



Water Resources Management in Yolo County

Kristin Sicke, P.E.

General Manager, YCFC&WCD

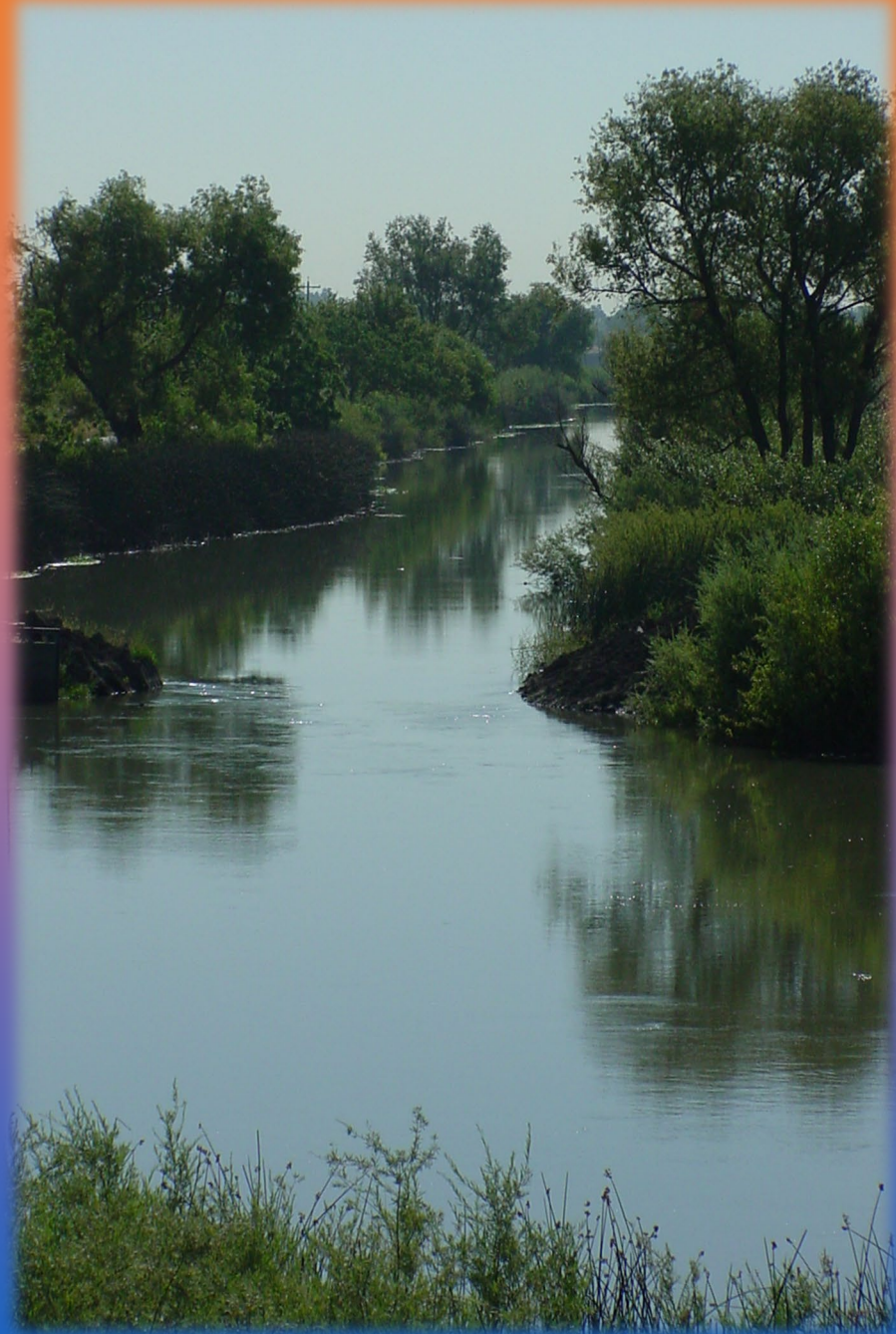
Executive Officer, YSGA

Yolo County Irrigated Lands Program: January 22-24, 2024

Agenda

- Overview of YCFC&WCD
- Water Conditions Update
- Overview of Yolo Subbasin Groundwater Agency
- Update on the Yolo Subbasin GSP
- Recharge Project Opportunities

*The Yolo County
Flood Control &
Water
Conservation
District* was
created in 1951 to
seek new water
sources and
manage them
efficiently.



Yolo County Flood Control & Water Conservation District

- ✓ Directors appointed by the County Board of Supervisors
- ✓ Broad groundwater and floodwater management authorities
- ✓ Three cities within service area



Overview of Yolo County Flood Control & Water Conservation District

200k acre service area

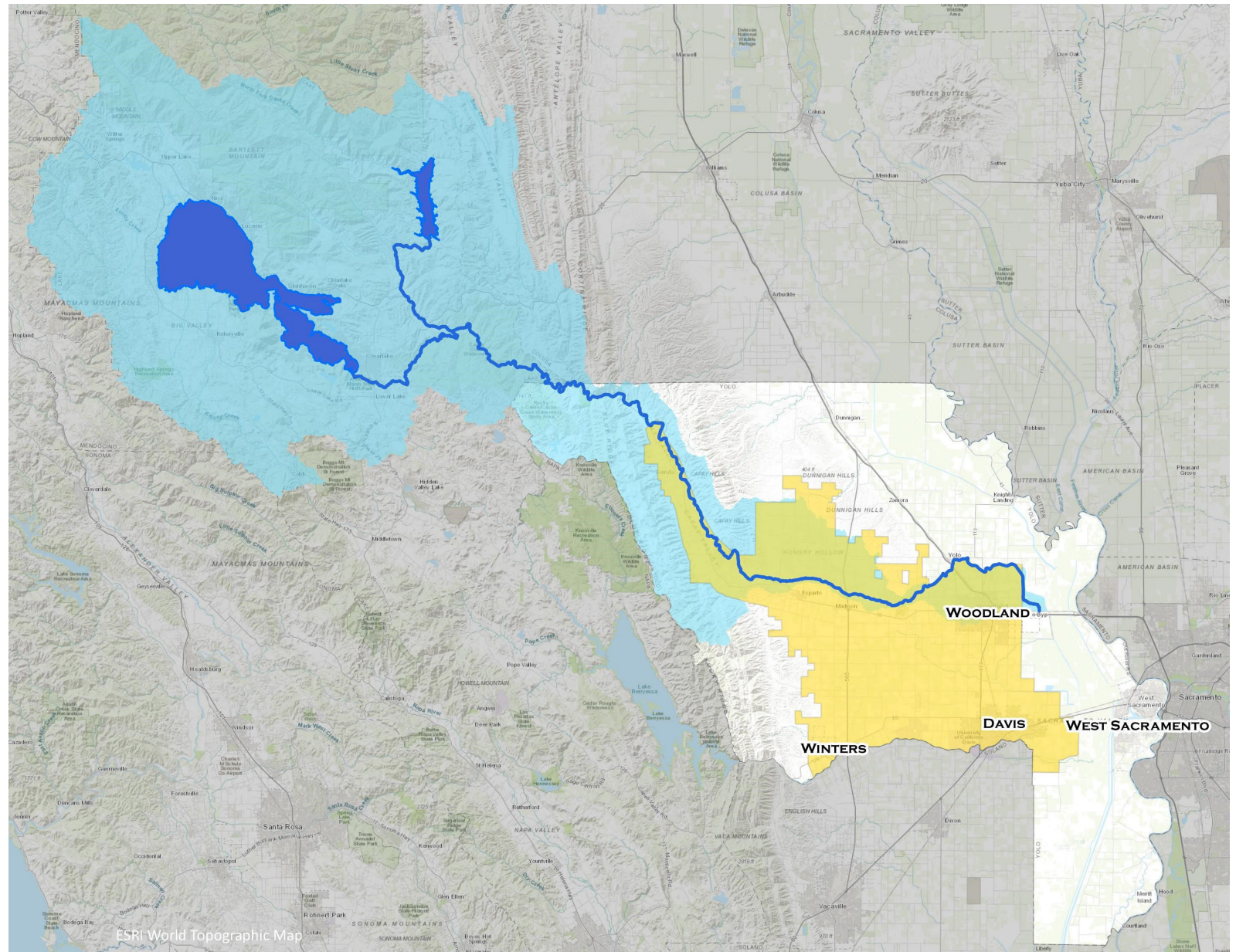
160 miles canals

110 customers

115-145 TAF

Full allocation year supply:

225 TAF by April 1



Clear Lake Water Conditions Update

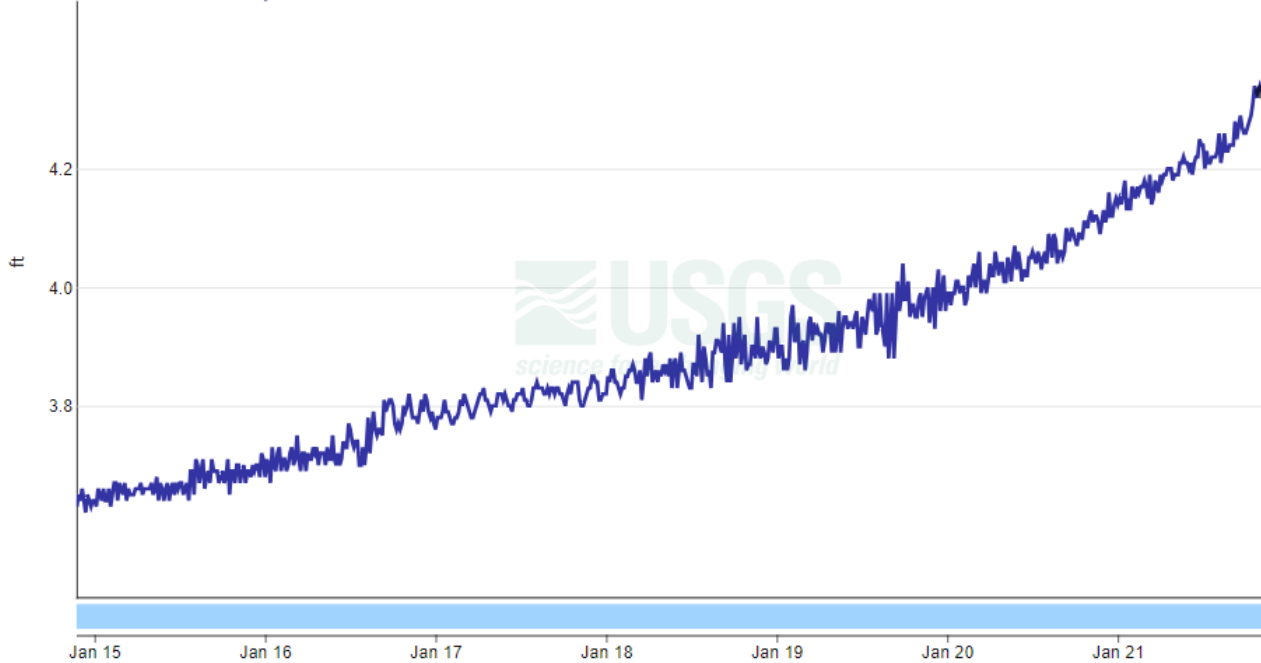
7 days 30 days 1 year

Clear LK a Lakeport CA - 11450000

January 14, 2024 - January 21, 2024

Gage height, feet

4.33 ft - Jan 21, 2024 08:15:00 PM PST



Clear Lake elevation = 4.33 feet (~30TAF)

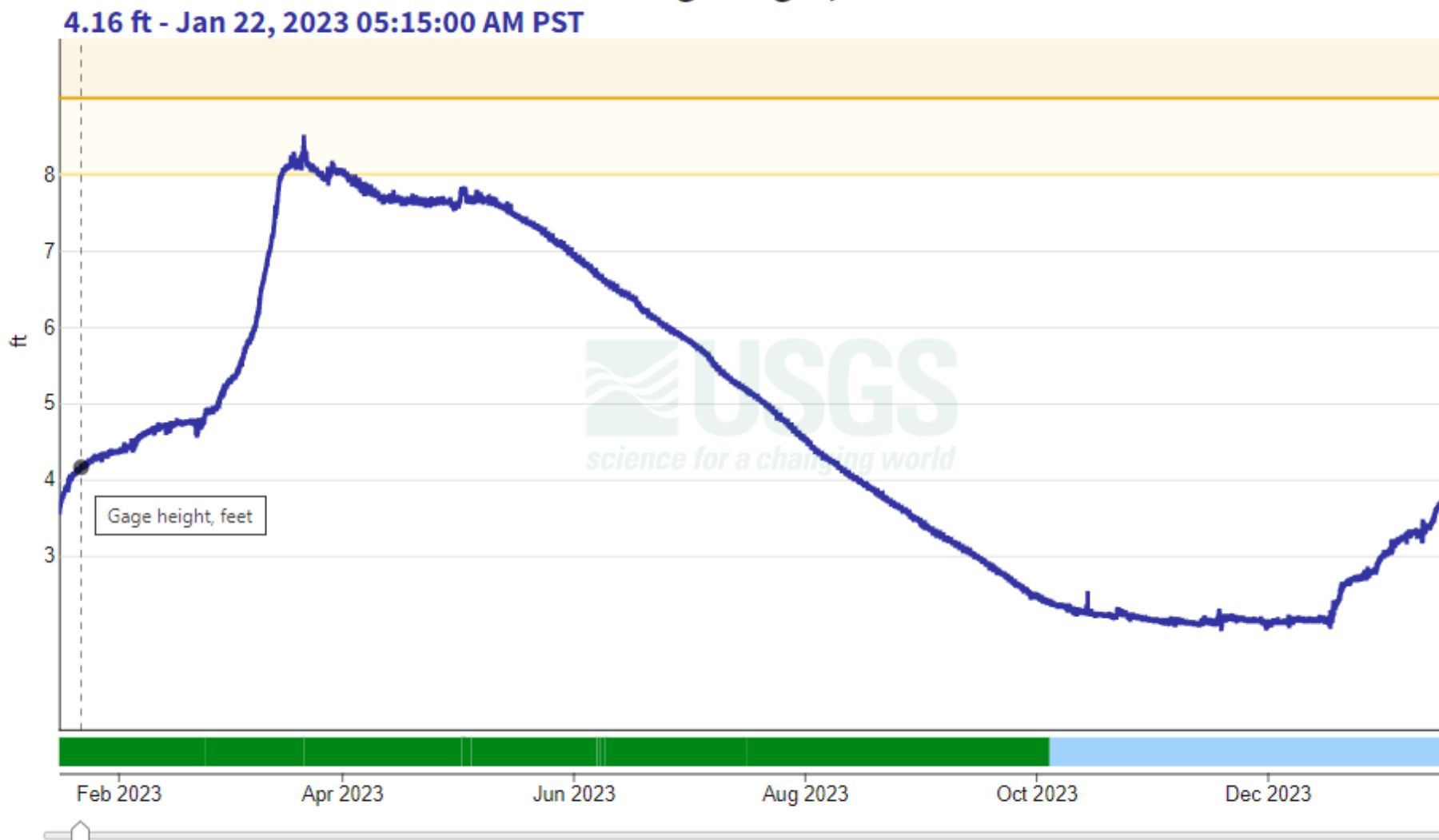
District Irrigation Entitlement is 150,000 AF
-- between 3.22 and 7.56 feet

7 days 30 days 1 year

Clear LK a Lakeport CA - 11450000

January 16, 2023 - January 16, 2024

Gage height, feet

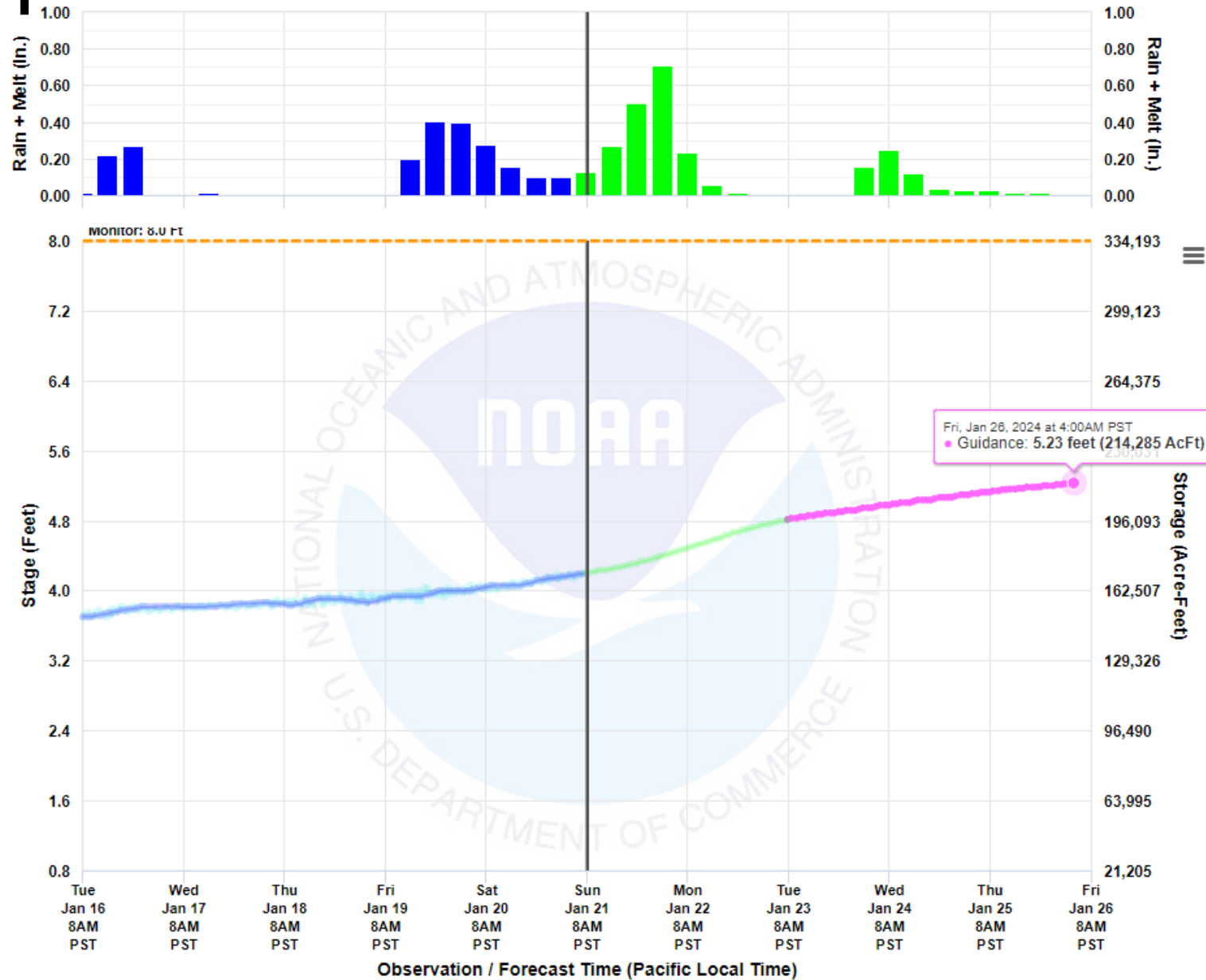


IMPORTANT Data may be [provisional](#)

CNRFC Update

Clear Lake - Lakeport (CLKC1) Reservoir Forecast Plot

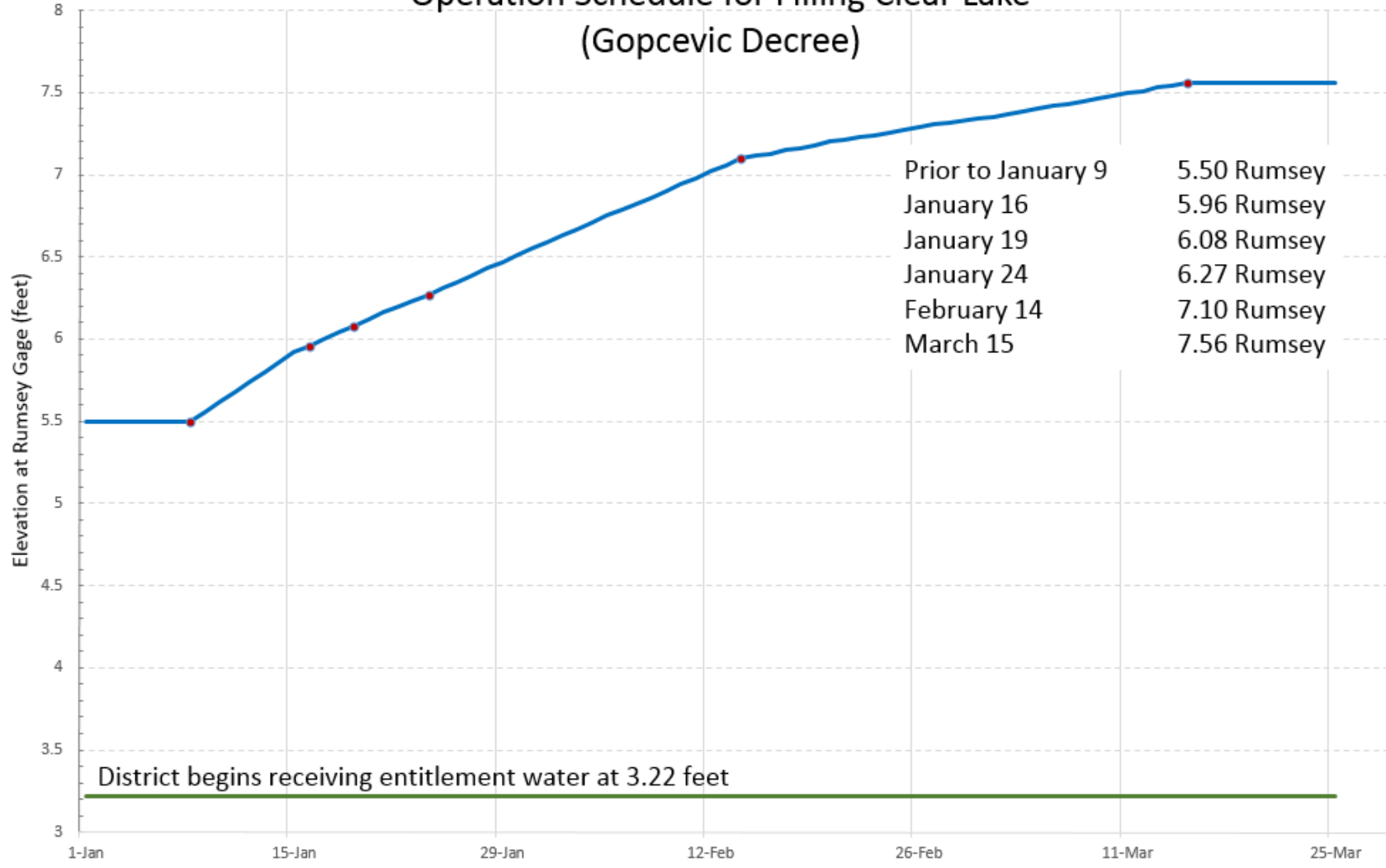
Forecast Posted: 01/21/2024 at 7:53 AM PST • Graphic Created: 01/21/2024 at 8:03 AM PST



NOAA / NWS / California Nevada River Forecast Center • California Department of Water Resources

Observed (Raw Gauge) Observed (Simulated) Forecast Guidance

Operation Schedule for Filling Clear Lake (Gopcevic Decree)



Indian Valley Reservoir Water Conditions Update

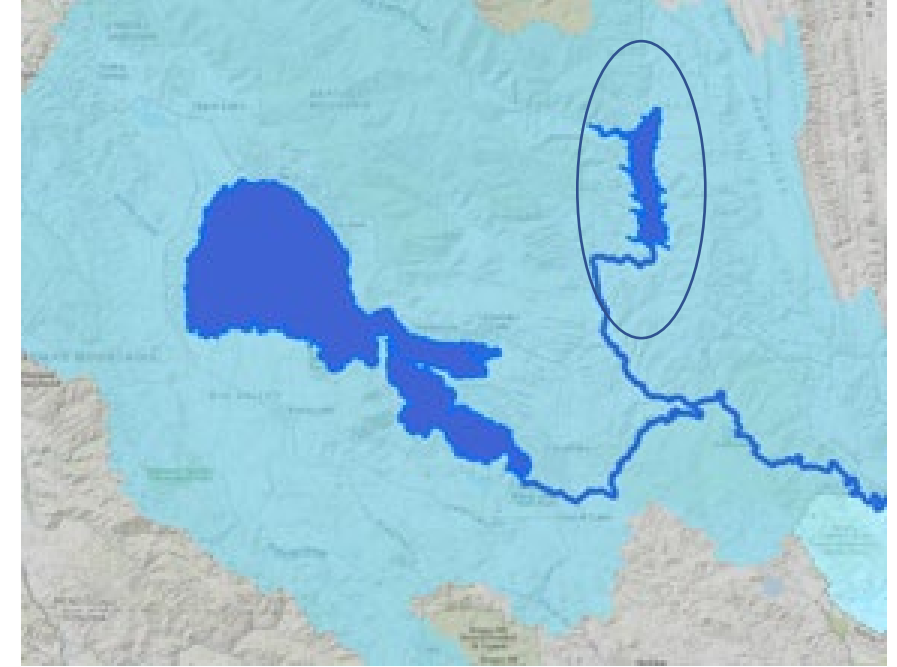
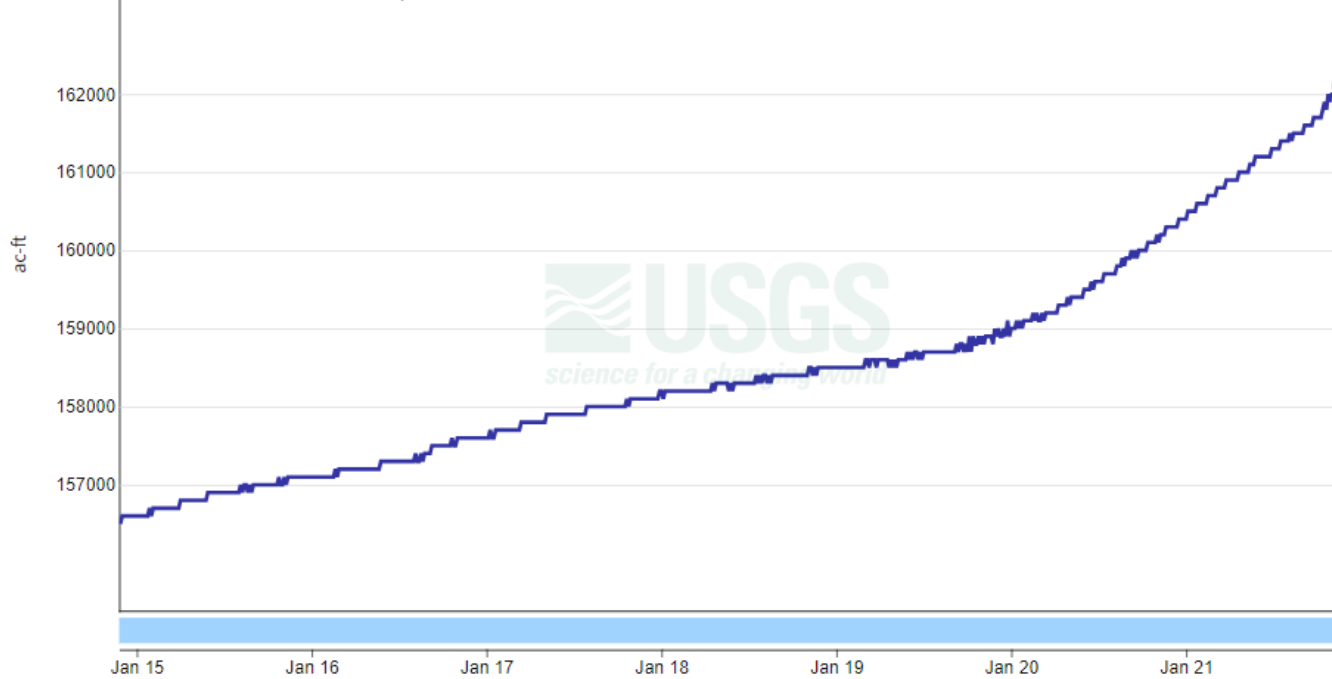
7 days 30 days 1 year

Indian Valley Res a Clearlake Oaks CA - 11451290

January 14, 2024 - January 21, 2024

Reservoir storage, acre-feet

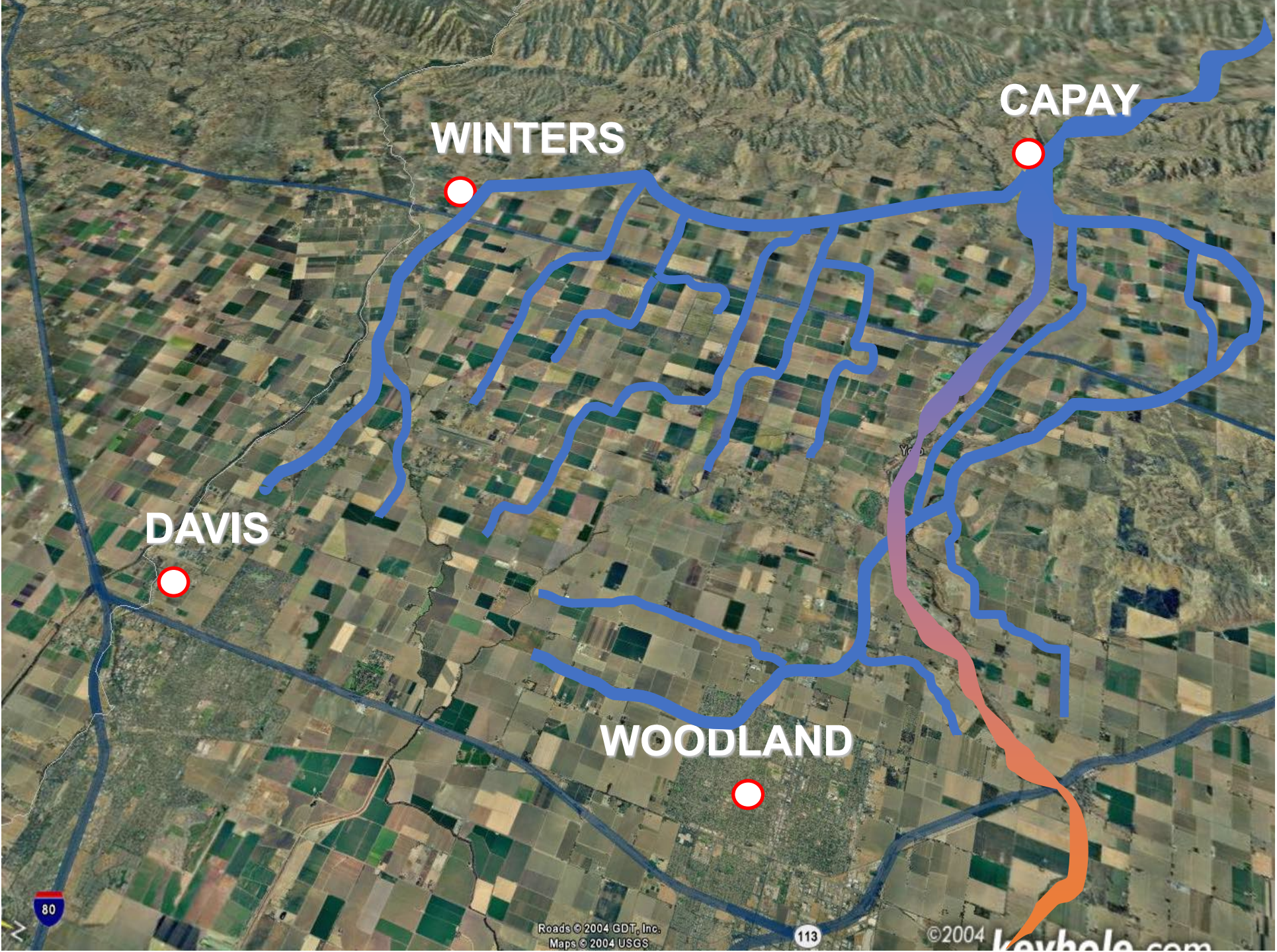
162100 ac-ft - Jan 21, 2024 09:00:00 PM PST



Indian Valley Reservoir Storage = 162,100 acre-feet

Total Storage Capacity = 300,000 AF





WINTERS

CAPAY

DAVIS

WOODLAND

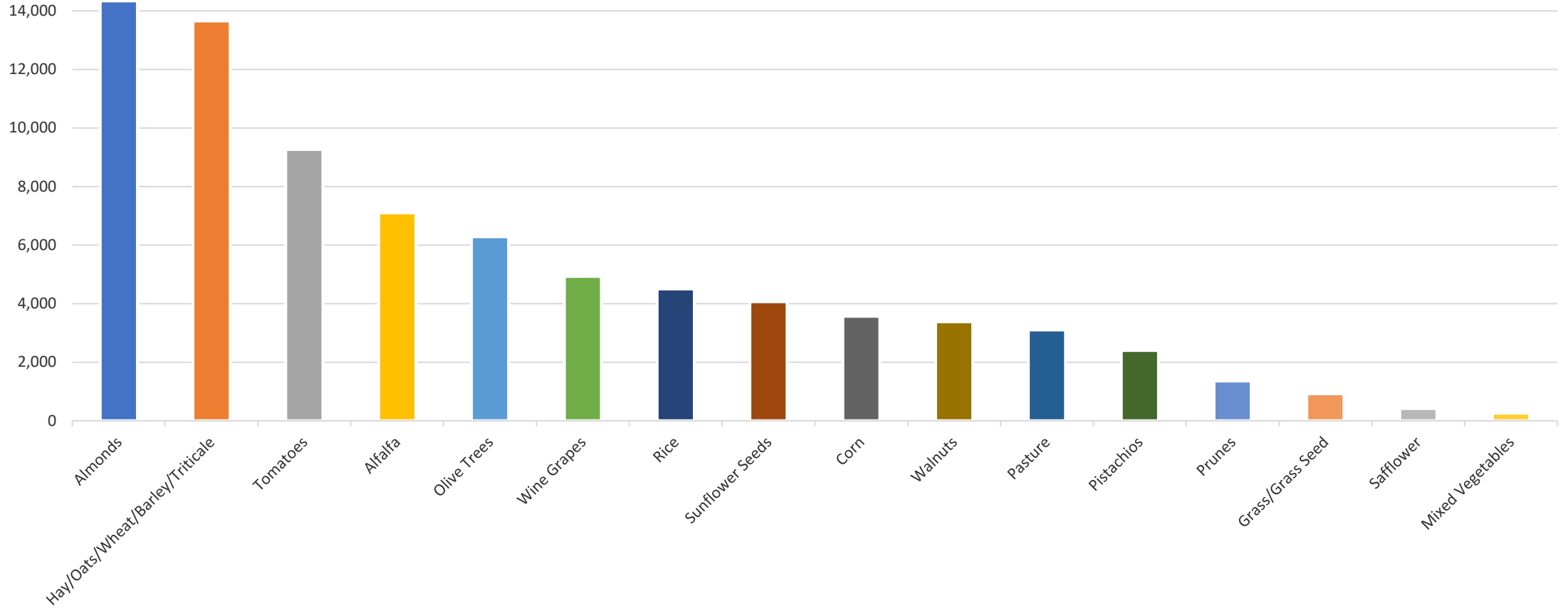
80

113

Roads © 2004 GDT, Inc.
Maps © 2004 USGS

© 2004 keyhole.com

2023 Top 20+ Crops Signed Up



2023 Acreage Signups

- 82,000 acres signed up
- 3,400 organic acres
- 50 unique crop types

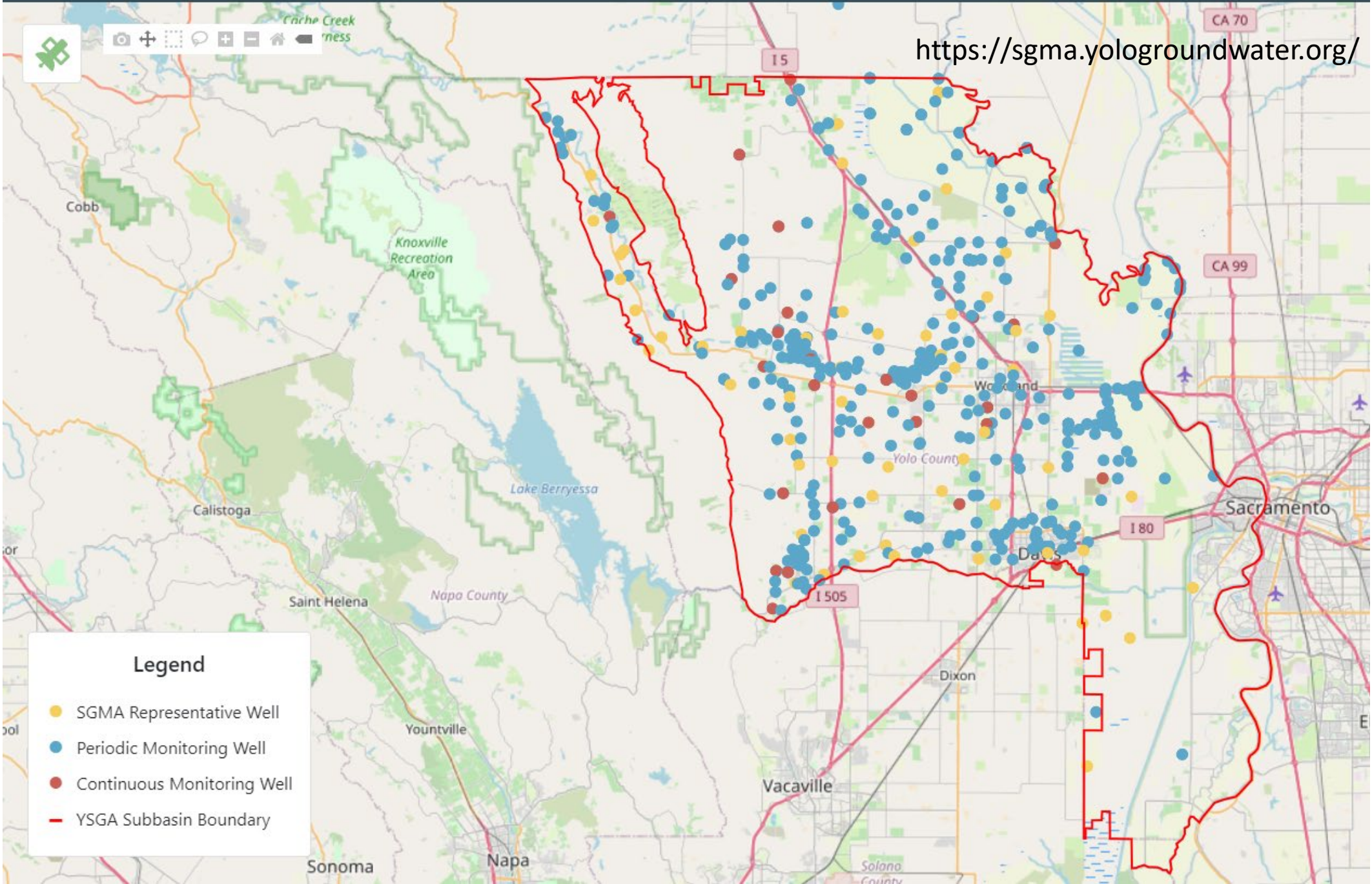


2024 Temporary Permit for Diverting Excess Flows to Groundwater Recharge

- Diversions season: January 1 – April 30, 2024
- Diversions up to 600 cfs; max of 72,000 AF
- Maintain ≥ 50 cfs in Cache Creek at Yolo (100 cfs in April)
- Divert “excess” stormwater into canals and onto fields
- Fields must be part of Yolo County ILRP

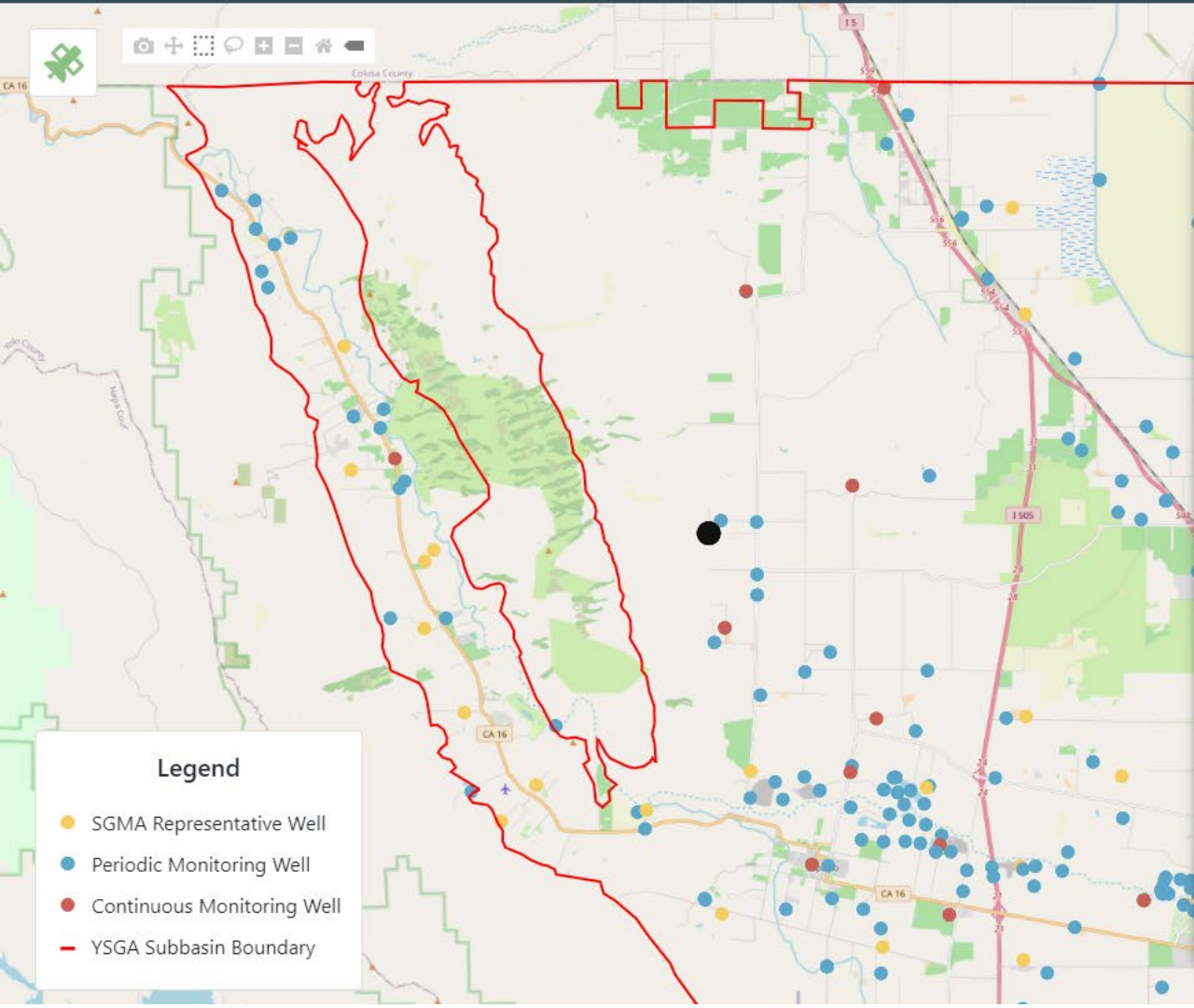
Year	Diversion Days	Stormwater Diversion for Groundwater Recharge (AF)
2016	39	11,128
2017	41	6,210
2018*	0	0
2019	30	3,745
2020-2022*	0	0
2023	31	4,604

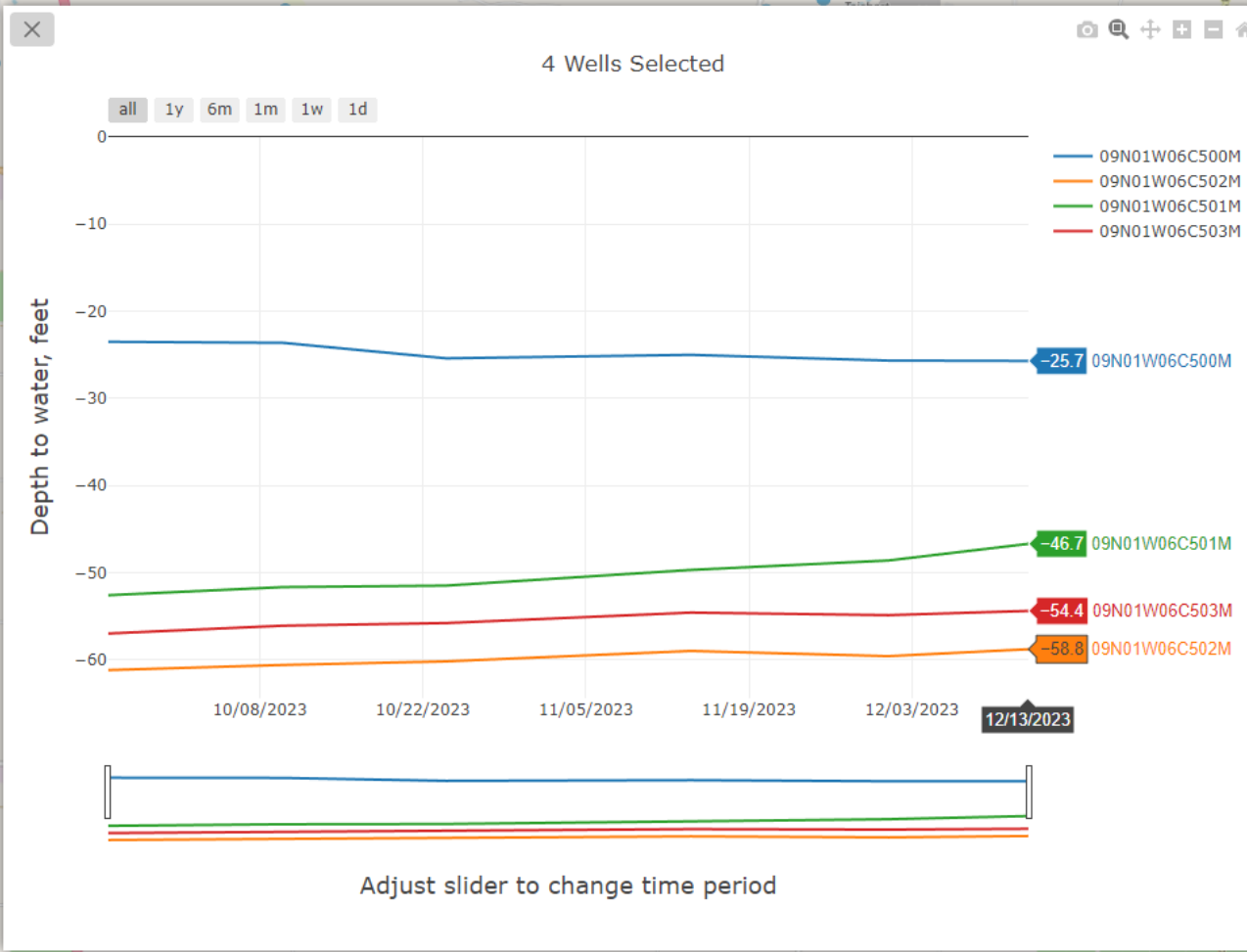
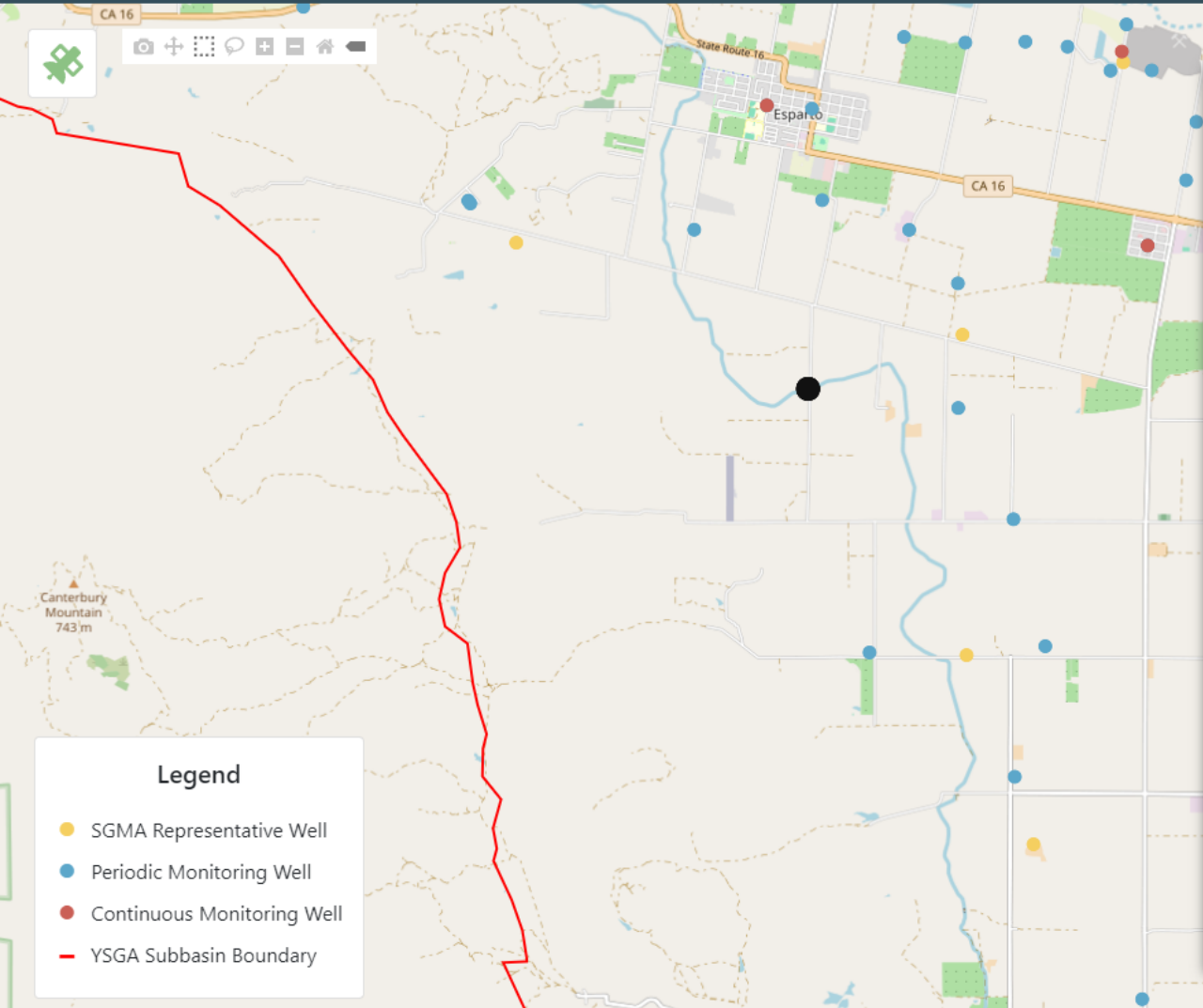


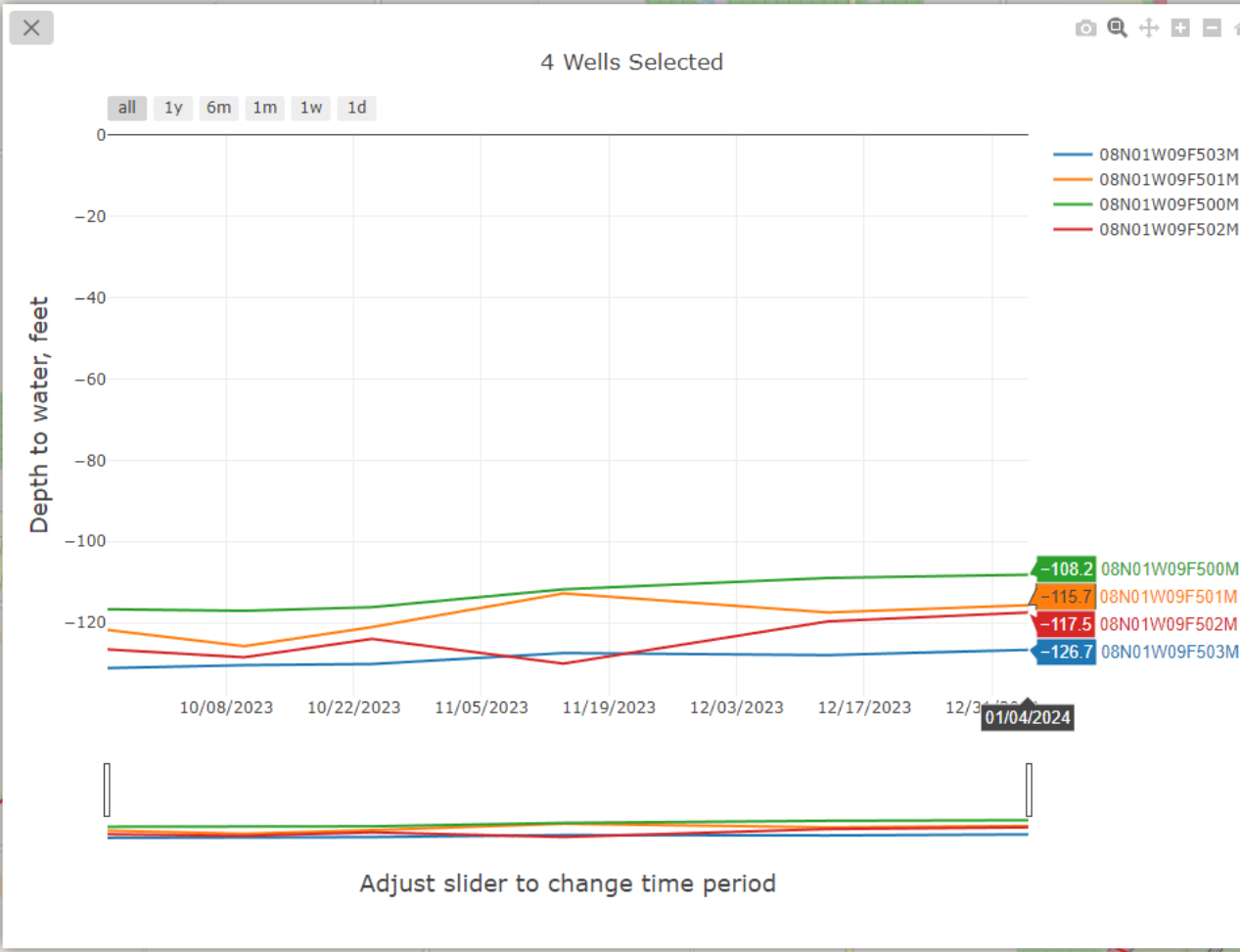
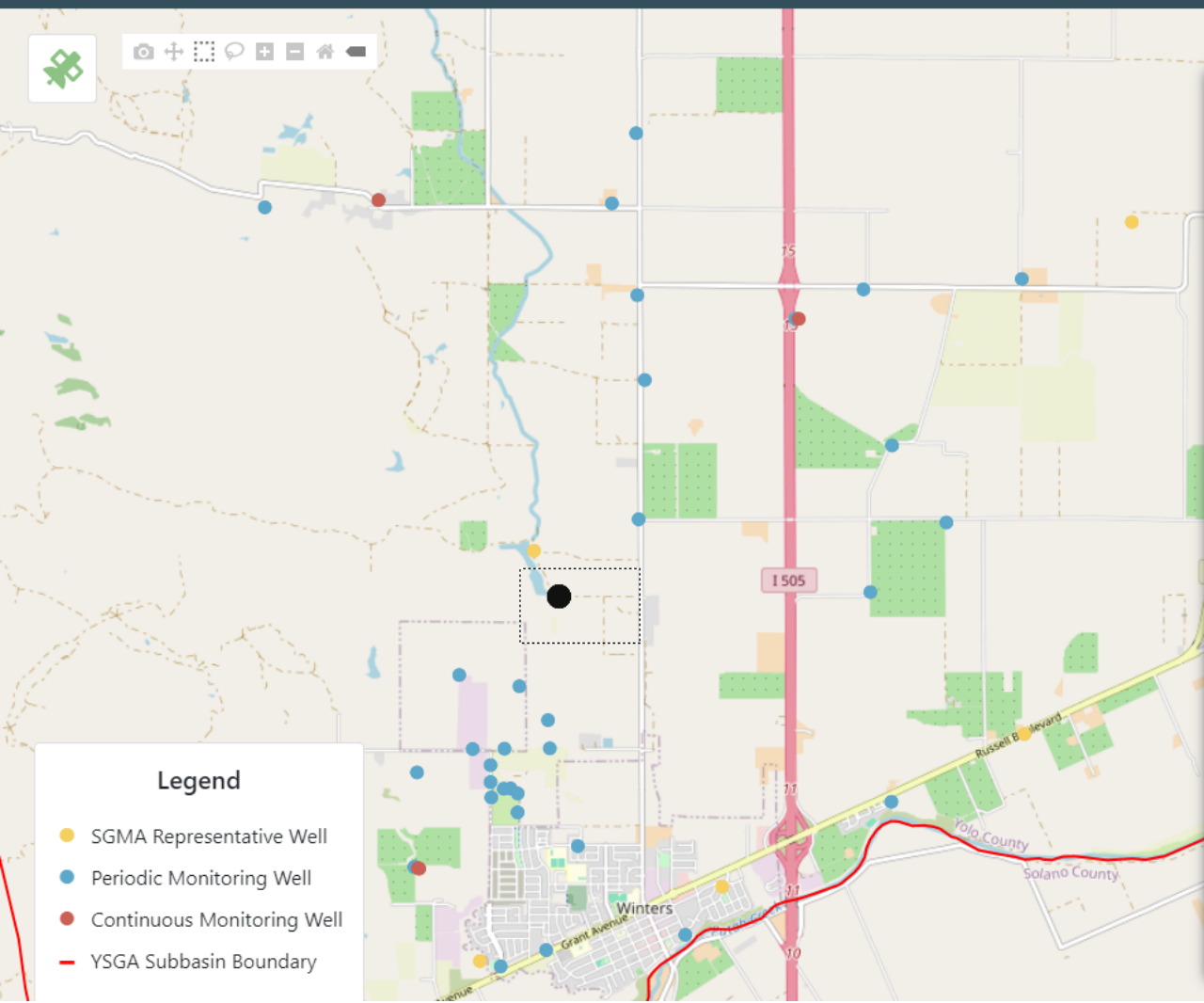


Legend

- SGMA Representative Well
- Periodic Monitoring Well
- Continuous Monitoring Well
- YSGA Subbasin Boundary



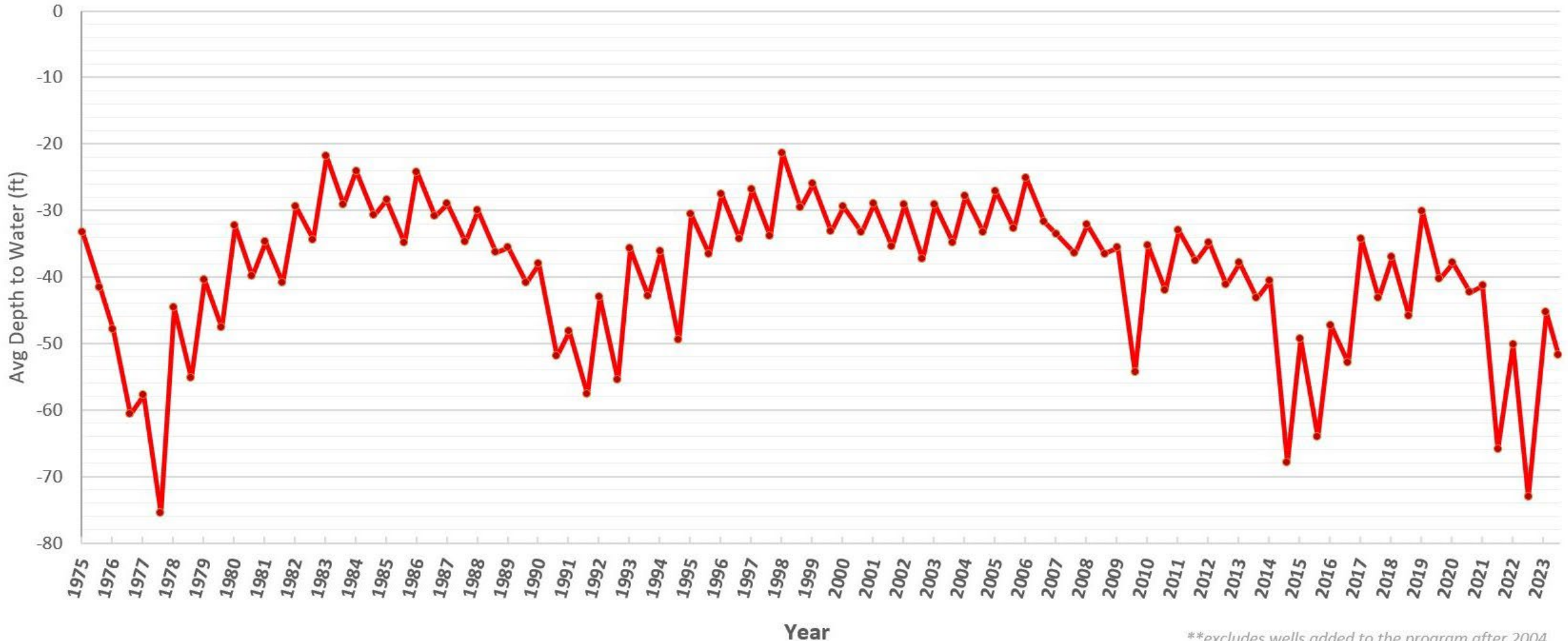




YCFC&WCD Average Hydrograph Fall 2023

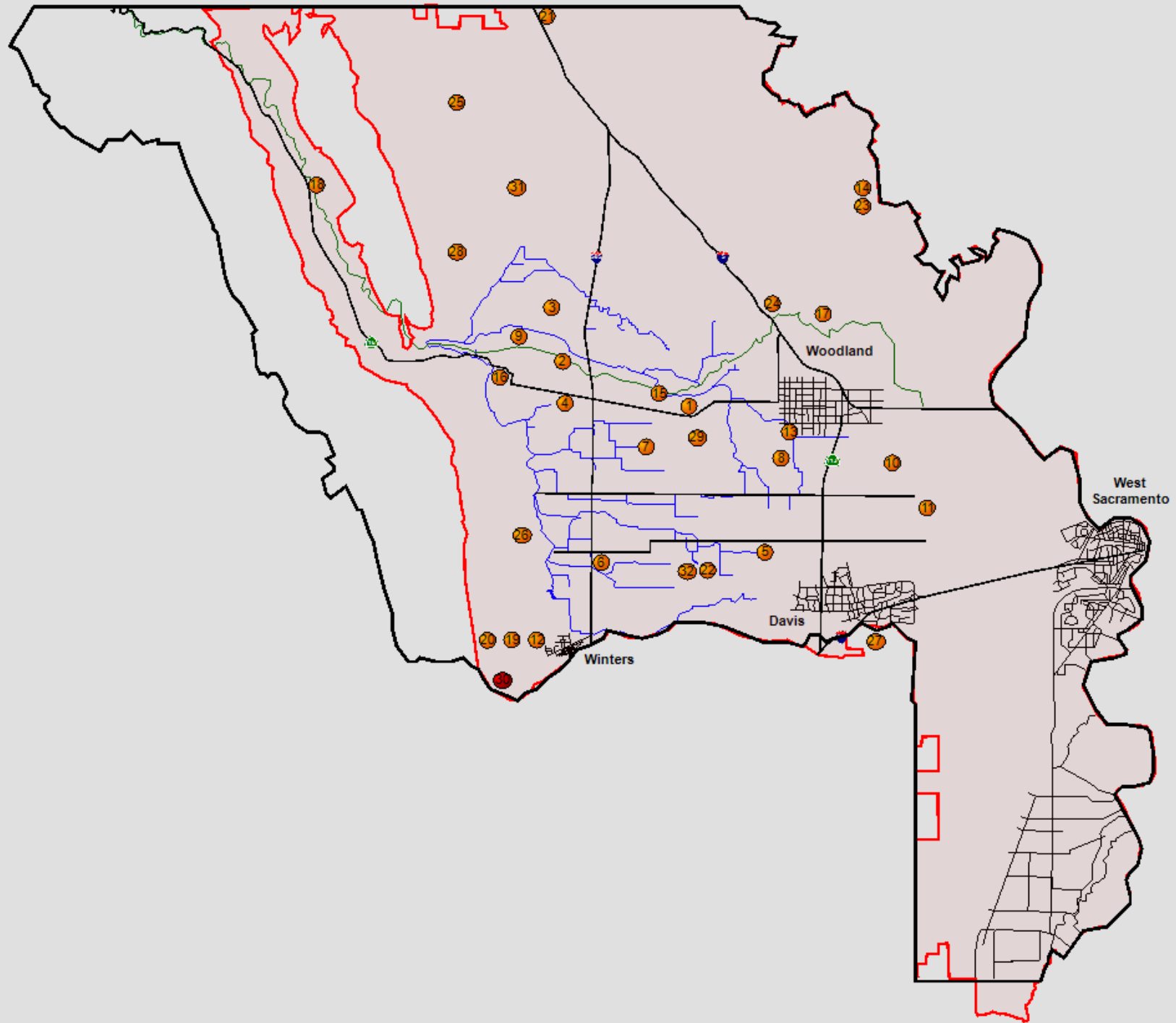
YCFCWCD Average Groundwater Depth by Season *(Fall 2023 is 135 wells)***

1977 Drawdown from Spring to Fall ~18 feet
2019 Drawdown from Spring to Fall ~10 feet
2022 Drawdown from Spring to Fall ~23 feet
2023 Drawdown from Spring to Fall ~7 feet



***excludes wells added to the program after 2004*

Well Monitoring
Continuous



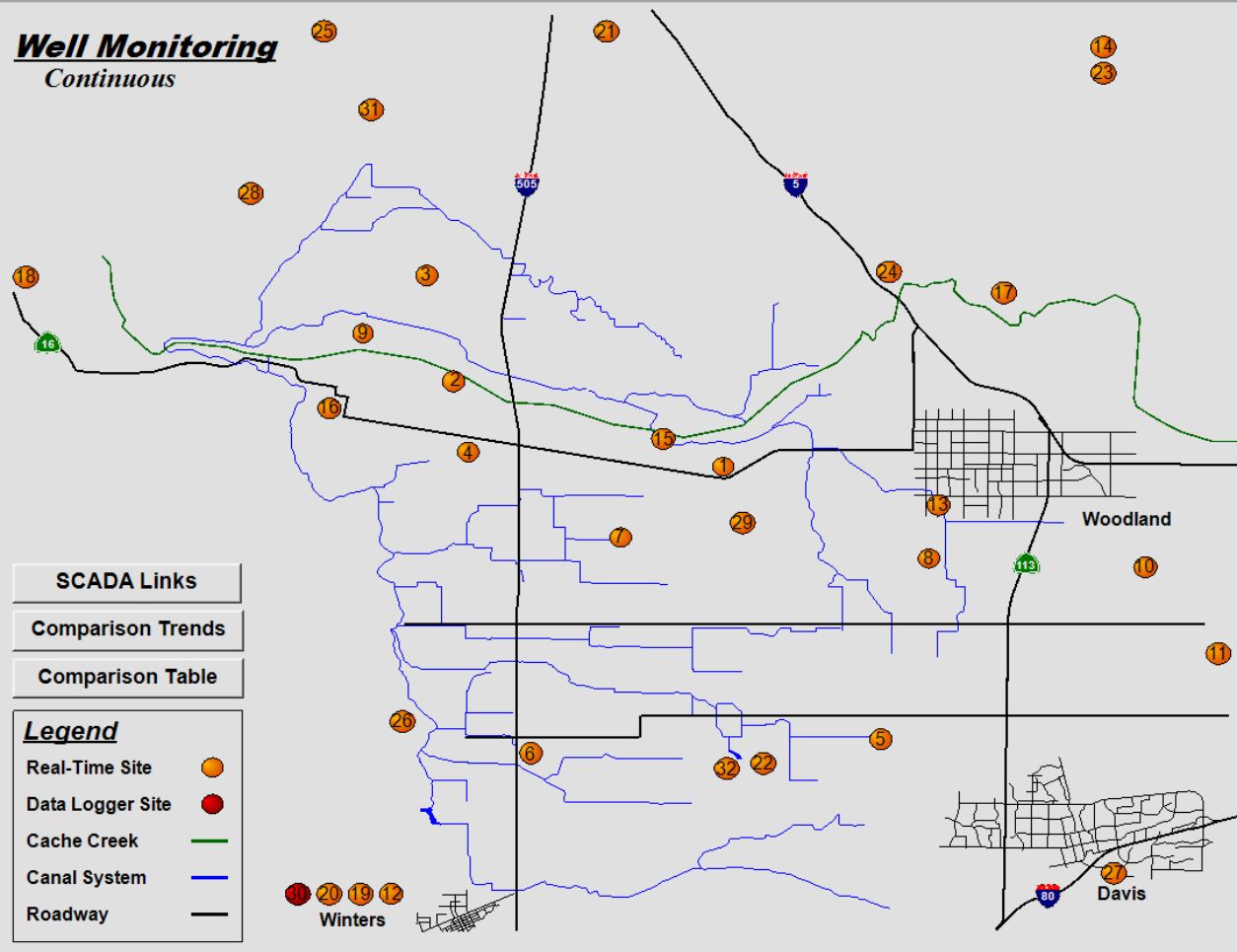
- SCADA Links
- Comparison Trends
- Comparison Table

Legend

Real-Time Site	●
Data Logger Site	●
YSGA	—
County	—

Well Monitoring

Continuous



SCADA Links

Comparison Trends

Comparison Table

Legend

- Real-Time Site ●
- Data Logger Site ●
- Cache Creek —
- Canal System —
- Roadway —

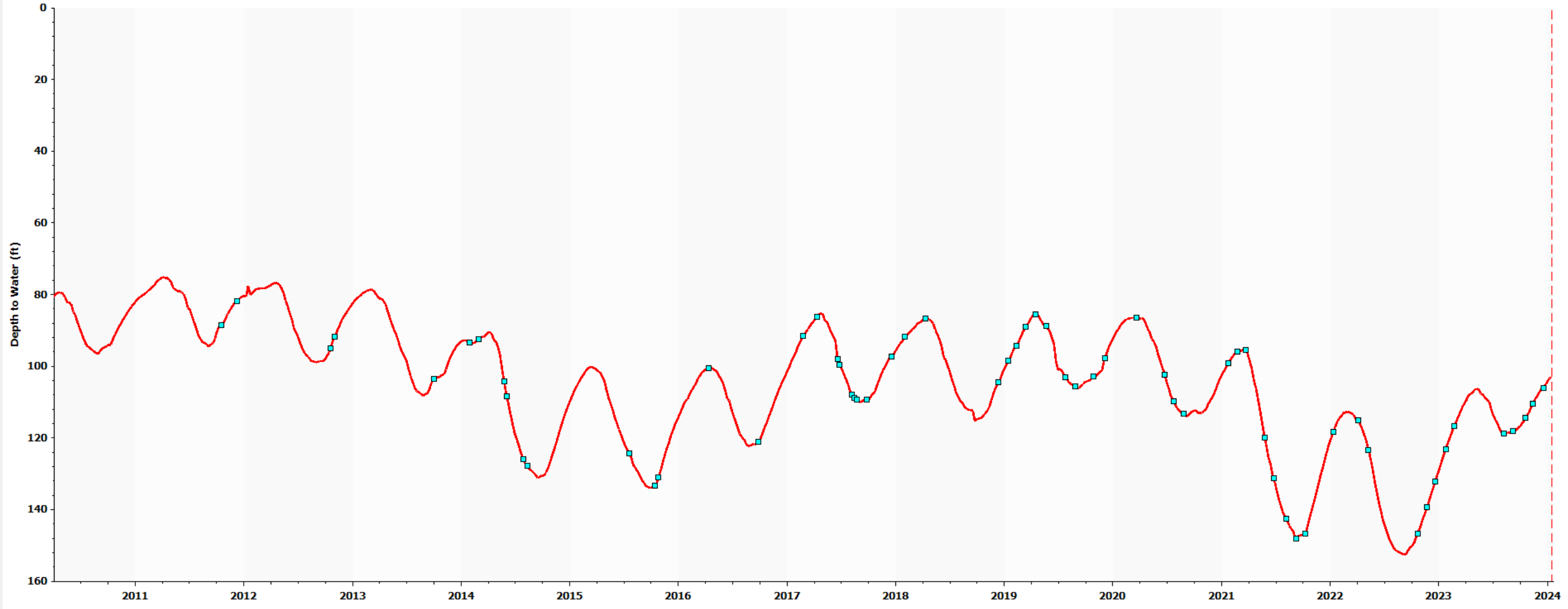
Well Monitoring

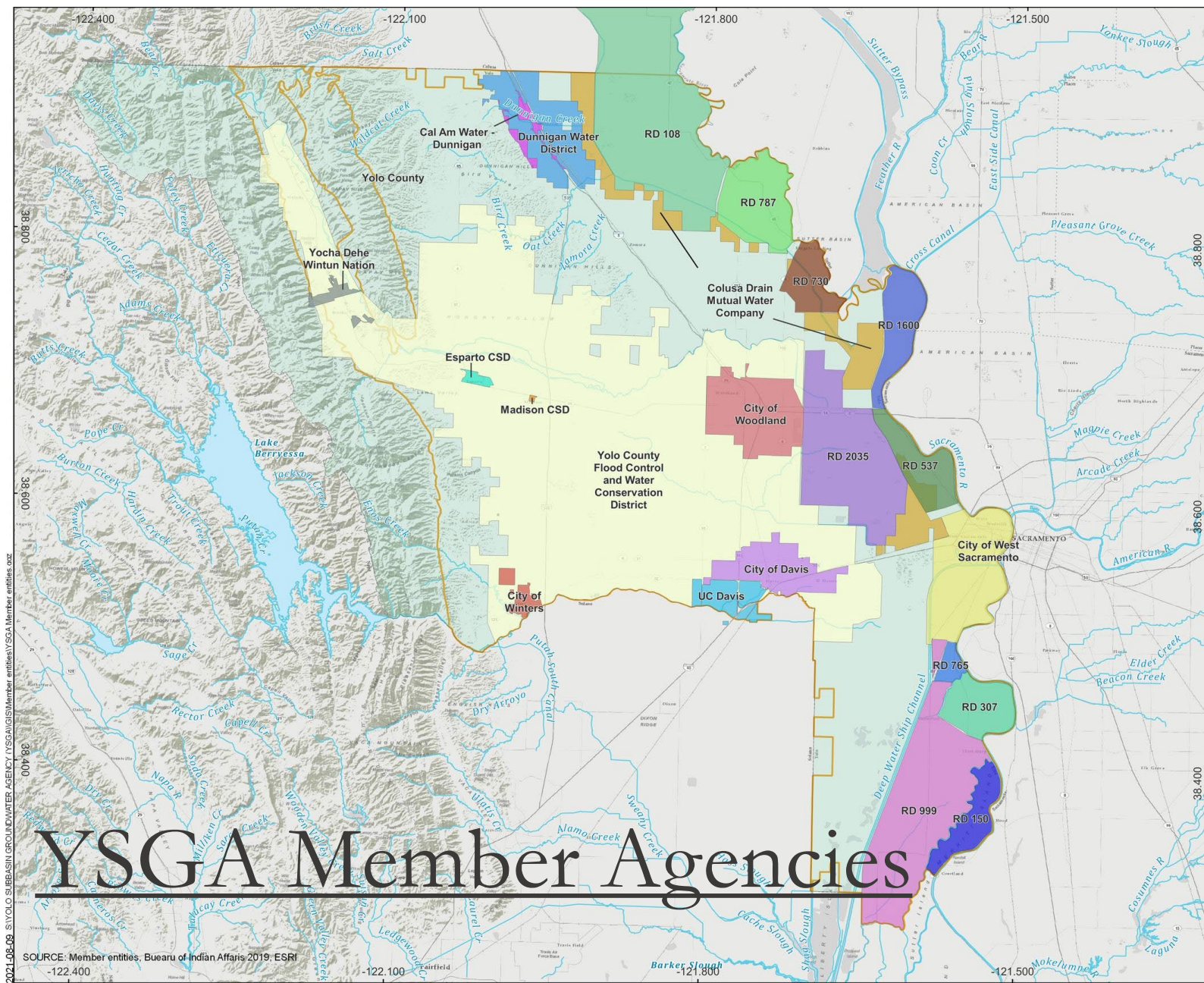
Depth to Water Historical Comparison

(Daily Average DTW in feet)

Well	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Δ 2023 - 2024	Δ 2015 - 2024
1.	81.8	80.8	82.1	93.1	109.3	113.7	100.8	95.1	100.2	92.1	101.9	120.3	129.9	104.8	25.1	4.5
2.	31.1	30.0	28.9	37.7	43.2	47.4	32.8	30.4	30.9	29.8	32.3	39.4	49.9	32.6	17.3	10.6
3.	44.1	39.1	40.0	51.0	65.8	65.3	50.7	39.7	42.5	39.7	42.9	58.5	73.8	48.4	25.3	17.4
4.	27.5	26.5	23.1	37.2	42.1	45.6	31.8	30.1	27.0	25.1	31.4	36.3	48.0	30.4	17.7	11.7
5.		20.2	20.9	28.8	33.3	39.8	30.2	27.3	29.4	21.9	29.5	36.1	35.6	35.4	.2	-2.1
6.		37.8	31.2	58.2	50.2	54.8	39.7	33.3	36.3	31.2	39.1	48.5	59.3	43.7	15.6	6.5
7.				35.4	35.4	37.9	23.0	23.3	21.2	19.2	27.2	33.6	38.6	25.3	13.3	10.0
8.				52.2	64.1	67.8	59.7	44.9	47.3	37.9	46.9	60.1	68.0	50.4	17.6	13.7
9.				52.0	65.0	67.0	49.2	40.6	41.9	40.6	44.3	55.3	75.6	44.1	31.4	20.9
10.					30.3	34.0	27.3	16.2	19.4	12.2	23.2	25.4	31.5	18.7	12.9	11.7
11.						16.5	12.3	10.4	11.8	9.6	14.7	12.8	15.2	12.6	2.5	
12.									119.5	110.3	121.0	131.9	142.6	132.2	10.3	
13.								56.3	57.9	48.8	58.5	69.6	75.9	60.1	15.8	
14.									11.4	10.7	13.0	11.9	7.9			
15s.									40.7	37.6	46.6	45.5	47.8	39.3	8.5	
15d.									122.0	110.9	130.7	158.0	174.3	135.8	38.5	
16.									40.7	33.0	37.0	41.7	52.9	38.3	14.5	
17.										20.0	26.0	31.3	37.2	24.6	12.7	
18.										32.9	38.5	38.5	37.9	32.3	5.6	
19.										169.6	178.5	190.8	202.1	189.9	12.2	
20.														239.6		
21.											127.8	136.0	141.7	130.2	11.5	
22.												59.4	69.0	54.7	14.4	
23.												28.4	30.3	30.2	.1	
24.												57.9	68.2	48.3	19.9	
25.													108.0	103.5	4.4	
26.													112.8	79.6	33.2	
27.													51.6	46.9	4.8	
28.													146.6			
29.													105.6	72.5	32.4	
30.													117.2			
31.													225.6	202.1	22.9	
32.														118.8		

1. HQ Well Depth to Water





MEMBER AGENCIES

- Member Agencies**
- Cal Am Water - Dunnigan
 - City of Davis
 - City of West Sacramento
 - City of Winters
 - City of Woodland
 - Colusa Drain Mutual Water Company
 - Dunnigan Water District
 - Esparto CSD
 - Madison CSD
 - Reclamation District (RD) 108
 - RD 150
 - RD 1600
 - RD 2035
 - RD 307
 - RD 537
 - RD 730
 - RD 765
 - RD 787
 - RD 999
 - UC Davis
 - YFC&WCD
 - RD 537
 - Yocha Dehe Wintun Nation
 - Yolo County
- Other Features**
- Yolo Subbasin
 - Water Bodies

Not Shown: Yolo County Farm Bureau, Environmental Representative



Yolo Subbasin Groundwater Agency
yologroundwater.org

Yolo County, California



AUGUST 2021

DRAFT







YSGA Member Agencies

SOURCE: Member entities, Bureau of Indian Affairs 2019; ESRI

S:\YOLO SUBBASIN GROUNDWATER AGENCY\YSGA\GIS\Member entities\YSGA Member entities.cox

OVERALL GOAL OF GROUNDWATER SUSTAINABILITY PLAN

For each basin to achieve “sustainable groundwater management” by avoiding the “six undesirable results”

-  Chronic lowering of groundwater levels
-  Reduction of groundwater storage
-  Seawater intrusion
-  Degraded water quality
-  Land subsidence
-  Depletions of interconnected surface water

YSGA Update

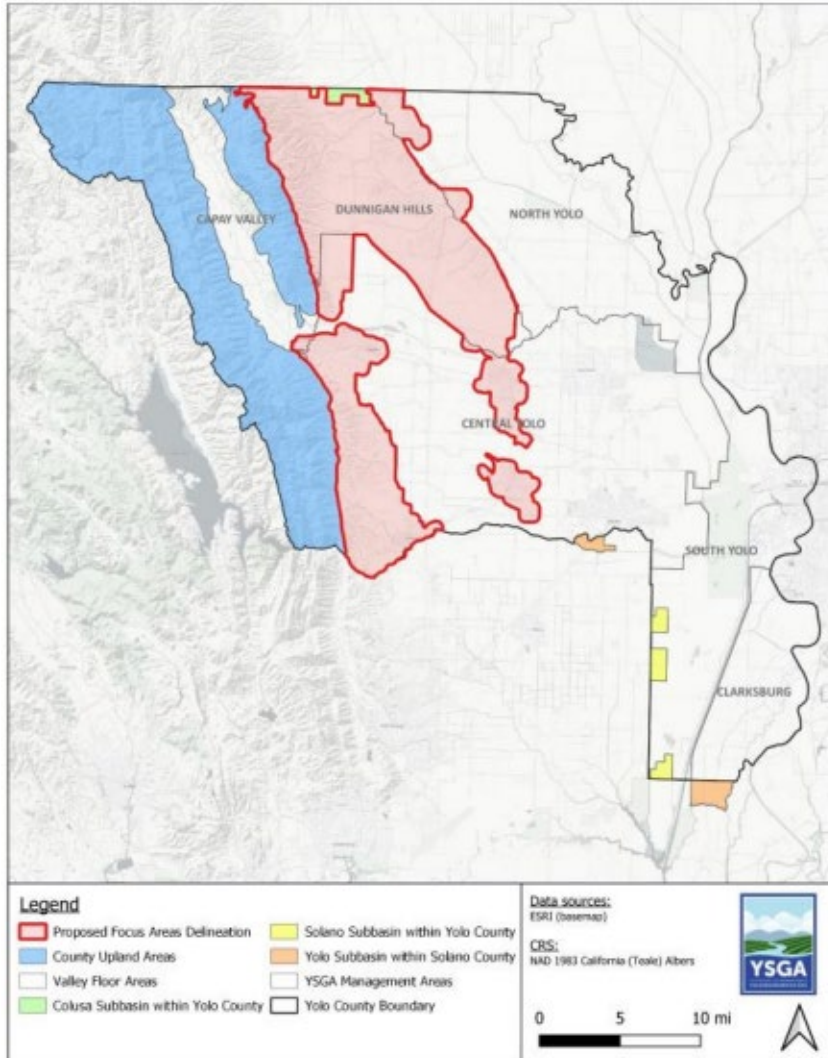


Figure 1. Proposed Delineated Focus Areas Relative to County Defined Valley Floor and Upland Areas.

- Focus Areas analysis prompted by
 - Requirements of Executive Order (EO) N-3-23
 - Concerns over declining groundwater levels in domestic wells
- Process and Purpose for developing Focus Areas Map
 - Identify areas using best available groundwater data where a hydrogeologist report may be needed to support YSGA's written verification
 - YSGA Board approved Map on November 20

YSGA Update

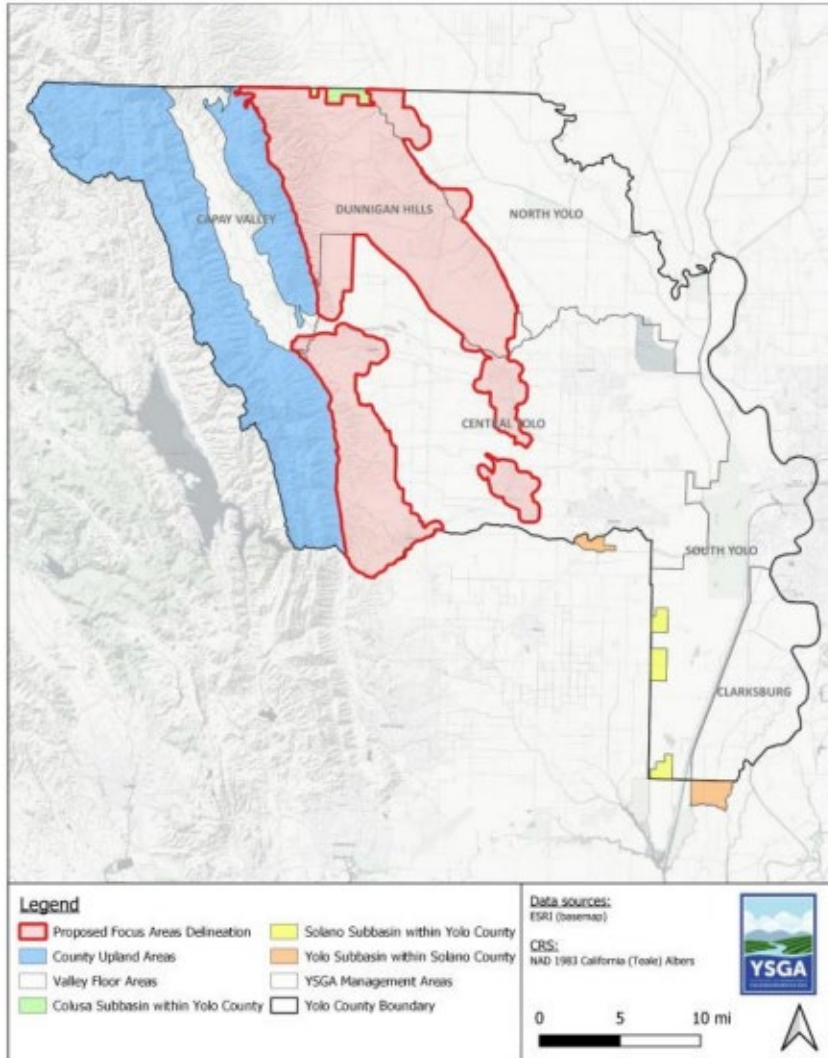
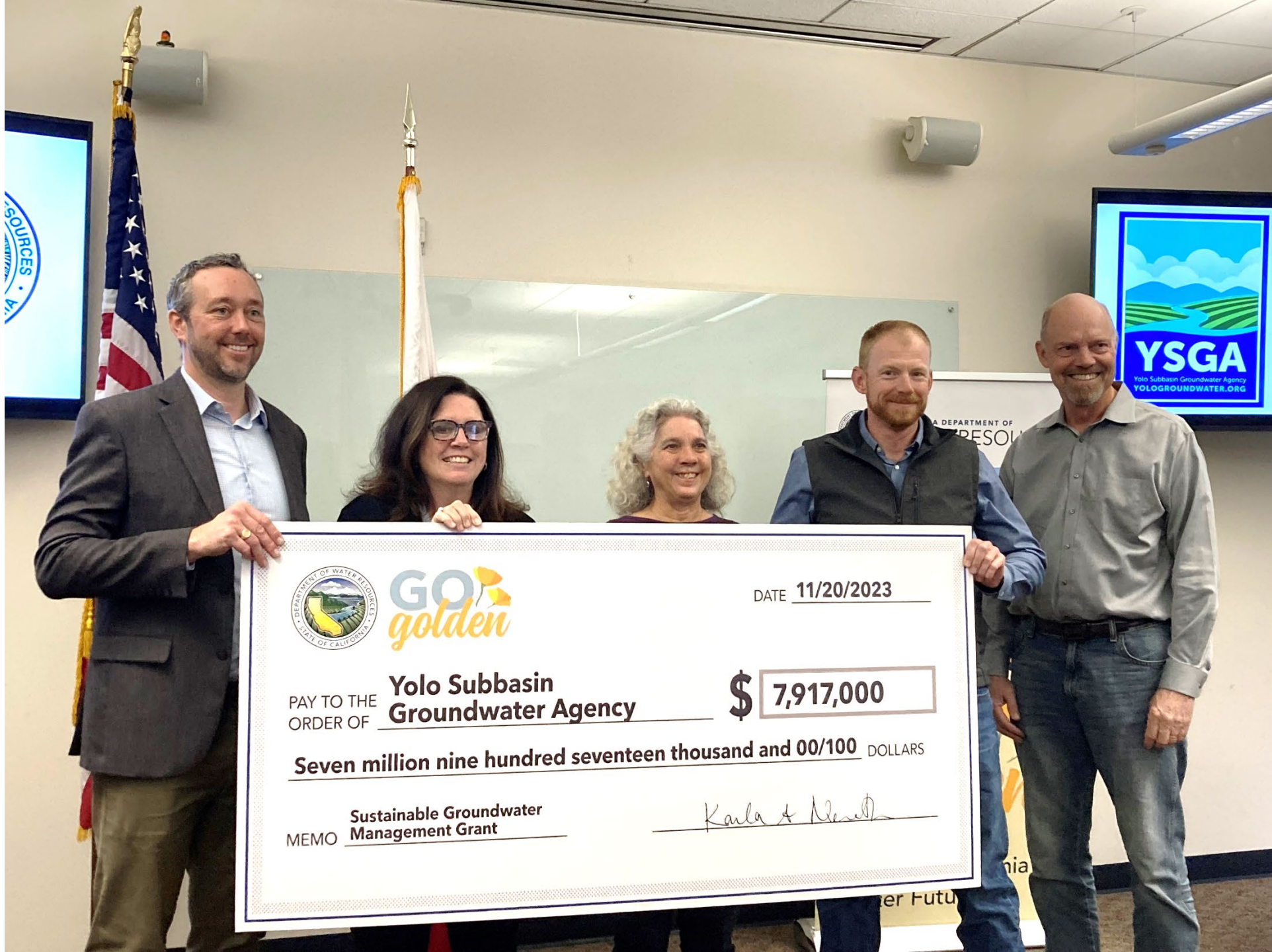


Figure 1. Proposed Delineated Focus Areas Relative to County Defined Valley Floor and Upland Areas.

- Well Permit Review Procedures reviewed at November 20 Board meeting
- Requested staff reconsider Hydrogeology Report requirement sequencing to potentially offer a two-stage process
 - Provide economies of scale (lower applicant expense)
 - Incorporate practical considerations (high-impact versus low-impact wells)
- YSGA Drought Contingency Planning Committee met December 20
- YSGA Board meeting scheduled for January 22
- Anticipate providing another public comment period end of January/mid-February for Focus Areas Map and Well Permit Review Procedures to be reviewed

Outline of Hydrogeologist Report & Summary Form

- Property Owner Information
- Location of Proposed Well
- Description of the Proposed Well
- Design of the Proposed Well
- Hydrogeologic Evaluation
- Impact Assessment
- Conclusions



GO
golden

DATE 11/20/2023

PAY TO THE
ORDER OF Yolo Subbasin
Groundwater Agency

\$ **7,917,000**

Seven million nine hundred seventeen thousand and 00/100 DOLLARS

MEMO Sustainable Groundwater
Management Grant

Karla A. Hernandez



SGMA Implementation Grant

- 1) YSGA GSP Implementation
 - i. GSP Update: Updated water budgets with recent land use and climate data and forecast scenarios
 - ii. GPS Subsidence Survey
 - iii. Fee Study
 - iv. Hungry Hollow Area White Paper

- 2) YCFC&WCD Winter Water Recharge Program
 - i. Install four automatic gates on Hungry Hollow Canal checks
 - ii. Long-Term Permit Application Process (includes environmental documentation)
 - iii. Farm-field recharge pilot

- 3) City of Winters Feasibility Studies
 - i. Alternative Surface Water Supply
 - ii. Recycled Water Supply

- 4) Yolo-Zamora Recharge Project
 - i. Pilot Trickle Flow
 - ii. Install 3 new culverts, 3 new check structures, 5 new automated gates, and flow measurement equipment in ESA and ACA
 - iii. Feasibility Analysis for Long-Term Recharge

- 5) Dunnigan Area Recharge Program
 - i. Install Stream Gauges
 - ii. Implement Trickle Flow and Farm Field Recharge (Winter Shorebird Habitat)
 - iii. Basis of Design and Recharge Operations Manual for Long-Term Implementation



Flowing over County Road 88



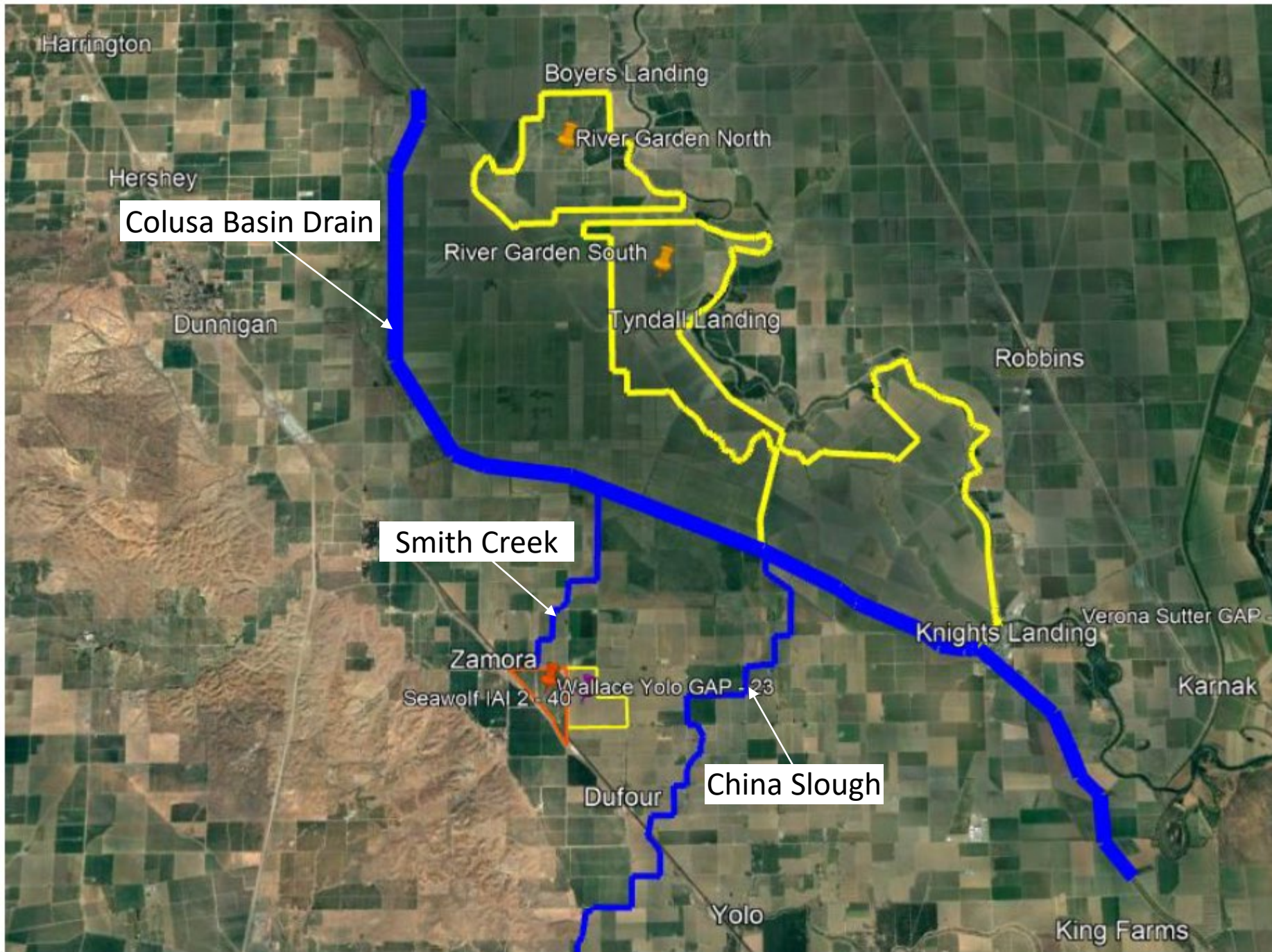
Dewatered Canal

Buckeye Creek Recharge

Dewatered Canal Length

Bird Creek

Conceptual Project



Yolo Subbasin GSP Receives Approval from DWR



On October 26, 2023, the California Department of Water Resources (DWR) released its determination for the Yolo Subbasin GSP, approving the plan and recommending corrective actions to be implemented prior to the 2027 GSP update. DWR's statement of findings regarding the approval of the Yolo Subbasin GSP under SGMA can be read [here](#).

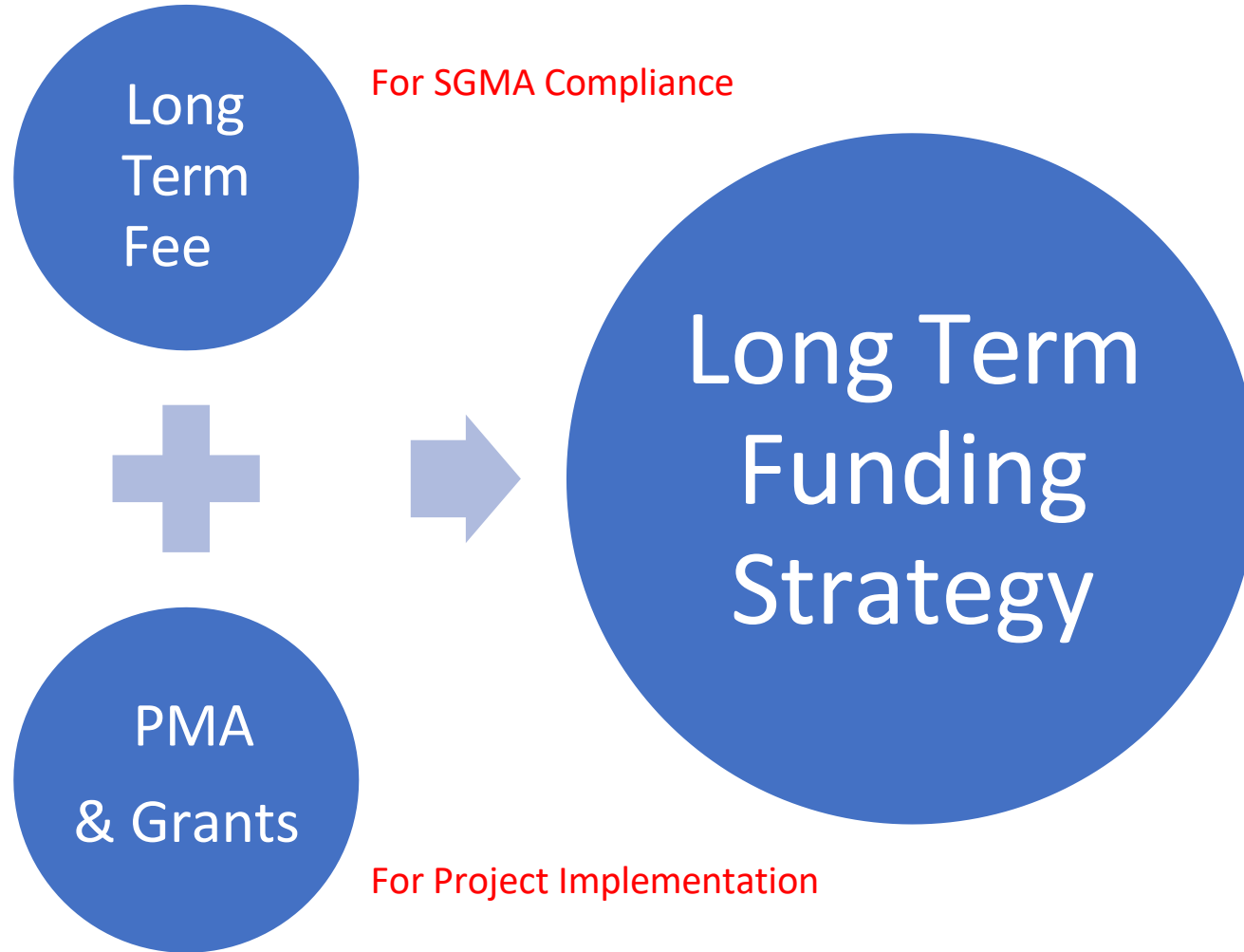
The YSGA is grateful to everyone who was involved in the development of the GSP, and looks forward to implementing the now-approved plan to achieve groundwater sustainability in the Yolo Subbasin.

DWR's Corrective Actions for 2027 GSP

To maintain substantial compliance status

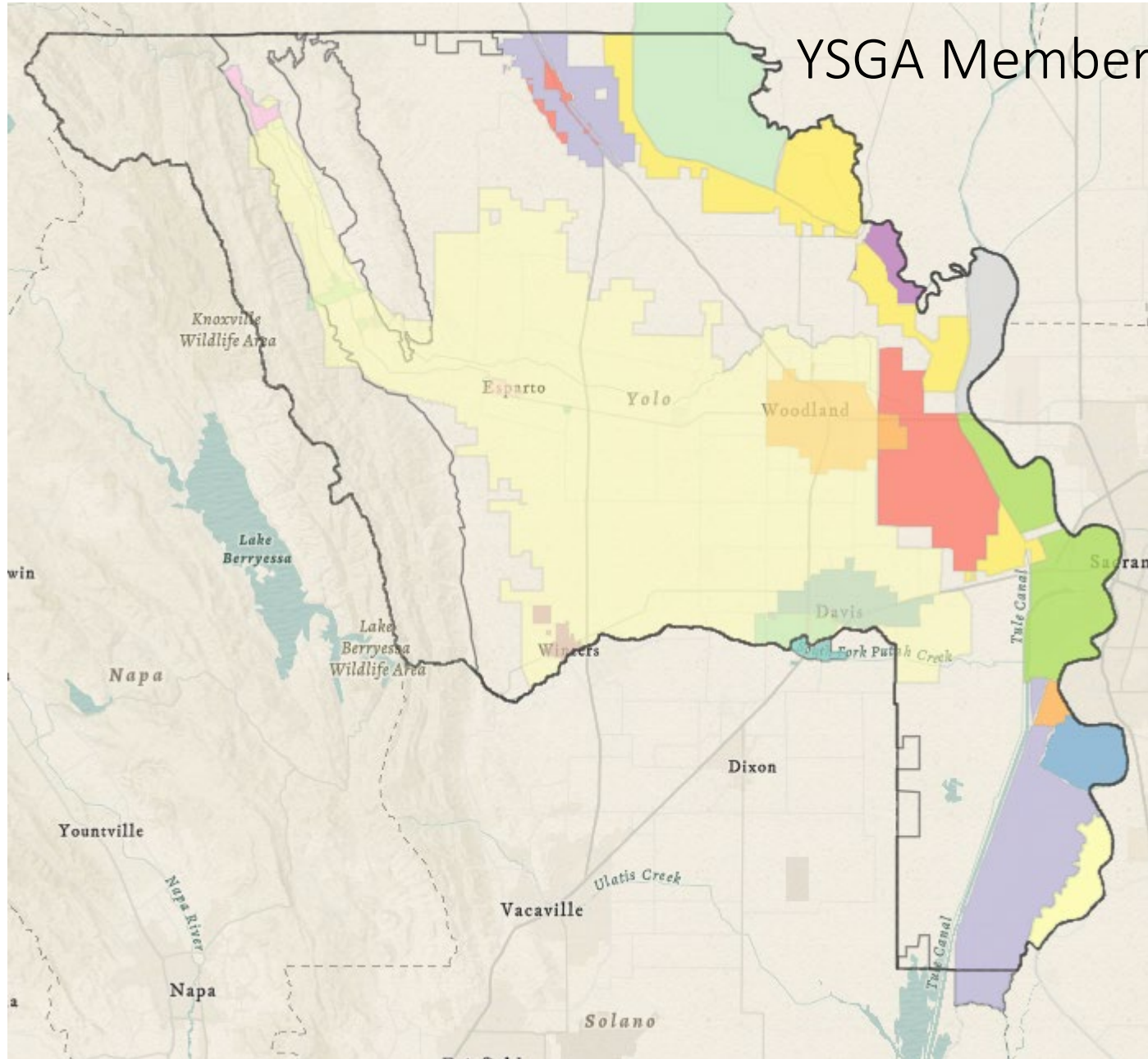
1. Revise the sustainable management criteria for
 - Chronic lowering of groundwater levels
 - Degraded water quality
 - Land subsidence
 - Interconnected surface water
2. Revise the monitoring network
3. Address miscellaneous comments

YSGA – Long Term Funding Strategy



- Legal Counsel support on summary of decisions
- Requesting member agency Board discussions

YSGA Member Agencies and Affiliated Parties



No direct fees levied by YSGA

Members/Affiliated Parties are responsible annual contributions of \$466,874

Approximately 171k acres of “undistricted” area in the Yolo Subbasin.

Thank You

Contact Information:

Kristin Sicke

ksicke@ycfcwcd.org

(530) 662-0265



YOLO COUNTY
FLOOD CONTROL &
WATER CONSERVATION
DISTRICT