficial evapotranspiration by improving on-farm management practices through a pilot precision irrigation program*

Example and Potential Projects

- Palermo Clean Water Consolidation Project
- Regional Conjunctive Use Projects
 - Palermo Drainage Plan, Multi-Benefit Flood Control and Groundwater Recharge Project
 - Honcut & Wilson Creeks In-lieu Groundwater Recharge Project
 - Feather River Recharge Project
 - Others?

Palermo Clean Water Consolidation Project

- Extend SFWPA water service to Palermo community
- MOU between Butte County and SFWPA
- Funding Sources
 - \$525,000 Urban and Multi-Benefit Drought Relief
 - \$2.5M Butte County ARPA Funds
 - \$2.5M EPA State and Tribal Grant Assistance
 - \$11.4M State Revolving Loan Funds (application pending)
- Construction to connect dry well areas, Summer 2025



Flooding in Palermo

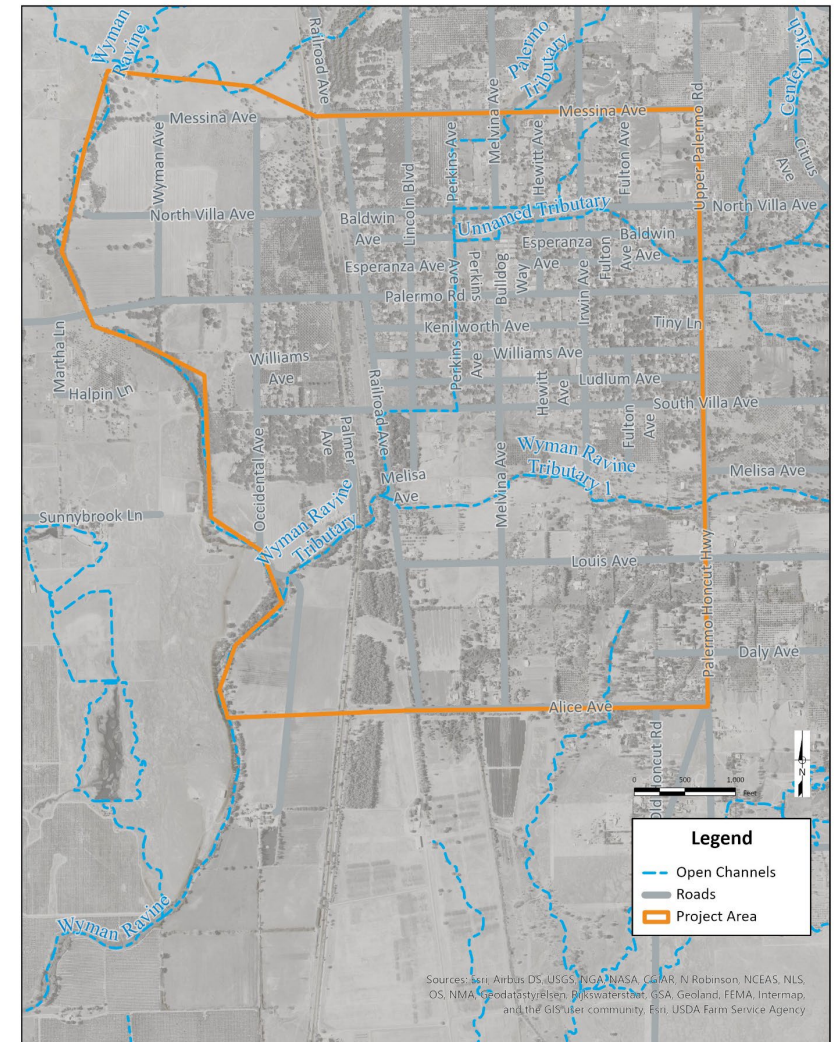


- History of flooding – Naturally flooded landscape
- Flood risk has been identified in the 2019 Butte County Local Hazard Mitigation Plan
- Property damage, road closures, septic system flooding, safety risks



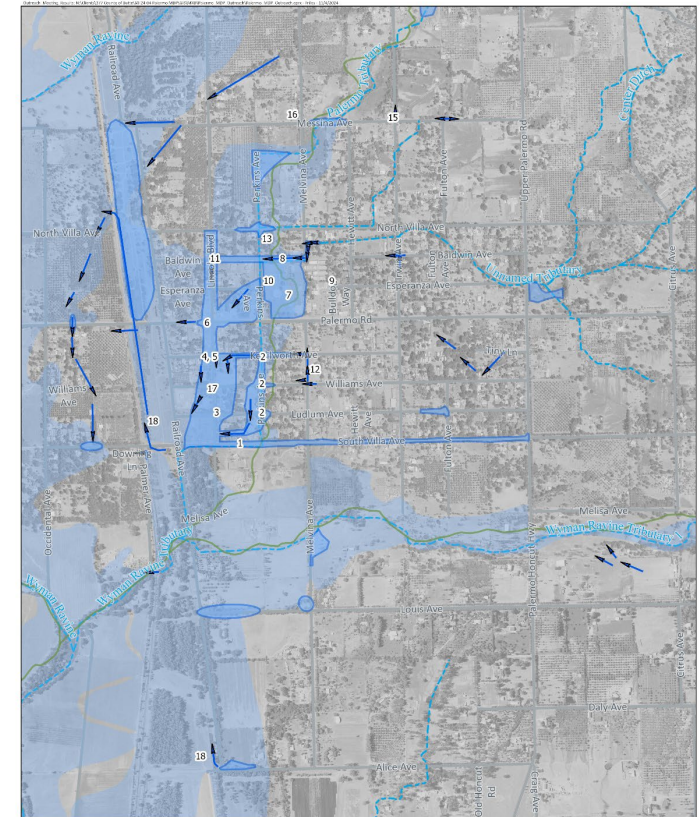
Palermo Master Drainage Plan

- A comprehensive approach to drainage and flooding
- Collect data on existing flooding
- Analyze existing problems and develop potential solutions
- Prioritize solutions for funding and implementation



Palermo Master Drainage Plan

- Community flood mapping process has been completed.
- Using flooding results to calibrate a hydraulic model
- Currently in the process of developing potential solutions. Potential solutions may include detention, diversions, and capacity increases.



Symbology

- Flooding Areas
- FEMA 100 Year Flooding
- Overland Flow Direction
- Waterways
- historic_drainage_1890s
- Roads

Notes:

- Roads blocked and homes flooded
- Roads are impassible during flooding
- Flood depths of 1.5 feet have been observed
- Floods most years
- Flood depths of 2.5 feet observed
- Flood waters come up through the storm drain
- Flood depths of 2-3 feet have been observed in the school field
- Flood depths over 1 foot occur during every heavy rain
- School has closed 3 times in the last 10 years due to flooding
- Palermo Tributary overtops and flows to the southwest
- Children observed wading through floodwater on the way to/from school
- Flood waters almost enter the house
- Flood depths of 6 inches have been observed
- Flood depths of 2 to 3 feet have been observed 3 to 4 times per year. There is a significant debris build up on the fence
- Area floods with heavy rain
- Flood depths of 1-2 feet deep observed 2 to 3 times per year
- Elderly residents become stranded in their homes
- Due to limited outlet capacity, flooding flows north

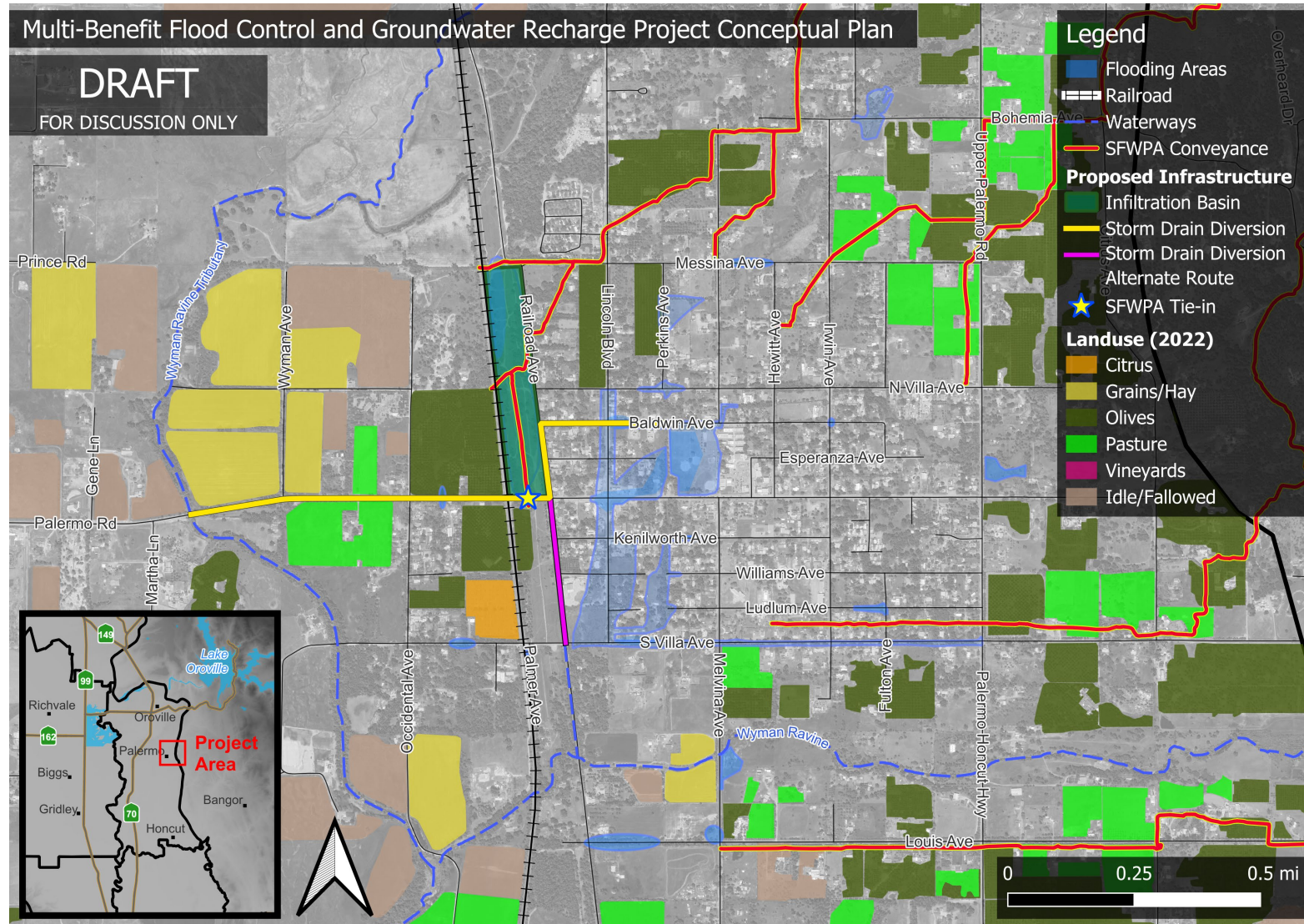
Prepared by: **WEST / YOST**

Prepared for: **Butte County**
Palermo Master Drainage Plan

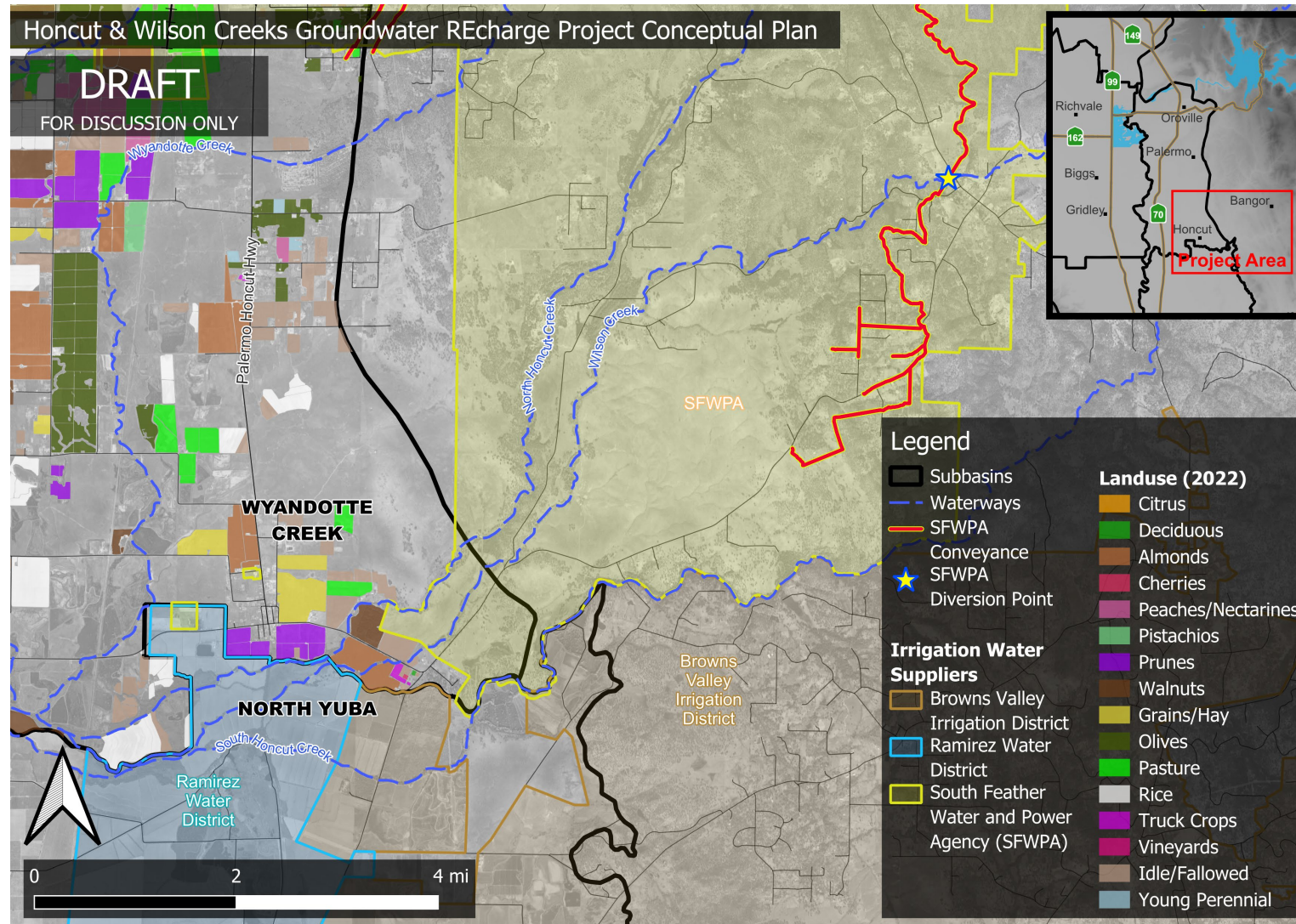
Community Outreach Meeting Results
Flooding Locations and Notes

Figure X-X

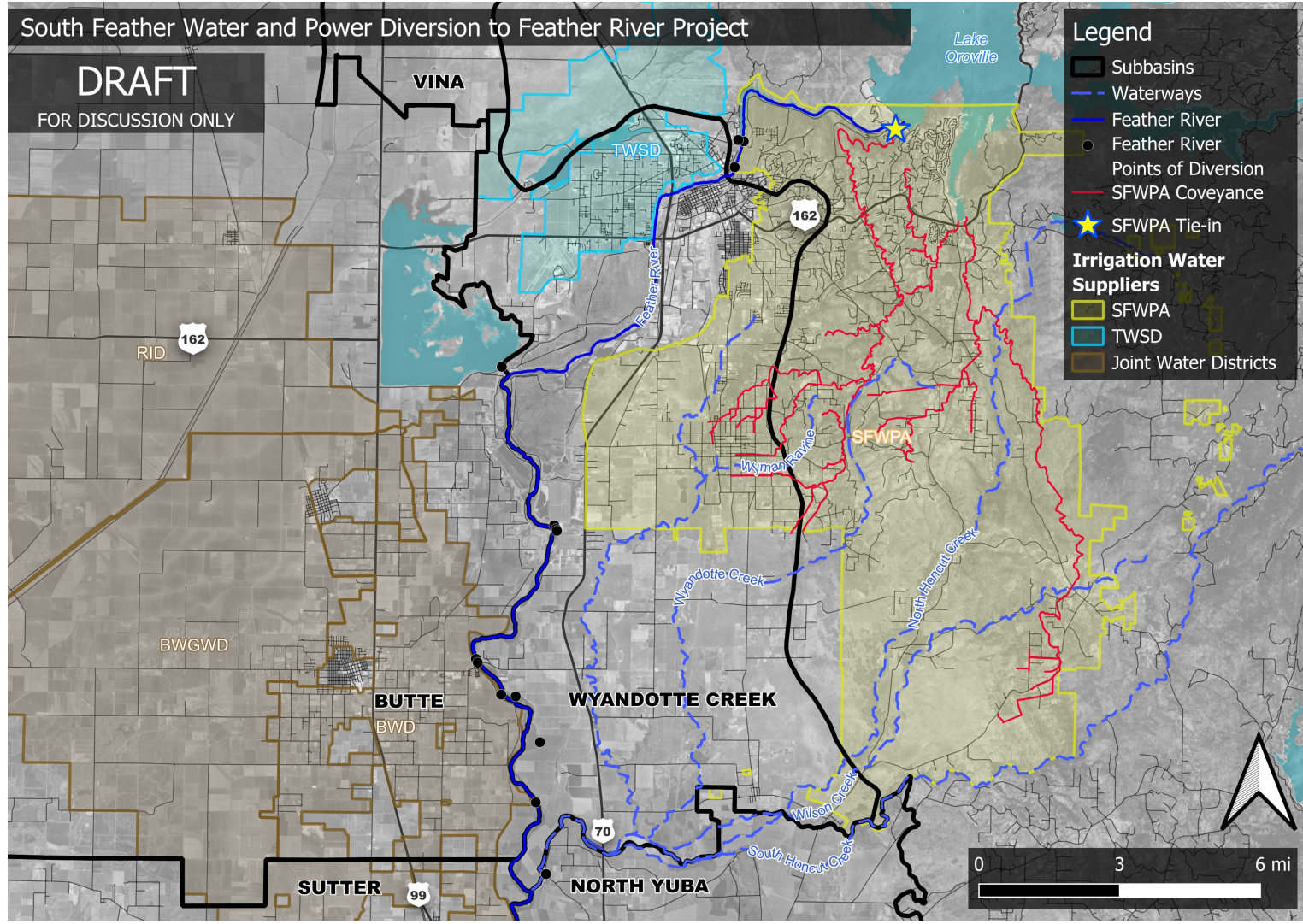
Palermo Master Drainage Plan, Multi-Benefit Flood Control and Groundwater Recharge Project



Honcut & Wilson Creeks Groundwater Recharge Project



Feather River Recharge Project



Questions?

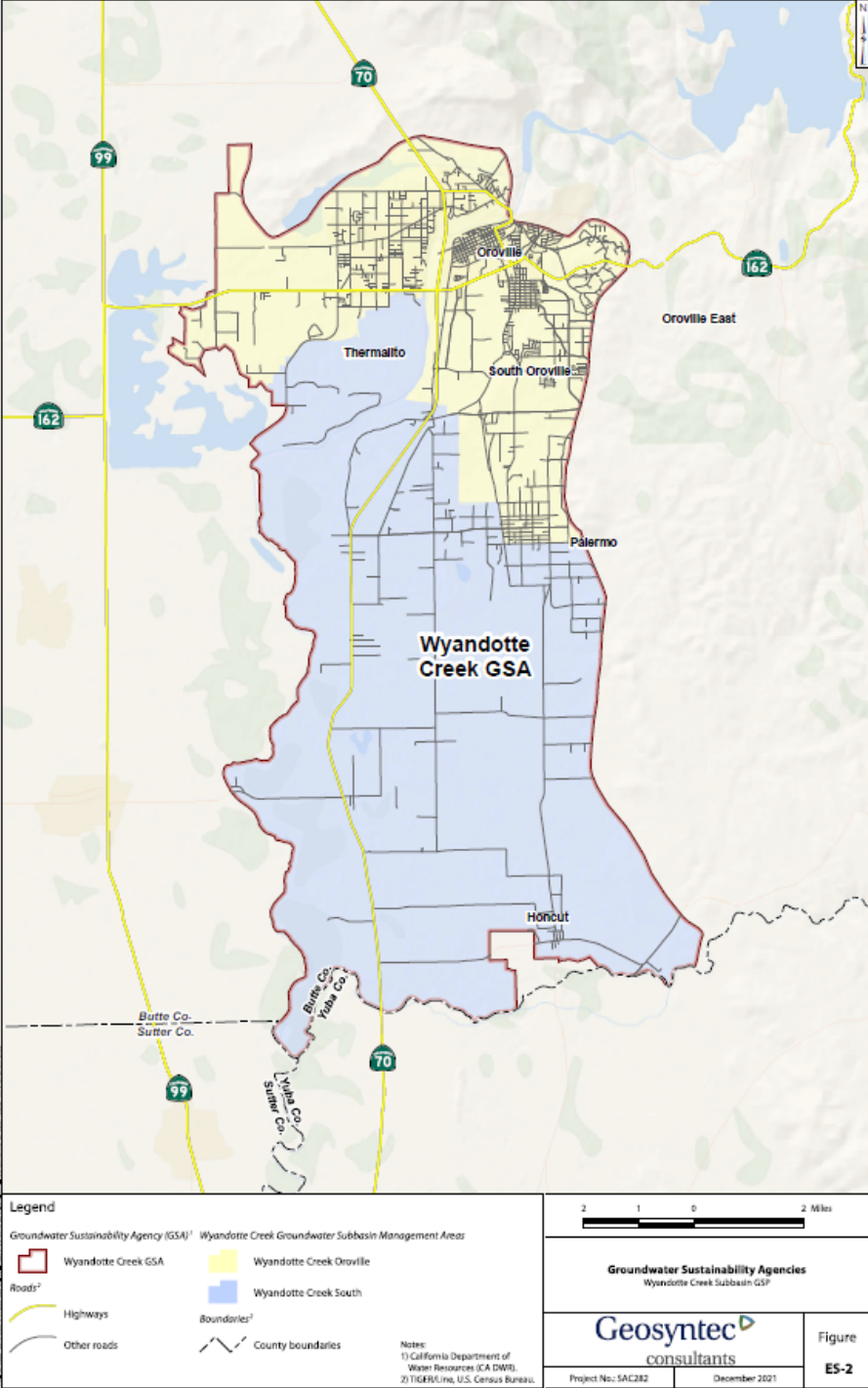
SGMA Sustainability Goal

Sustainability Goal (*from GSP Executive Summary*):

To ensure that groundwater is managed to provide a water supply of adequate quantity and quality to support beneficial users of groundwater including but not limited to rural areas and other communities, the agricultural economic base of the region, and environmental resource uses in the subbasin now and in the future.

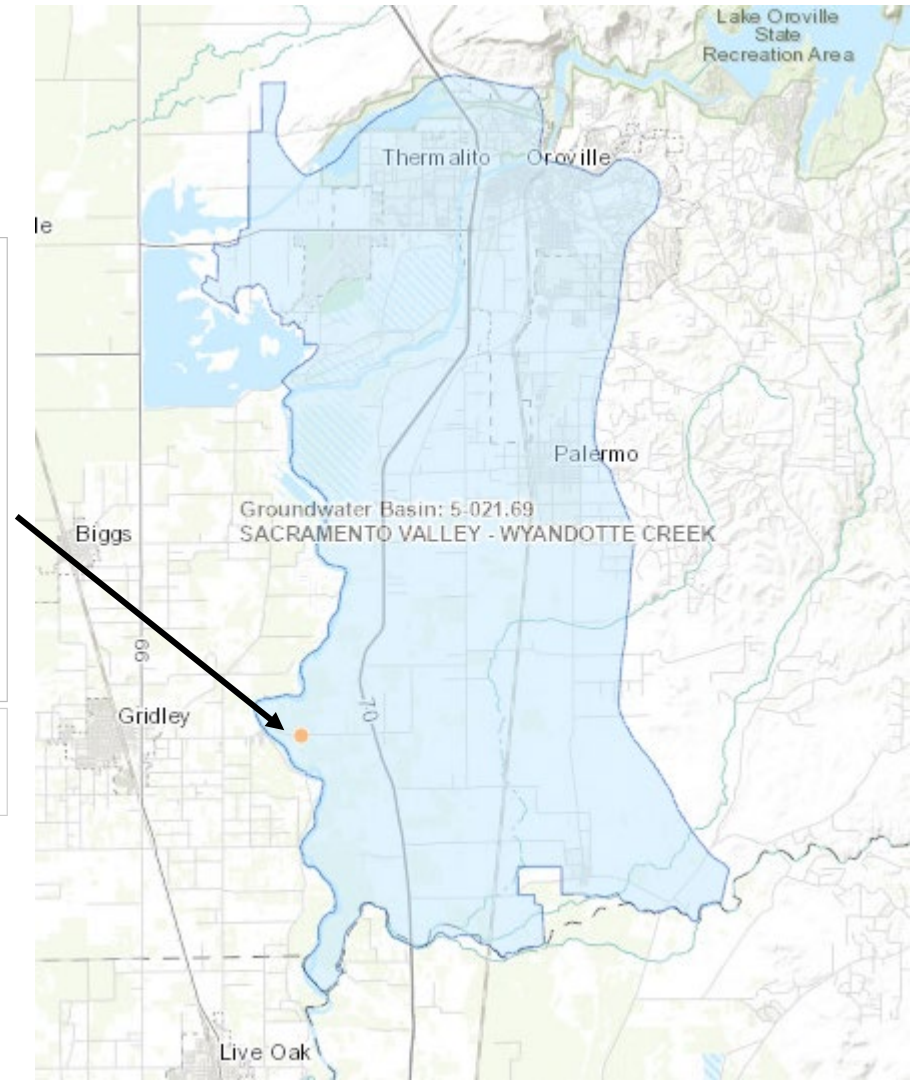
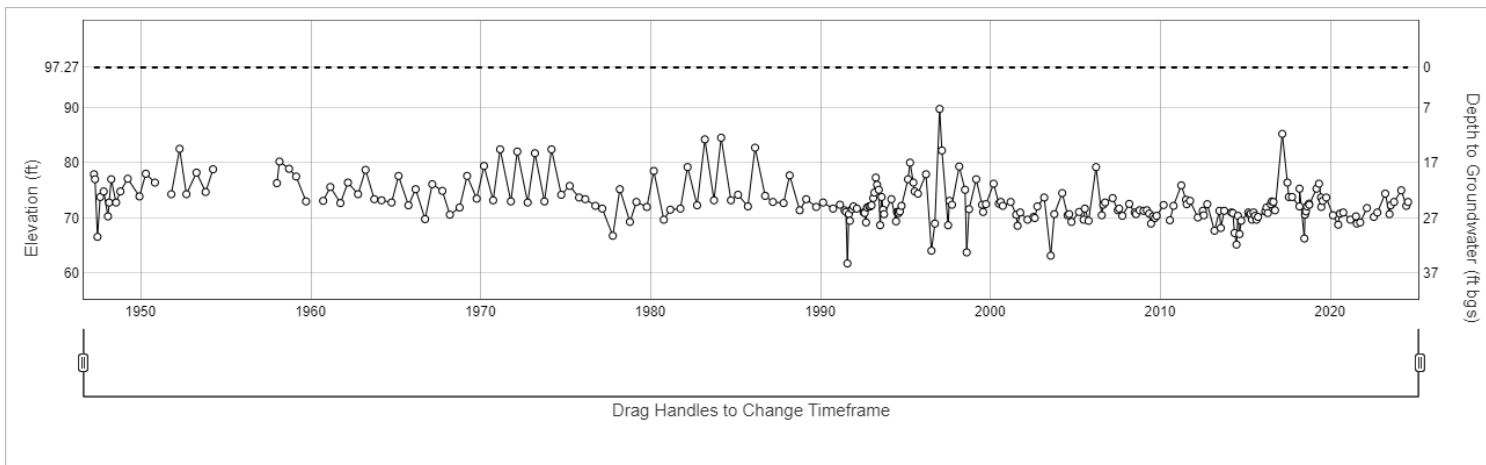
Wyandotte Creek Groundwater Sustainability Agency (GSA)

- GSA Board has five members
 - County of Butte
 - City of Oroville
 - Thermalito Water And Sewer District
 - Agricultural Groundwater User
 - Domestic Well User (non-agricultural)



Feather River Region

Well: 17N03E03D001M



Date: (hover to see values)

- Ground Surface:
- Depth to Groundwater:

- Groundwater Elevation:
- Current Ground Surface Elevation: 97.27