



YSGA BOARD OF DIRECTORS MEETING

September 18, 2023

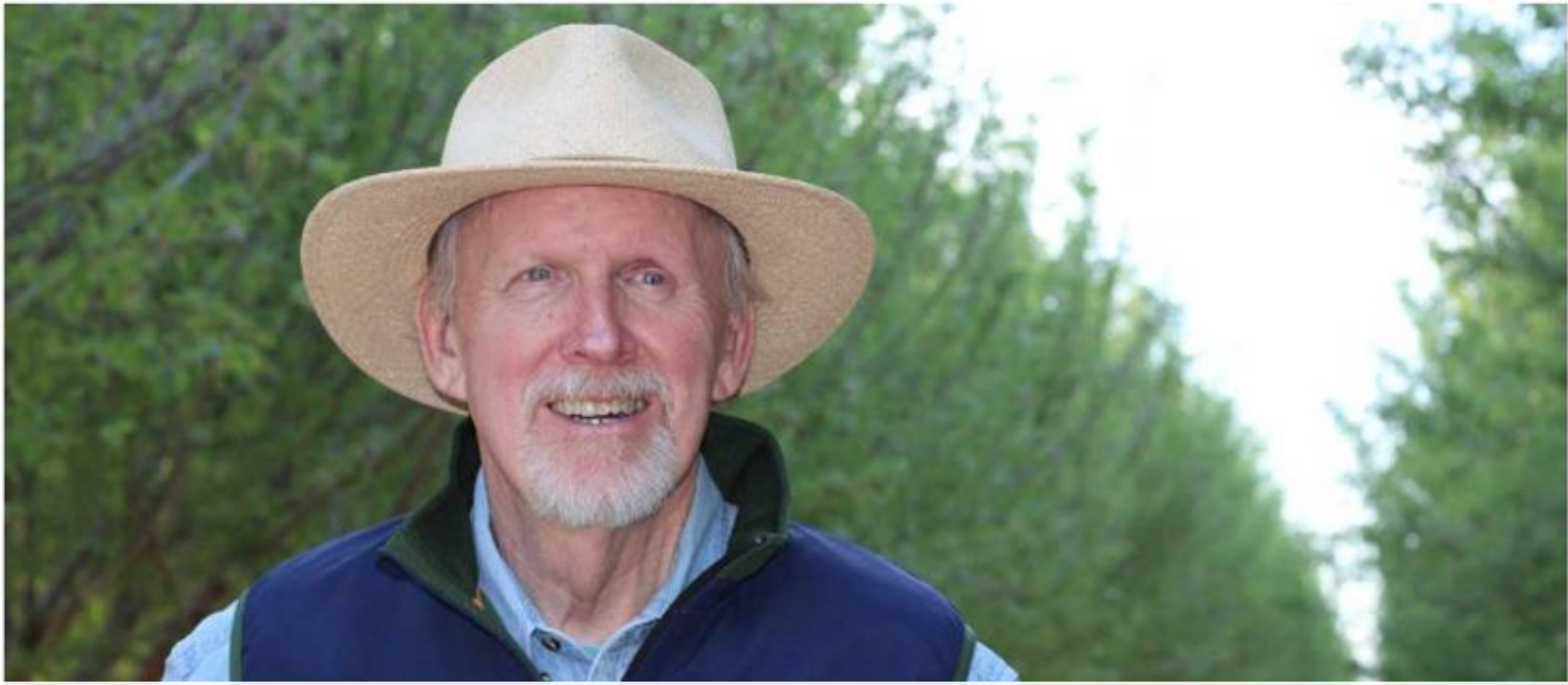
Agenda

- 1. Call to Order and Determination of Quorum**

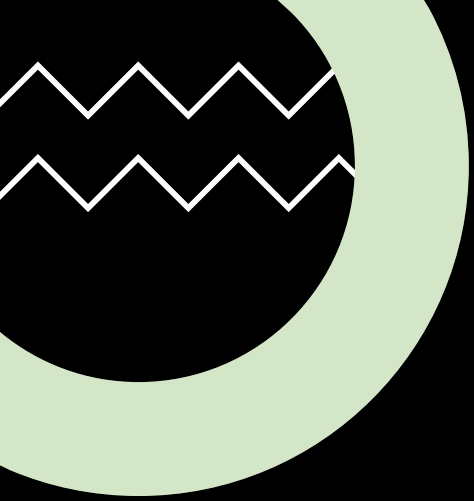
2. Adding Items to the Posted Agenda
3. Public Forum
4. CONSIDERATION - Consent Items
5. Report of the Chair and Executive Officer
6. Update from LSCE on Fee Study Development
7. CONSIDERATION: Adopt Resolution 23-01
8. CONSIDERATION - WaterSMART Applied Science Grant Application
9. Member's Reports and Future Agenda Items
10. Next Meeting - October Special Board Meeting
11. Adjournment

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Remembering Legendary Gary Sandy



Appreciating Camille Kirk



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Consideration: Consent Items

- a) Approve June 19, 2023 Board of Directors Meeting Minutes
- b) Receive Fiscal Year End 22/23 Financial Statements
- c) Receive Fiscal Year 23/24 Financial Statements: 7/1 - 9/14/23
- d) Receive minutes of Executive Committee: 5/30 and 7/24/23
- e) Approve Payment of Bills in Approved Fiscal Year 2022/23 Budget

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Components	Grant Amount
Component 1: Grant Administration	\$613,875
Component 2: Yolo Subbasin GSP Implementation	\$1,721,000
Component 3: Yolo-Zamora Groundwater Recharge Pilot Project	\$1,221,050
Component 4: Dunnigan Area Recharge Program	\$1,180,950
Component 5: City of Winters Feasibility Studies	\$580,000
Component 7: YCFC&WCD Winter Water Recharge Program	\$2,600,000
Total:	\$7,916,875

DWR ANNOUNCED FINAL SGMA
IMPLEMENTATION AWARDS

- ▶ Current Conditions
- ▶ Groundwater Levels
- ▶ Groundwater Storage
- ▶ Water Quality
- ▼ Land Subsidence

Land Subsidence Layers

- DWR Extensometers
- USGS Extensometers
- GPS Stations
- Estimated Vertical Displacement SJV DWR 1949 to 2005 (feet)

TRE Altamira InSAR Dataset

- Vertical Displacement Point Data

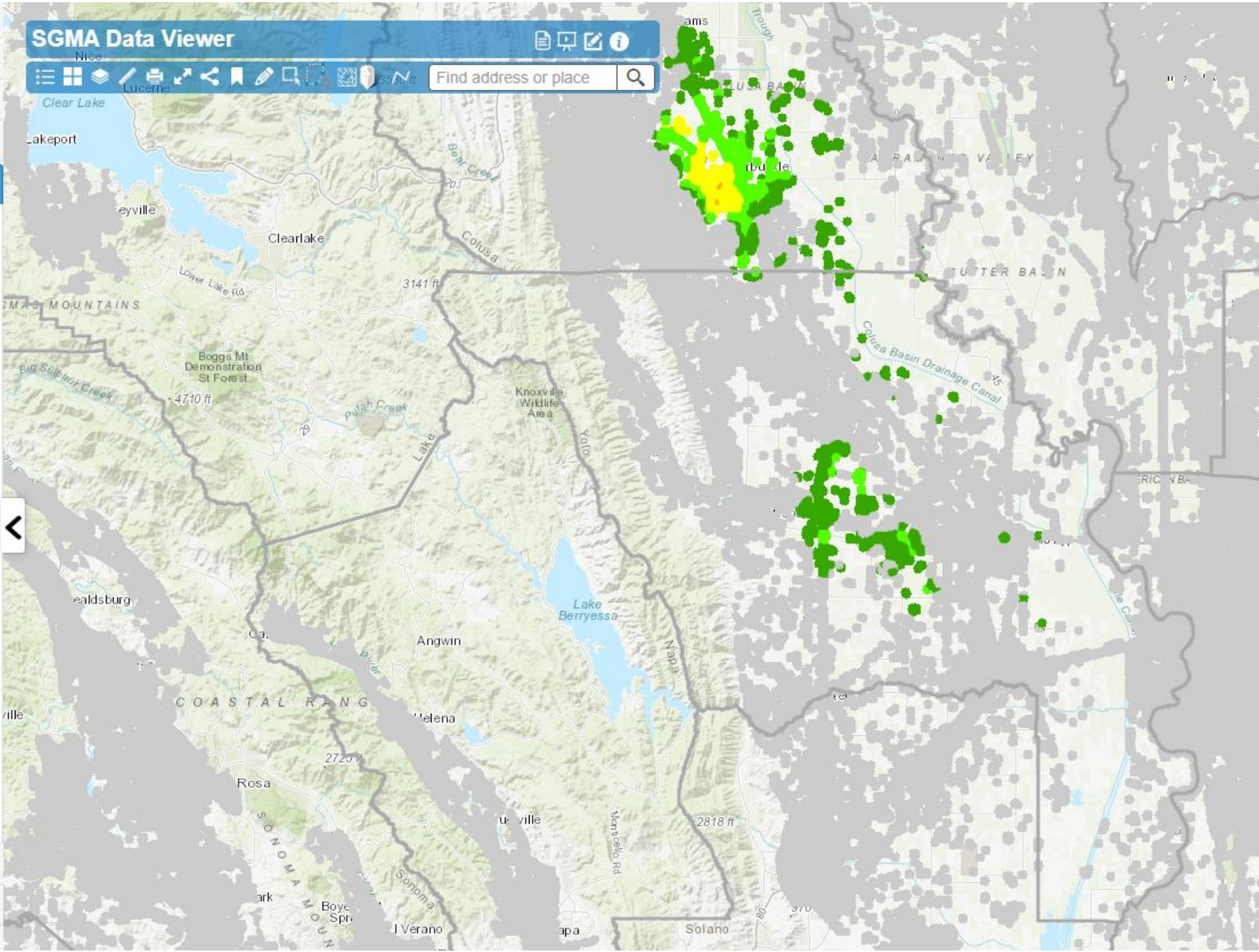
Annual Raster

07/01/2022 x ▾ 07/01/2023 x ▾

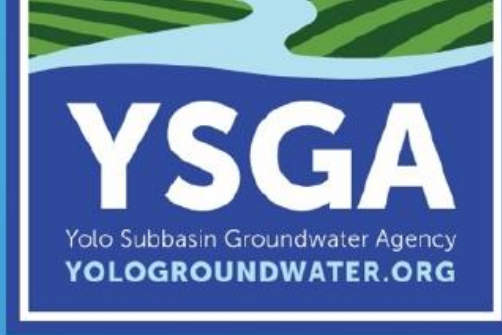
Vertical Displacement Raster Data

- <-1 (feet)
- 1 to -0.8 (feet)
- 0.8 to -0.6 (feet)
- 0.6 to -0.4 (feet)
- 0.4 to -0.2 (feet)
- 0.2 to -0.1 (feet)
- 0.1 to 0.1 (feet)
- >0.1 (feet)

- ▶ Interconnected Surface Water
- ▶ Water Budget
- ▶ Hydrogeologic Conceptual Model



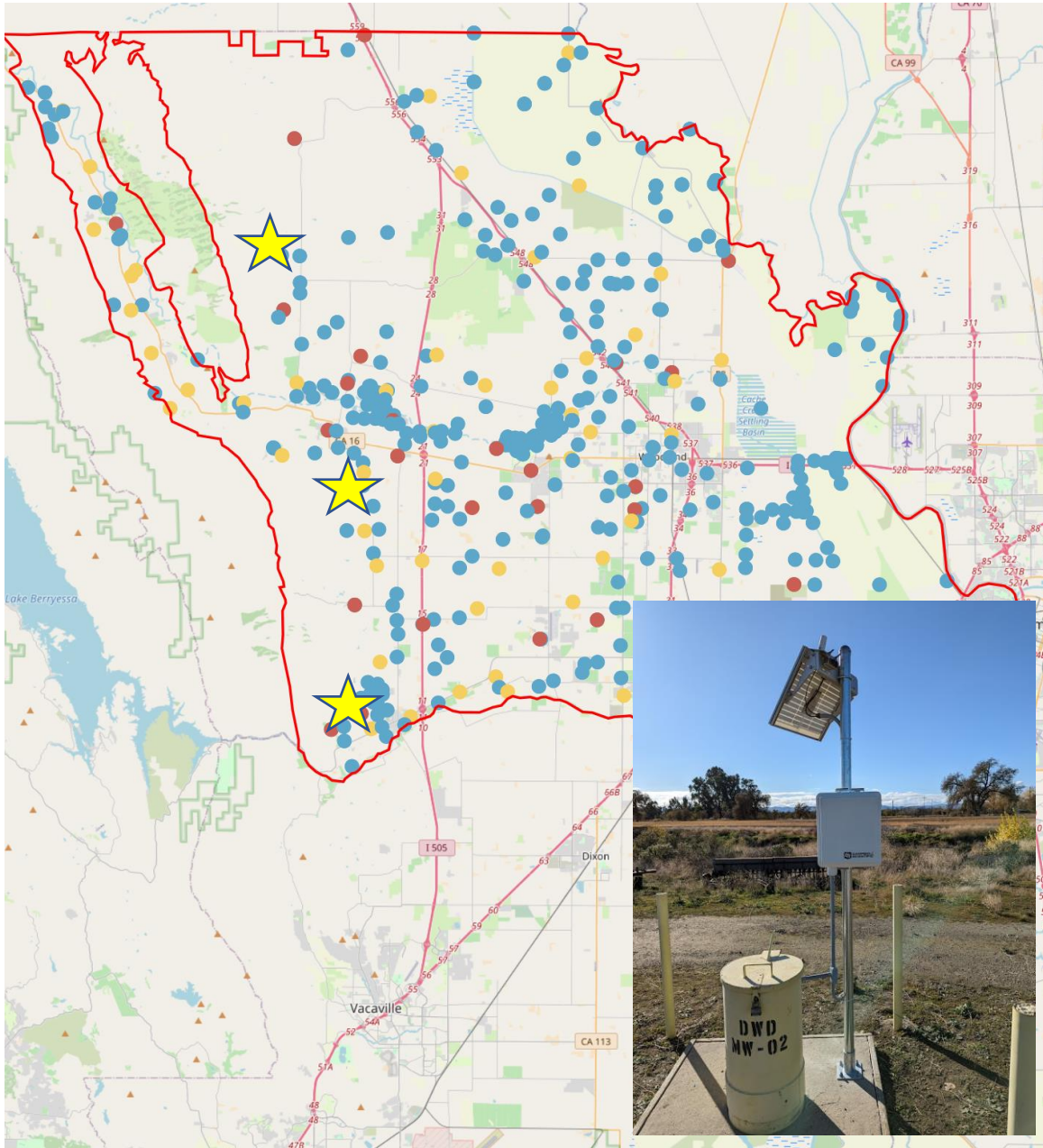
DWR released July 2023 InSAR Land Subsidence Data



Yolo Subbasin Groundwater Agency

GRANT STRATEGY

2023-2026

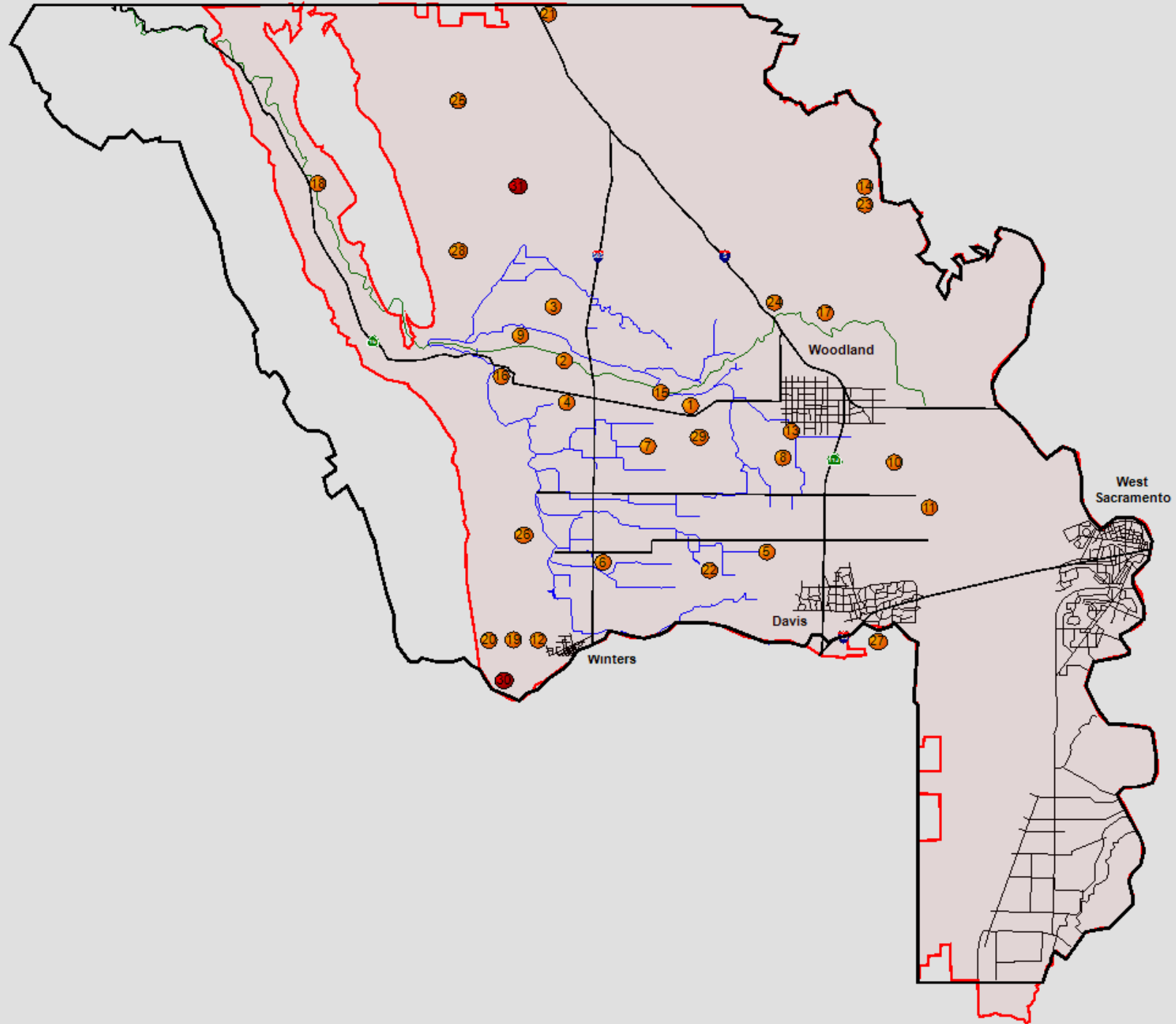


DWR's Technical Support Services (TSS)

- 3 dedicated multi-completion monitoring wells funded by DWR's TSS program
- Real-time monitoring to be installed
- Focused in areas of special concern and data gap areas
- Well depths approx. 1,000 feet
- All wells are drilled and equipment is being ordered

Well Monitoring

Continuous



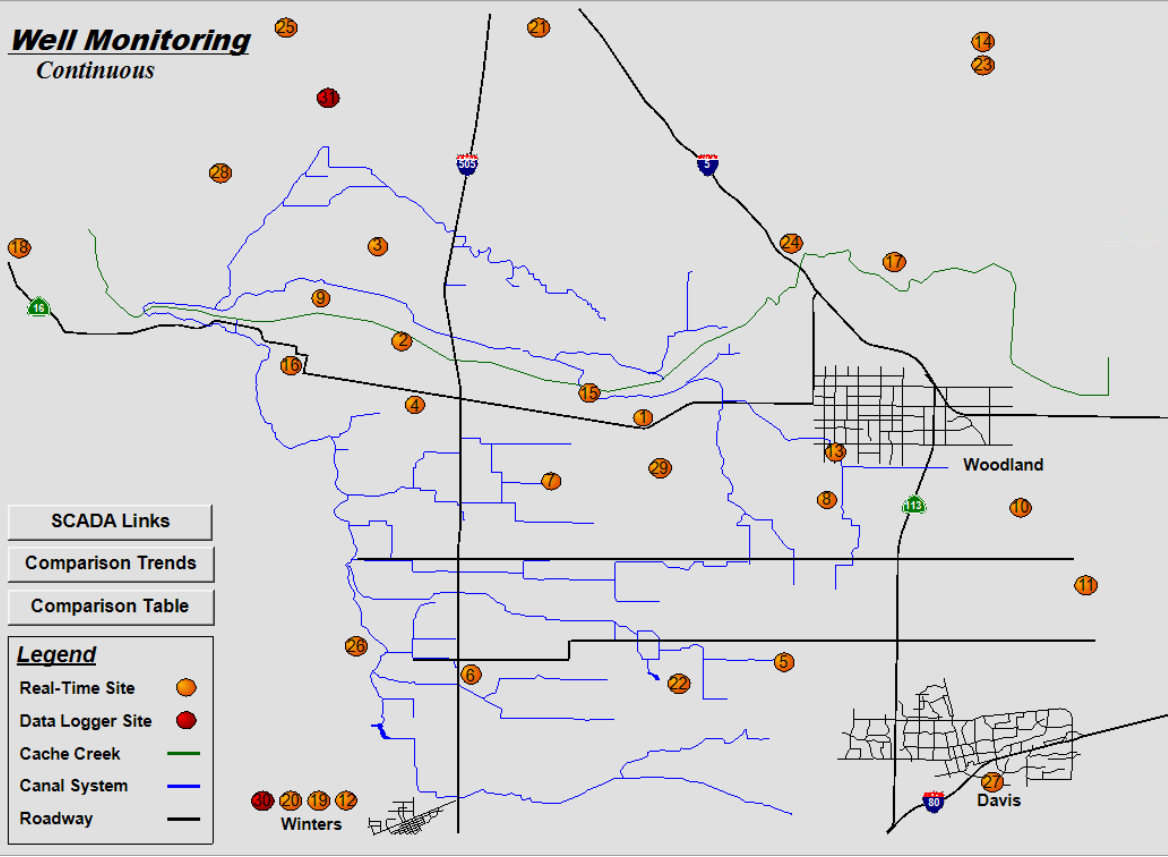
- SCADA Links
- Comparison Trends
- Comparison Table

Legend

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

Well Monitoring

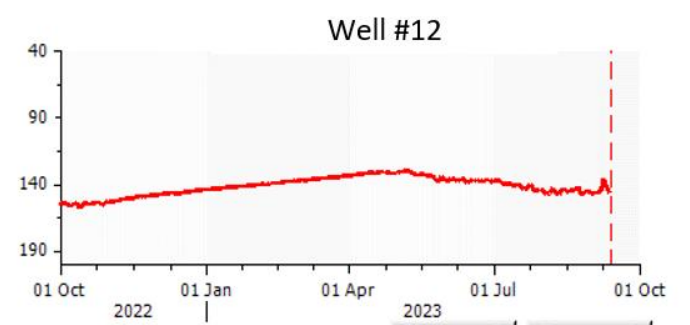
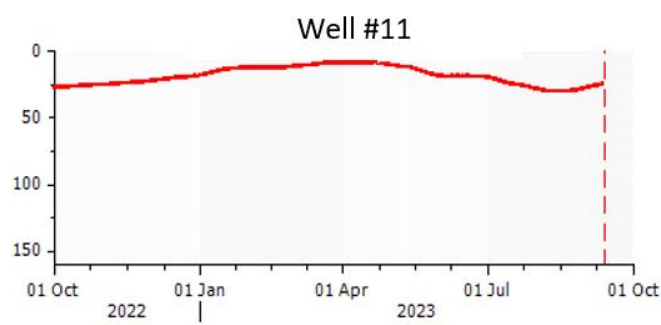
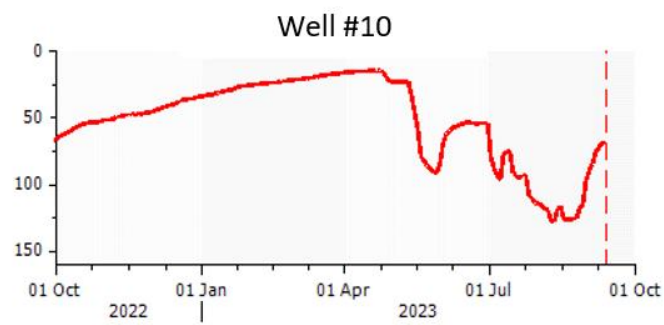
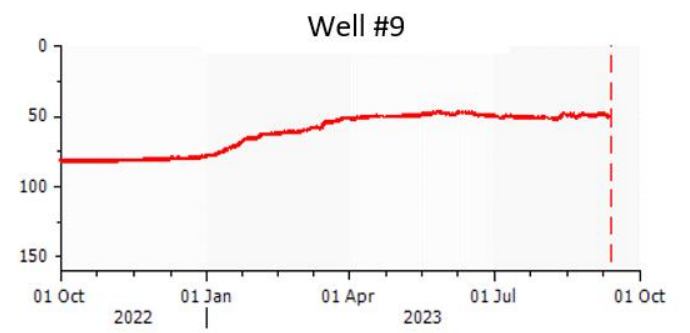
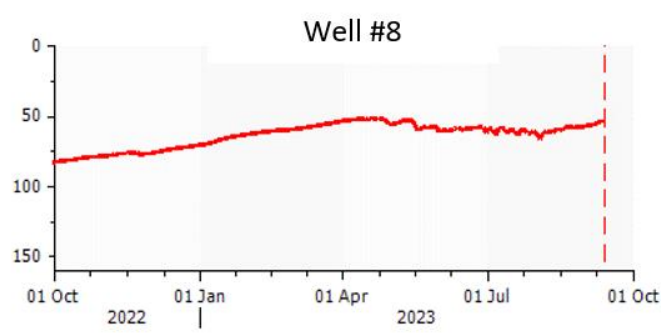
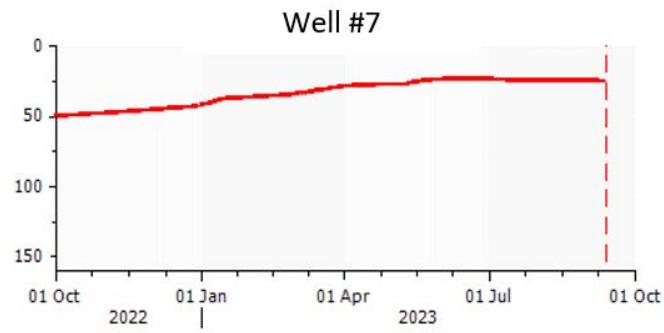
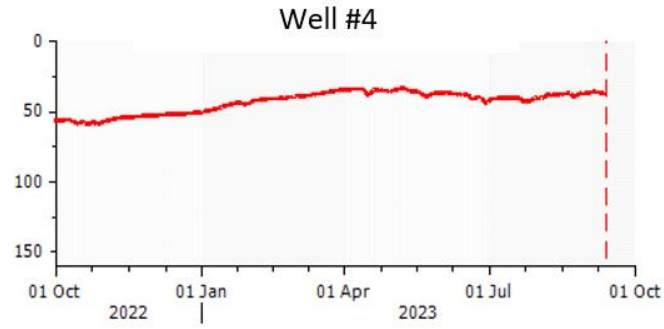
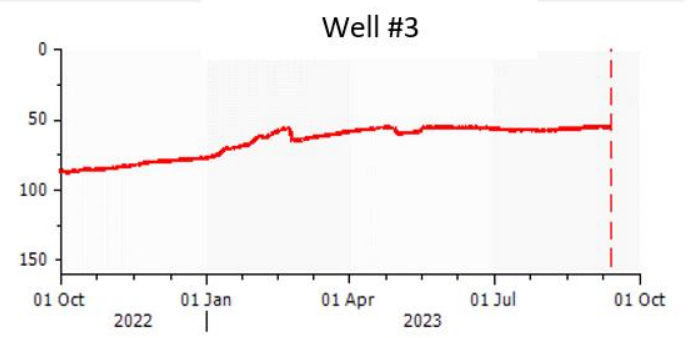
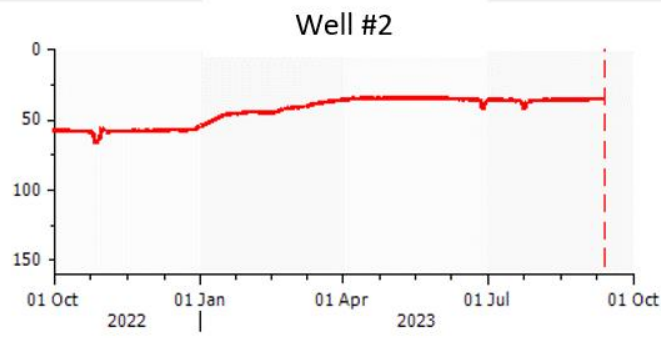
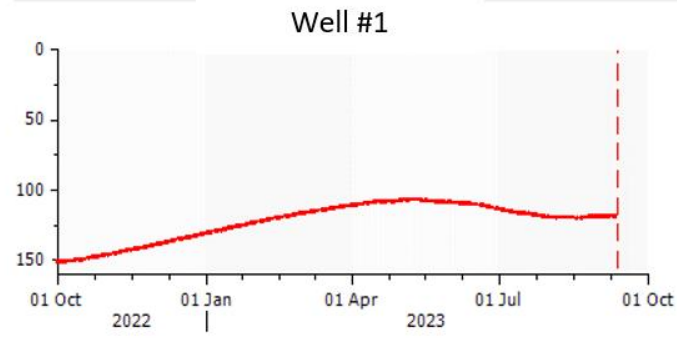
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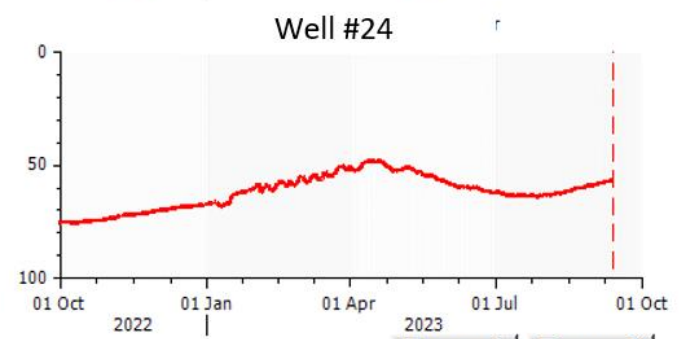
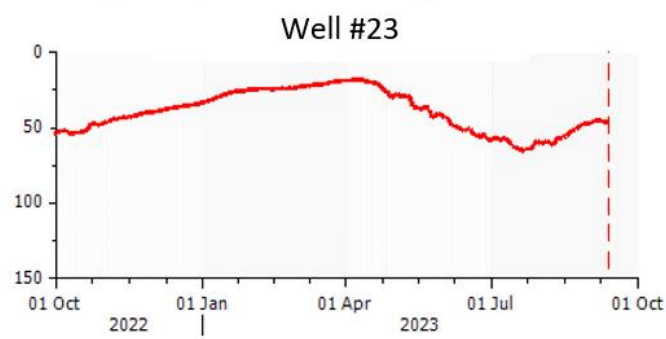
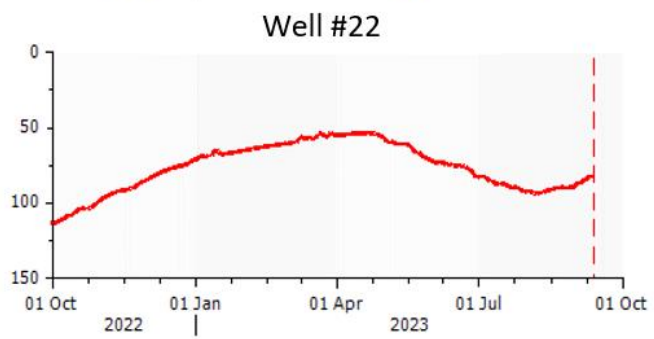
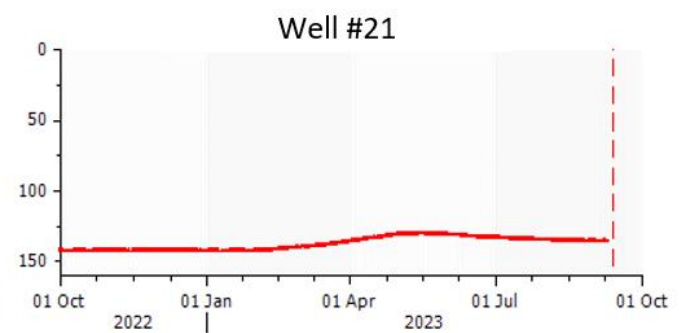
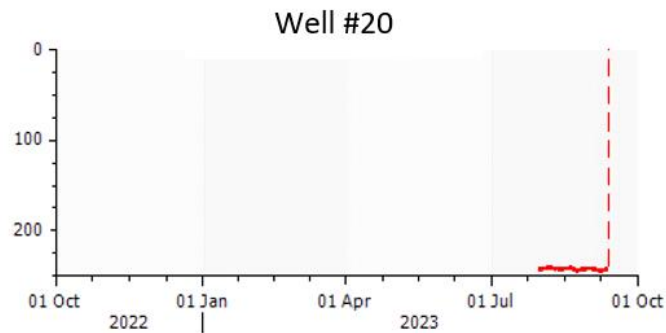
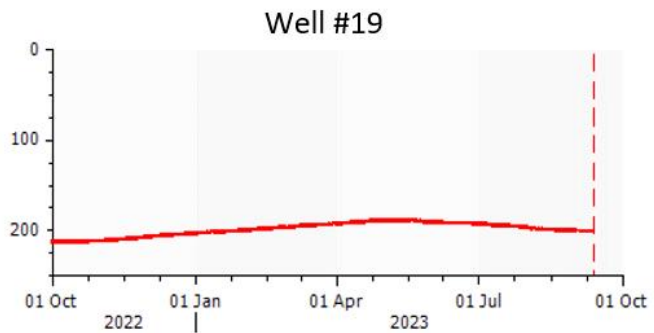
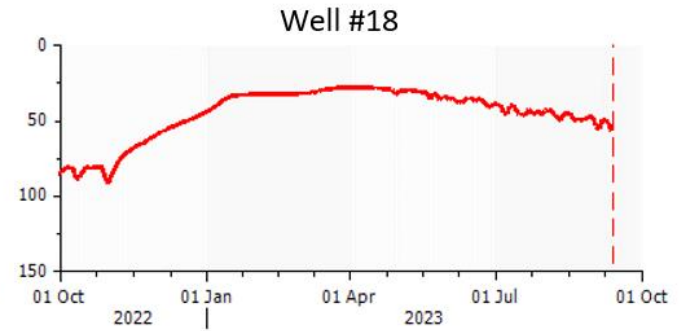
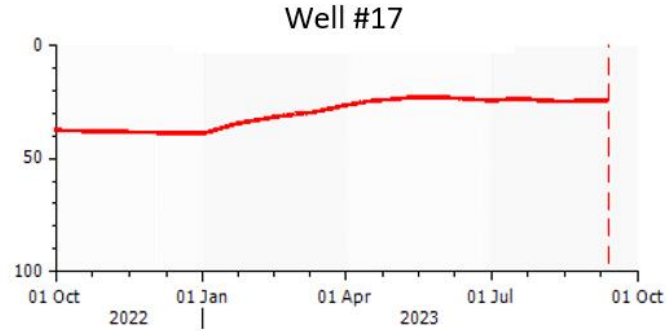
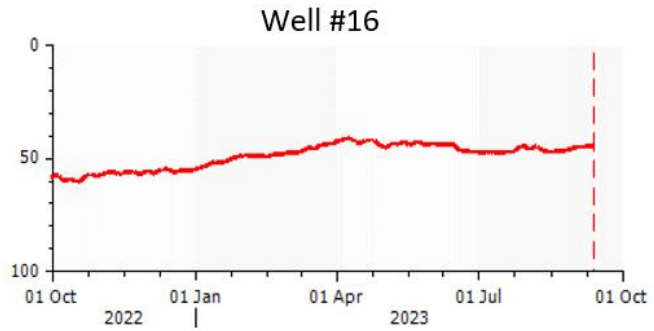
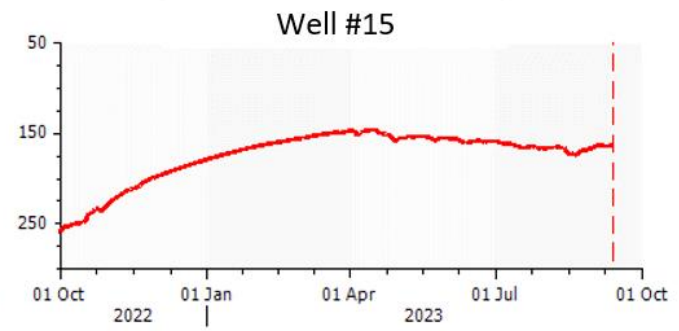
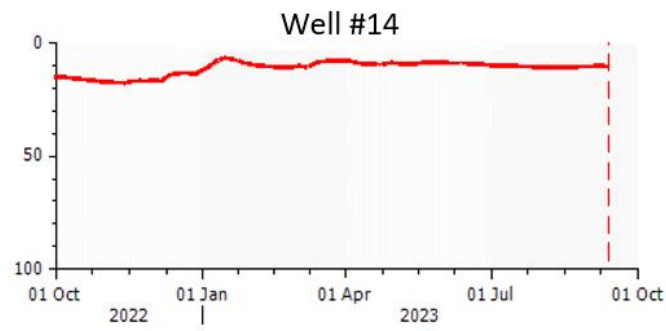


Well Monitoring

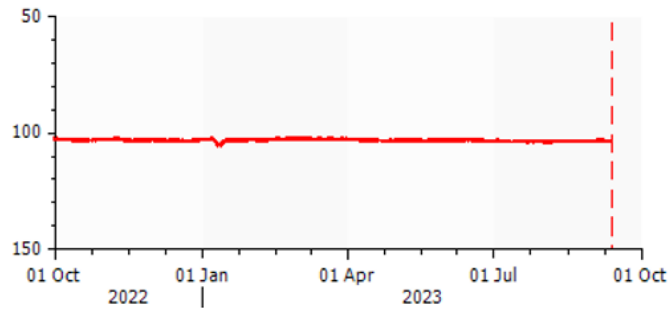
Depth to Water Historical Comparison
(Daily Average DTW in feet)

Well	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ 2022 - 2023	Δ 2015 - 2023
1.	96.1	94.3	98.9	109.3	132.8	134.0	122.2	110.3	114.8	106.3	120.7	147.9	152.8	118.8	34.0	15.3
2.	51.3	44.9	36.9	54.1	55.6	51.2	41.1	30.8	33.6	30.5	32.0	45.1	58.0	35.2	22.9	16.0
3.	48.1	39.6	45.9	52.4	82.7	78.4	62.3	40.2	44.6	38.8	43.6	74.5	88.2	54.6	33.6	23.8
4.		32.9	35.5	38.6	59.5	51.6	49.9	30.5	31.6	30.0	33.1	59.3	65.1	37.3	27.8	14.3
5.		17.3	20.0	23.2	35.0	36.3	35.9	23.7	25.3	18.6	21.7	37.0	43.2	26.6	16.6	9.7
6.			35.3	41.1	75.4	67.2	45.4	33.4	39.7	33.9	35.7	62.9	75.8	53.4	22.5	13.9
7.				43.4	43.4	50.5	26.8	20.6	22.2	19.1	24.8	47.7	50.8	24.9	25.9	25.6
8.				60.2	81.9	80.5	78.9	56.6	61.2	50.0	57.6	82.2	88.2	61.0	27.2	19.5
9.					78.3	73.5	59.5	41.3	44.9	41.4	44.1	67.5	81.4	50.8	30.6	22.7
10.					80.6	78.3	73.9	43.0	64.9	47.6	68.4	82.0	88.0	61.1	26.9	17.3
11.					29.6	25.7	25.8	16.2	22.2	16.6	23.5	28.6	29.9	22.7	7.3	3.0
12.										123.7	130.9	150.8	157.4	209.7	-52.3	
13.									90.0	79.5	89.2	119.7	119.0	88.9	30.0	
14.									11.9	11.1	11.2	13.1	16.4	10.6	5.8	
15s.									41.9	36.7	46.3	50.6	49.2	38.6	10.6	
15d.									160.3	139.7	159.3	248.0	269.1	161.5	107.6	
16.									41.9	37.7	40.3	49.7	61.5	44.3	17.2	
17.										21.0	24.7	34.0	37.3	24.5	12.7	
18.										78.1	84.2	123.0	119.4	56.0	63.3	
19.										179.0	186.4	202.0	212.1	200.7	11.4	
20.														242.6		
21.											128.2	138.6	142.0	135.0	7.1	
22.												108.7	122.5	79.5	43.0	
23.												74.8	63.7	43.5	20.2	
24.													79.4	55.9	23.6	
25.													102.4	103.5		
26.													124.5	91.0		
27.													80.1	69.8		
28.														160.2		
29.														95.0		

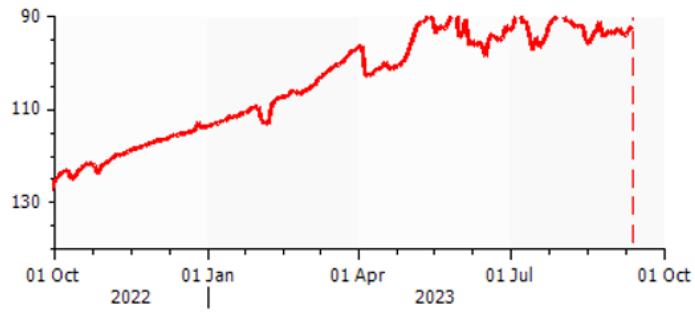




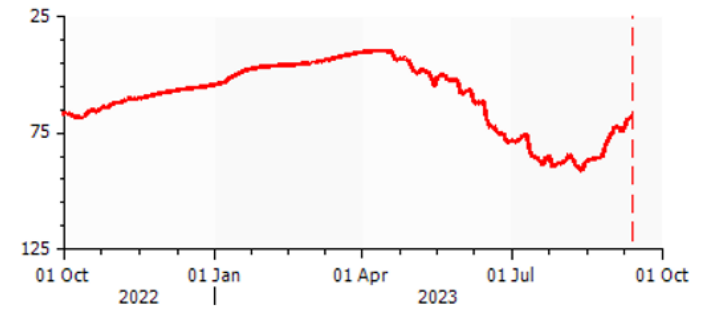
Well #25



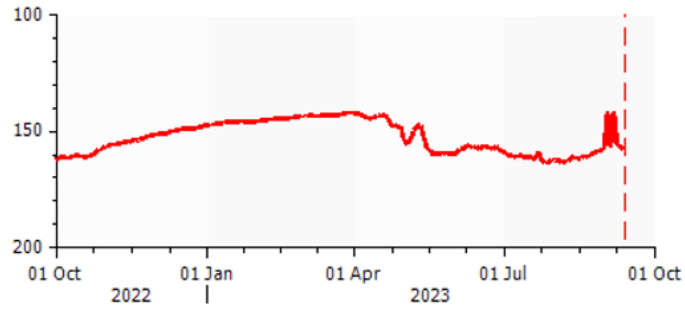
Well #26



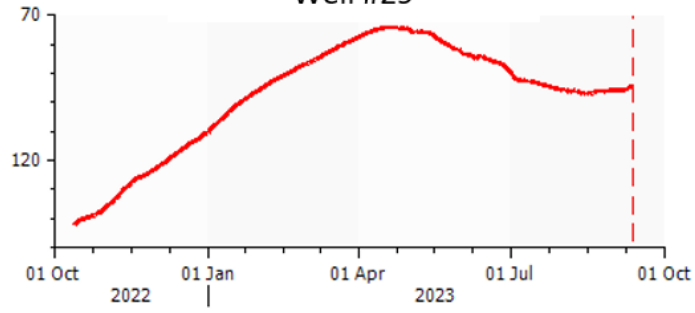
Well #27



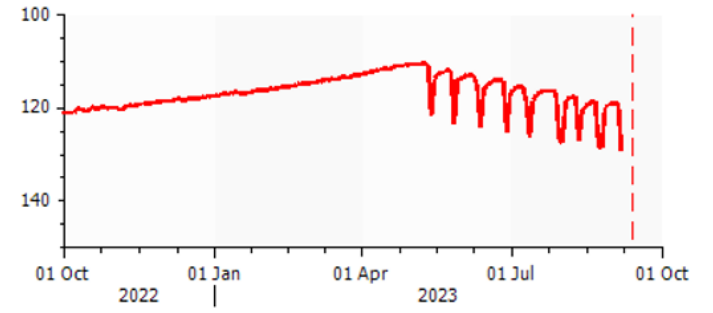
Well #28



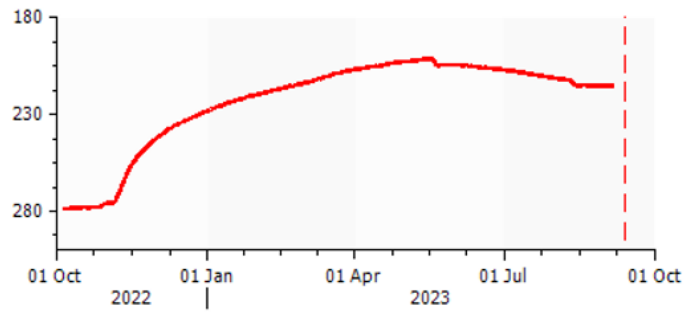
Well #29



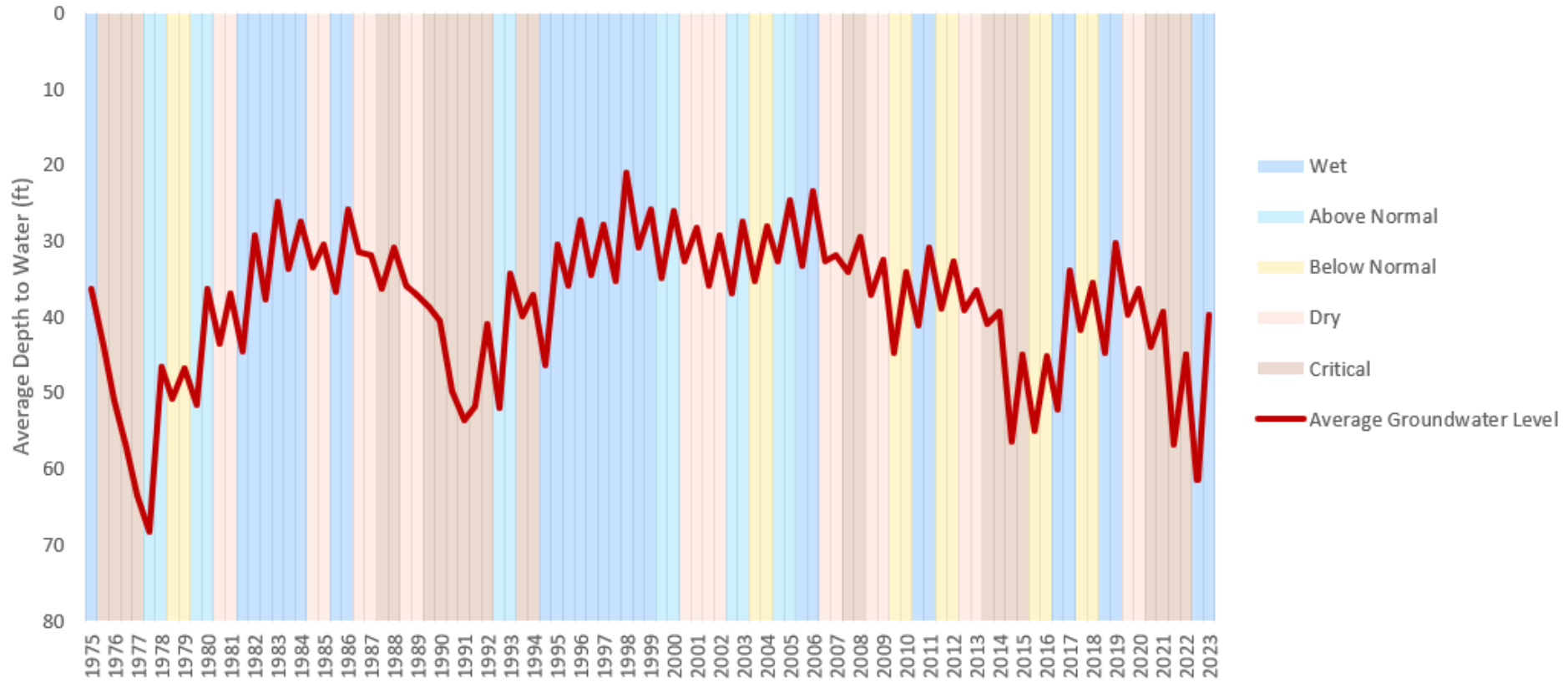
Well #30



Well #31



Yolo Subbasin Average Groundwater Representative Wells - Depth by Season (62 Wells)



Mid-March 2021 Average Depth to Water ~ 39 feet
 Mid-August 2021 Average Depth to Water ~ 57 feet
 Early March 2022 Average Depth to Water ~ 45 feet
 September 2022 Average Depth to Water ~ 62 feet
 April 2023 Average Depth to Water ~ 40 feet

Of Note:

1977-78 Recovery from Fall to Spring ~21 feet
 2016-17 Recovery from Fall to Spring ~ 18 feet
 2022-23 Recovery from Fall to Spring ~22 feet

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Yolo Subbasin Groundwater Agency Board Meeting Long Term Fee Update Project

Eddy Teasdale and Jacques DeBra, LSCE

September 18, 2023 (3:00 - 5:00 p.m.)

Woodland Police Department



**Luhdorff &
Scalmanini**
Consulting Engineers

Yolo Subbasin Groundwater Agency – Our Mission

The mission of the Yolo Subbasin Groundwater Agency (YSGA) is to provide a dynamic, cost-effective, flexible collegial organization to ensure compliance with SGMA within the Yolo Subbasin. Each of the Members and Affiliated Parties will have initial responsibility for groundwater management within their respective jurisdictional boundaries and the YSGA serves a coordinating and administrative role for developing and implementing the Groundwater Sustainability Plan.

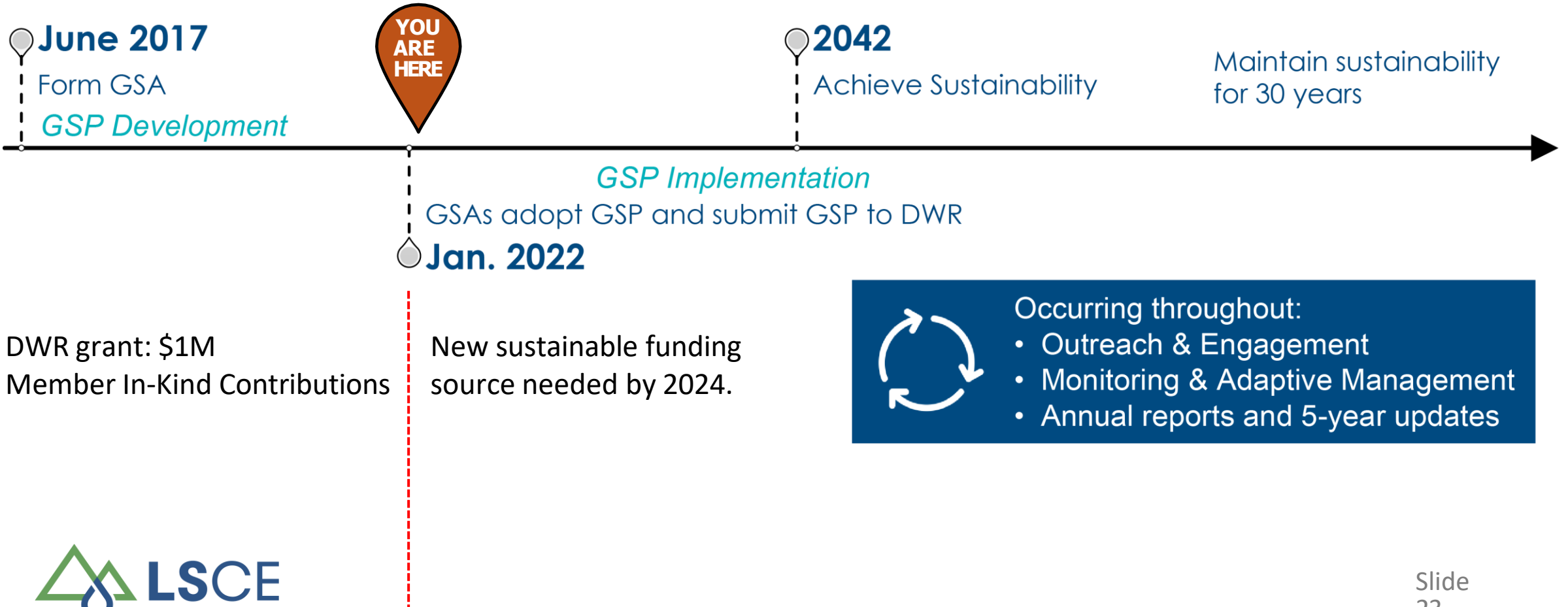
To date, the YSGA has been funded through local contributions and DWR grant funding. Sustainable long term funding sources are needed in certain areas of the Subbasin.



Yolo Subbasin Groundwater Agency – Long-Term Funding Strategy

GSP implementation is more expensive than GSP development.

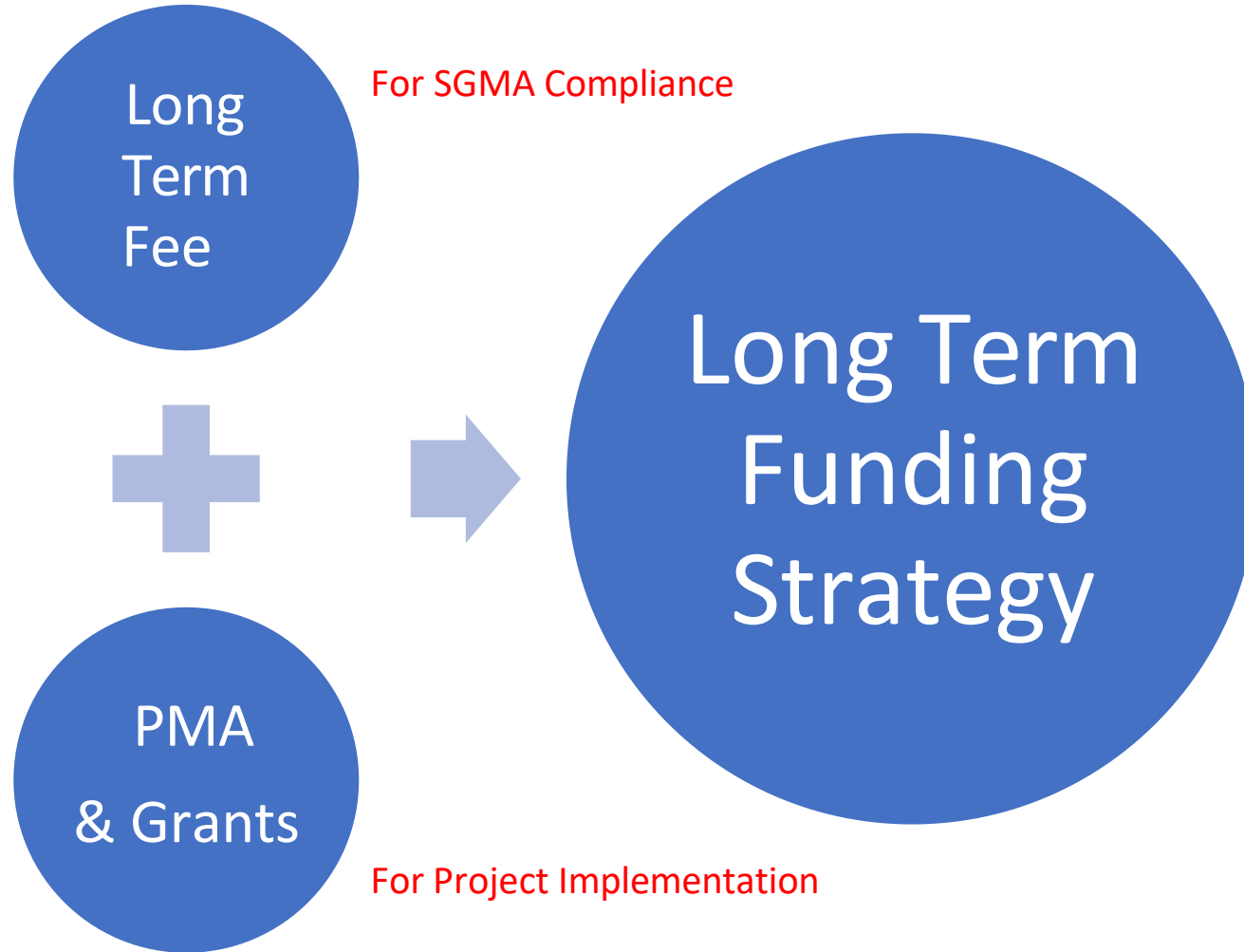
SGMA Timeline



GSP Implementation: > 50 years (2022 – 2072)

Task Name	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
GSA Administration and Operations																					
Public Outreach	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Legal Services	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Community Outreach and Education																					
Community Outreach and Education ¹	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
GSP Monitoring and Data Management																					
Monitoring of Wells	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Data Management	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
GSP Reporting																					
Annual Reporting	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Responding to DWR Comments on GSP		×					×														
GSP Five-Year Updates						×					×					×					×
Grant Writing																					
Grant Writing	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

YSGA – Long Term Funding Strategy



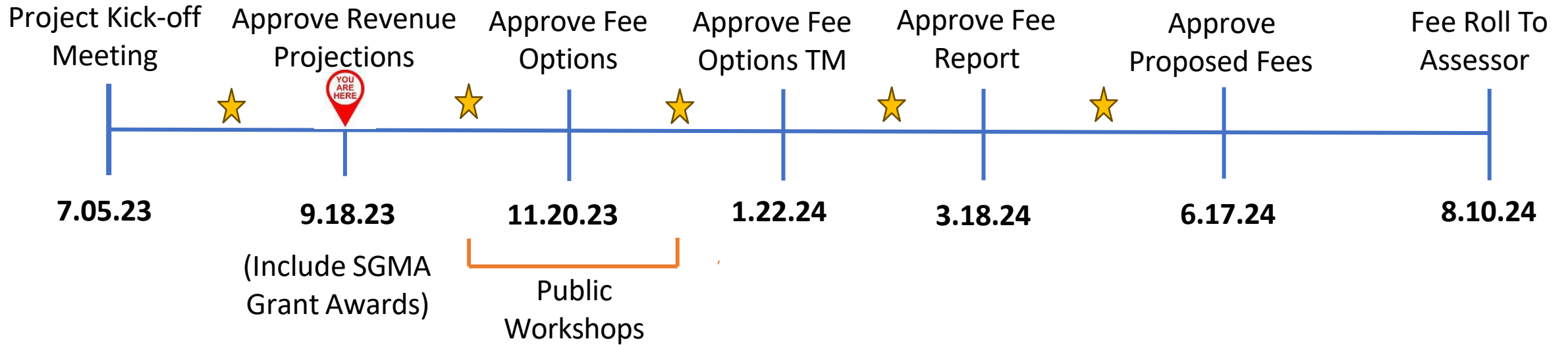
The YSGA members worked together to apply for the DWR Round 2 SGMA Implementation grant funds in December 2022 for eligible Yolo GSA Projects and SGMA compliance costs. DWR announced draft grant awards in June 2023 with \$7M included for the YSGA application. Final awards in September 2023 validated with \$7M for the YSGA.

YSGA – Long Term Funding Strategy (DWR Grants)

2022SIR20050	5-021.67 Sacramento Valley-Yolo	Yolo Subbasin Groundwater Agency	Yolo Subbasin GSP: Planning and Project Implementation	\$7,917,000
			Grant Administration	<input type="checkbox"/> Tribe(s) <input type="checkbox"/> URC(s) <input type="checkbox"/> SDAC(s) \$613,900
			YSGA Groundwater Sustainability Plan Implementation	<input checked="" type="checkbox"/> Tribe(s) <input checked="" type="checkbox"/> URC(s) <input checked="" type="checkbox"/> SDAC(s) \$1,721,000
			YCFC&WCD Winter Water Recharge Program	<input type="checkbox"/> Tribe(s) <input checked="" type="checkbox"/> URC(s) <input checked="" type="checkbox"/> SDAC(s) \$2,600,000
			City of Winters Feasibility Studies	<input type="checkbox"/> Tribe(s) <input checked="" type="checkbox"/> URC(s) <input checked="" type="checkbox"/> SDAC(s) \$580,000
			Yolo-Zamora Groundwater Recharge Pilot Project	<input type="checkbox"/> Tribe(s) <input checked="" type="checkbox"/> URC(s) <input checked="" type="checkbox"/> SDAC(s) \$1,221,100
			Dunnigan Area Recharge Program	<input type="checkbox"/> Tribe(s) <input checked="" type="checkbox"/> URC(s) <input checked="" type="checkbox"/> SDAC(s) \$1,181,000

The YSGA applied for DWR Round 2 SGMA Implementation grant funds in Dec. 2022 for eligible Yolo GSA Projects and SGMA compliance costs. DWR announced final grant awards in September 2023 with \$7.9M allocated for the YSGA grant application.

Yolo Subbasin Groundwater Agency - 2023 Long Term Fee Update Project Schedule



Public Outreach:

Website/Project updates; public workshops (3).

PM Meetings = ★

Yolo Subbasin Groundwater Agency- Board Meeting: *Tentative* Project Milestone Actions

YSGA Board Meeting	Board Action Item	Project Deliverables
September 2023 Meeting ★	Approve Five-Year Revenue Projections	Updated Five Year Revenue Projections for GSP Implementation
November 2023 Meeting	Approve Fee Options To Evaluate	Provide Fee Options and Trade-offs
January 2024 Meeting	Approve Fee Options Evaluation	Fee Option TM
March 2024 Meeting	Approve Fee Report	Including Proposed Fees and Proposition 218 Notice(s)
June 2024 Meeting	Approve Proposed Fees and Finalize Funding Agreements	Public Hearing Approve proposed fees
August Assessor's Office Schedule		<u>Provide Tax Roll Data To Assessor by August 10, 2024</u>

- LSCE work will be coordinated with legal counsel review throughout the project duration.
- YGSA website and outreach updates provided during project implementation.

Long Term YGSA Fee – Development Process

Establish Revenue Needs
(Operational and Implementation Costs)

- Revenue needs – GSA operations
- Revenue needs – SGMA Compliance
- Five-year Revenue Projections – planning horizon
- Adequate for GSA to comply with SGMA
- Meet GSA financial assurance/sustainability goal



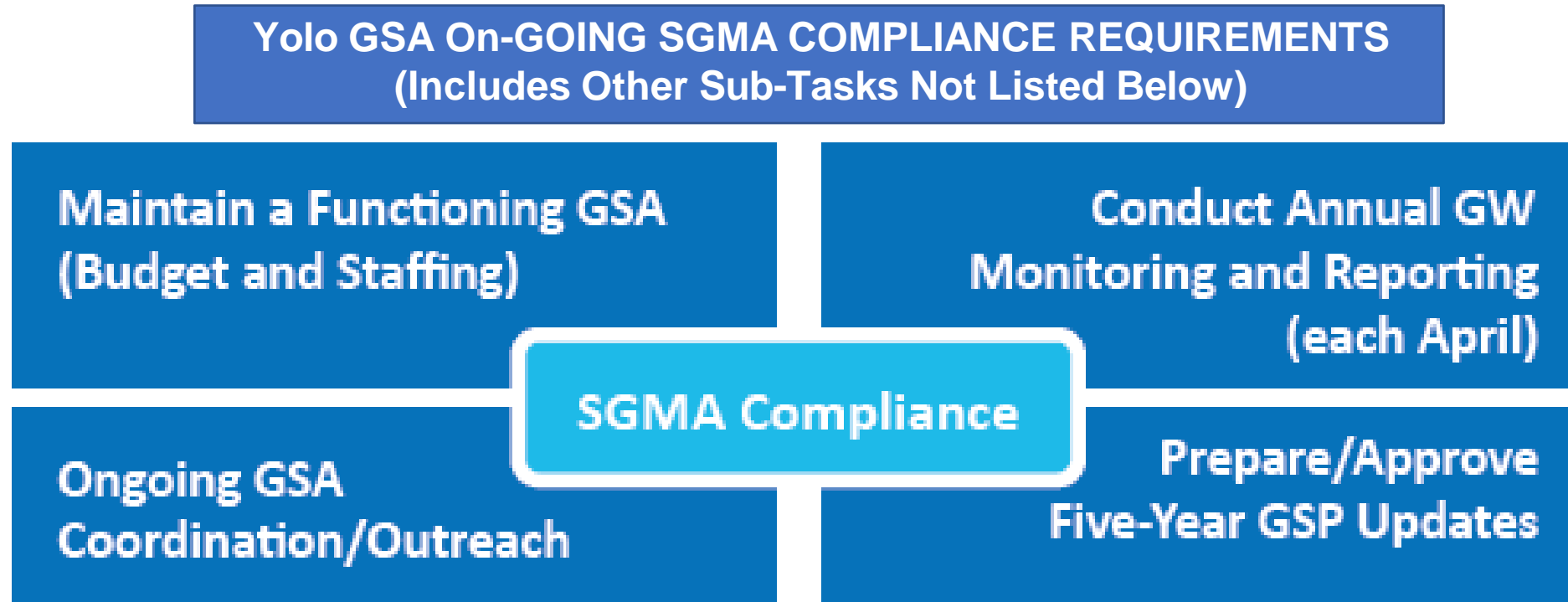
Cost Allocation

- By type – operations vs. implementation
- By Subbasin GSA – weighted by effort
- By use – weight by groundwater use
- Proportional relative to user costs and service/benefit received

Proposed Fees/Charges

- Public notification
- Stakeholder outreach
- Public hearing and majority protest

YSGA – Long Term SGMA Compliance = Local Control



Other compliance tasks may include Surface-Groundwater Interaction Modeling, Data Management System Updates and Maintenance, DWR GSP updates, Long Term Financial Planning to maintain sustainable fees, and other tasks that may be required based on SGMA policy updates and GSP implementation efforts.

YGSA – Updated Revenue Projections For GSP Implementation and SGMA Compliance

Assuming no 2023
DWR SGMA
Implementation
grant funding.

SCENARIO 2: NO GRANT FUNDS					
YOLO SUBBASIN GROUNDWATER AGENCY (YSGA) - 2023 Long Term Funding Project					
Five-Year GSA Operations Budget - GSP Implementation and SGMA Compliance Costs (with no DWR grants)					
5-Year GSP Implementation Inflation Adjustment	0%	3%	3%	3%	3%
Proposed	Year 1	Year 2	Year 3	Year 4	Year 5
Cost Category-GSA Administration	2024	2025	2026	2027	2028
Project Management, SGMA Implementation (YCFCWCD)	\$251,000	\$251,000	\$251,000	\$251,000	\$251,000
Admin. Expenses (copies/postage/website/DMS Hosting)	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
Legal Services	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
Audit Service - Financial	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000
Bank & Other Fees	\$750	\$750	\$750	\$750	\$750
Insurance - General & Auto	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500
Membership Dues	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
Consultant Services	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000
Contingency (10%)	\$49,625	\$49,625	\$49,625	\$49,625	\$49,625
GSA Administration Sub-Total	\$545,875	\$545,875	\$545,875	\$545,875	\$545,875
5-Year GSP Cost Re-Allocation	0%	3%	3%	3%	3%
Cost Category-SGMA Compliance	2024	2025	2026	2027	2028
Annual Monitoring and Reporting	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000
Five Year GSP Update w/Modeling Calibrations	\$112,500	\$112,500	\$112,500	\$112,500	\$90,000
Surface-GW Interaction Modeling	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
GSA Coordination & Outreach (w/in and between GSAs)	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000
Data Management System Maintenance	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
Long Term Financial Planning/Fees	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
Grant Procurement	\$0	\$0	\$0	\$0	\$0
Contingency (10%)	\$28,750	\$28,750	\$28,750	\$28,750	\$26,500
SGMA Compliance Sub-Total	\$316,250	\$316,250	\$316,250	\$316,250	\$291,500
TOTAL YSGA Administration (w/3% inflation adj.)	\$545,875	\$562,251	\$578,628	\$595,004	\$611,380
TOTAL YSGA SGMA Compliance (w/3% inflation adj.)	\$316,250	\$325,738	\$335,225	\$344,713	\$326,480
TOTAL YSGA Operations Budget	\$862,125	\$887,989	\$913,853	\$939,716	\$937,860



YSGA – Updated Revenue Projections For GSP Implementation and SGMA Compliance

With 2023 DWR SGMA Implementation grant funding.

SCENARIO 1: WITH Round 2 SGMA IMPLEMENTATION GRANT FUNDS (FINAL DWR AWARDS)					
YOLO SUBBASIN GROUNDWATER AGENCY (YSGA) - 2023 Long Term Funding Project					
Five-Year GSA Operations Budget - GSP Implementation and SGMA Compliance Costs (with DWR grants)					
5-Year GSP Implementation Inflation Adjustment	0%	3%	3%	3%	3%
Proposed	Year 1	Year 2	Year 3	Year 4	Year 5
Cost Category-GSA Administration	2024	2025	2026	2027	2028
Project Management, SGMA Implementation (YFCWCWD)	\$251,000	\$251,000	\$251,000	\$251,000	\$251,000
Admin. Expenses (copies/postage/website/DMS Hosting)	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
Legal Services	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
Audit Service - Financial	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000
Bank & Other Fees	\$750	\$750	\$750	\$750	\$750
Insurance - General & Auto	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500
Membership Dues	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
Consultant Services	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000
Contingency (10%)	\$49,625	\$49,625	\$49,625	\$49,625	\$49,625
Sub-Total (GSA Administration)	\$545,875	\$545,875	\$545,875	\$545,875	\$545,875
5-Year GSP Cost Re-Allocation	0%	3%	3%	3%	3%
Cost Category-SGMA Compliance	2024	2025	2026	2027	2028
Annual Monitoring and Reporting (*)	\$0	\$0	\$0	\$0	\$0
Five Year GSP Update w/Modeling Calibrations	\$112,500	\$112,500	\$112,500	\$112,500	\$90,000
Surface-GW Interaction Modeling (*)	\$0	\$0	\$0	\$0	\$0
GSA Coordination & Outreach (w/in and between GSAs) (*)	\$0	\$0	\$0	\$0	\$0
Data Management System Maintenance (*)	\$0	\$0	\$0	\$0	\$0
Long Term Financial Planning/Fees	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
Project Implementation Fund (e.g. data gaps/other projects)	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000
Grant Procurement	\$0	\$0	\$0	\$0	\$0
Contingency (10%)	\$18,750	\$18,750	\$18,750	\$18,750	\$16,500
Sub-Total (SGMA Compliance)	\$206,250	\$206,250	\$206,250	\$206,250	\$181,500
TOTAL YSGA Administration (w/3% inflation adj.)	\$545,875	\$562,251	\$578,628	\$595,004	\$611,380
TOTAL YSGA SGMA Compliance (w/3% inflation adj.)	\$206,250	\$212,438	\$218,625	\$224,813	\$203,280
TOTAL YSGA Operations Budget	\$752,125	\$774,689	\$797,253	\$819,816	\$814,660



Yolo Subbasin Groundwater Agency – Updated Revenue Projections Strategy

BASED ON UPDATED REVENUE PROJECTIONS DATA

- No DWR Grant Revenue Projections
 - Used to establish maximum fees over next five-year period
 - Based on future with non-reliable grant funding for SGMA compliance costs
- With DWR Grant Revenue Projections
 - Used to establish lower fees using expected 2023 DWR grant funds
 - Final grant awards expected in September 2023
- YSGA assessment of revenue requirements over next five years
- Includes 3% annual inflation adjustment (years 2-5)
- Fee collection: expect combination of MOU contributions and Prop. 218 fees

Yolo Subbasin Groundwater Agency – Basis For Long Term Fee Options

BASED ON AVAILABLE PARCEL LEVEL DATA

- Parcel exemptions – Federal/Tribal; State uncollectible
- Parcel location, size and boundaries (boundary conditions)
- Consider other sources (e.g. Land IQ 2021 parcel information)
- Land use designations
- Water source (sometimes known)
- Water use (typically GSA accounts have been unmetered with no water use records available)

Yolo Subbasin Groundwater Agency – Fee Options Evaluation Criteria

FEE OPTION EVALUATION CRITERIA

- Revenue Sufficiency – Meets revenue projection targets
- Revenue Stability – over fee implementation period
- All Beneficiaries Pay – important for SGMA compliance benefit
- Equity – cost allocation
- Affordability – economic impacts
- Simplicity – easy to understand
- Administrative ease – low implementation costs
- Enforceability – potential costs for more complex fee structures
- Legality – defensible, challenge risk, potential long term legal fees

Consider Fee
implementation costs

Yolo Subbasin Groundwater Agency – Conceptual Fee Collection Scenario

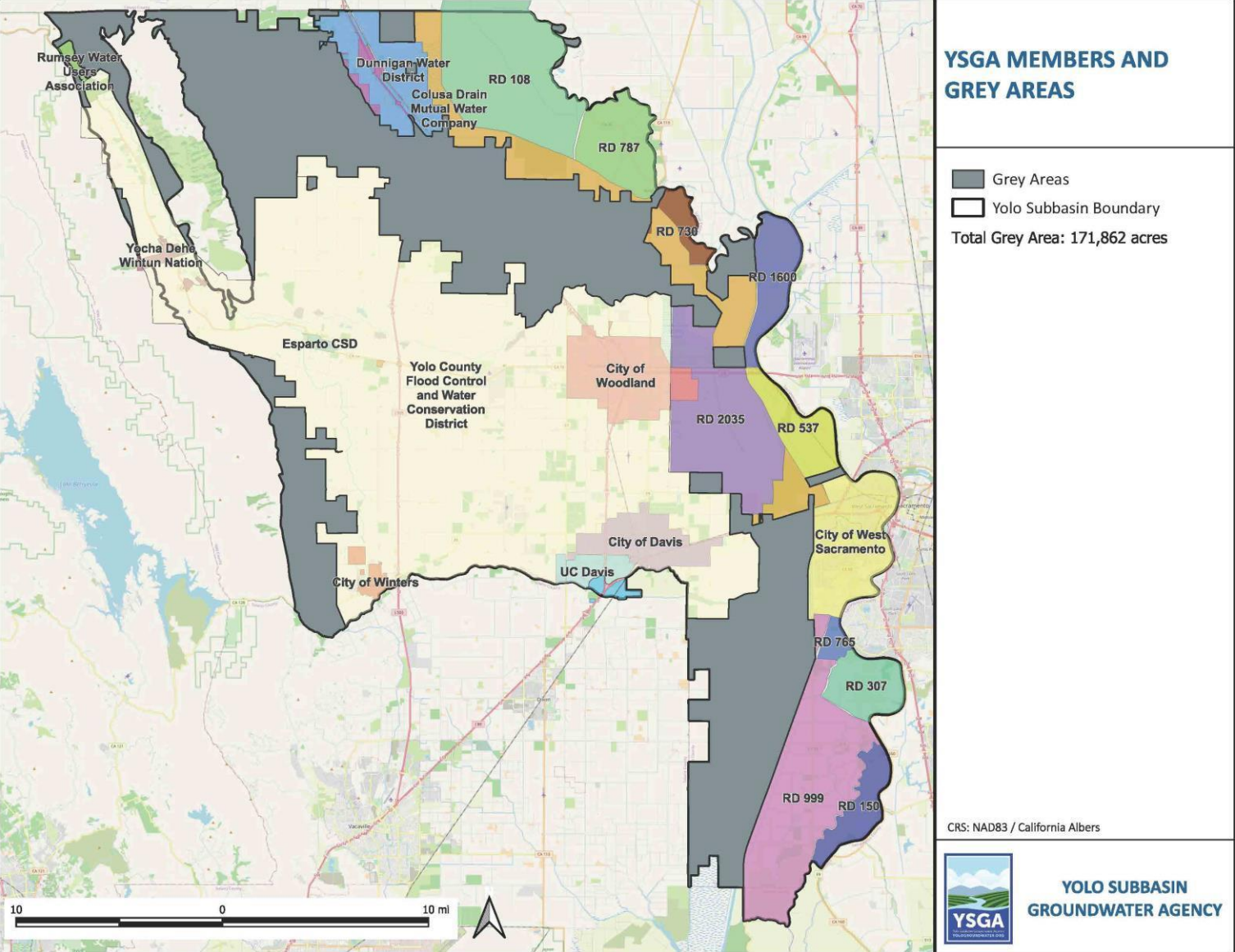
Member JPA/MOU Contribution Entities	Prop. 218 Fees – New Fees in 2024
Davis, Woodland, WSac., Winters, UCD	Yolo County – Grey Areas (need)
Esparto and Madison CSDs	
Tribal Lands	
YCFCWCD	
Yolo County – Grey Areas	
Reclamation Districts	
Colusa Drain Mutual Water Co.	
Cal American Water Co.	
Yolo County Farm Bureau	

Existing JPA/MOU fees could continue with annual inflation adjustment factor. Prop. 218 Fees could be collected on County Assessor Fee Roll.



Yolo Subbasin Groundwater Agency – Conceptual Fee Collection Scenario (Prop. 218 Process)

Other entities would have the option of paying via MOU or participating in Prop. 218 process.



Yolo Subbasin Groundwater Agency – Fee Options For Evaluation

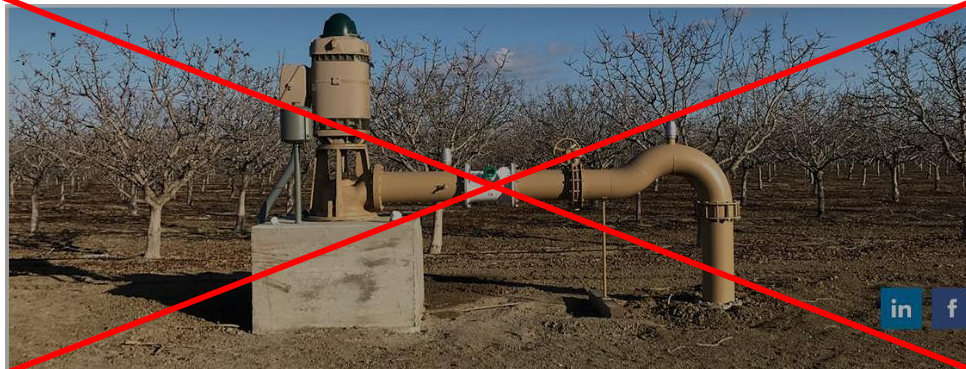
FEE OPTIONS TO EVALUATE – TO DISCUSS AT PUBLIC WORKSHOPS

- Option 1 – Uniform Fee (\$/ac)
- Option 2 – Irrigated/Non-Irrigated Fees
- Option 3 – Other Land Use Hybrid

Only for landowners subject to
Prop. 218 Fees (Yolo County
grey areas)

- Legality – defensible, challenge risk, potential long term legal fees

Special Note: suggest that fees be considered that charge lower fees to landowners who use little to no groundwater (e.g. rangeland, natural habitat, vacant property, dry land farming, no surface or groundwater use).



Yolo Subbasin Groundwater Agency – Fee Options Review

Fee Options	Proposition 218 Fees – New Fees in 2024	Recommended For Further Review
Uniform Fee (\$/ac.)	Easy to implement and understand. Not the most equitable for ratepayers.	MAYBE
Irrigated/Non-Irrigated Fee (\$/ac. w/user classes)	Additional implementation costs. More equitable than uniform fee.	YES
Land Use Hybrid	More complicated to implement with additional implementation costs.	YES (if needed)
ET Based Water Budget Method	Additional implementation costs. Changes the role of the GSA (bill collections).	NO
Well Registration	Additional implementation costs. Some missing and inaccurate data.	NO
Metered Groundwater Extraction	Most expensive option to implement. May cause negative impacts on Ag operations.	NO

Yolo Subbasin Groundwater Agency – Fee Options For Evaluation

UNIFORM FEE EXAMPLE – TO DISCUSS AT PUBLIC WORKSHOPS

- **Vina GSA: Example of Uniform Fees approved in 2023**
- Fee Structure - \$/acre uniform fee charge
- \$1.54 per acre per year (approved)
- \$3.09 per acre per year (maximum)
- Easiest fee structure to understand and implement
- Not the most equitable structure
- Maximum fees are in 2023 dollars, including inflation for the subsequent four years. The actual amount of the fee will be set by Resolution of the CSGSA each year but cannot exceed the maximum per acre fee specified above, including the inflation factor.

Yolo Subbasin Groundwater Agency – Fee Options For Evaluation

IRRIGATED/NON-IRRIGATED FEE EXAMPLE – TO DISCUSS AT PUBLIC WORKSHOPS

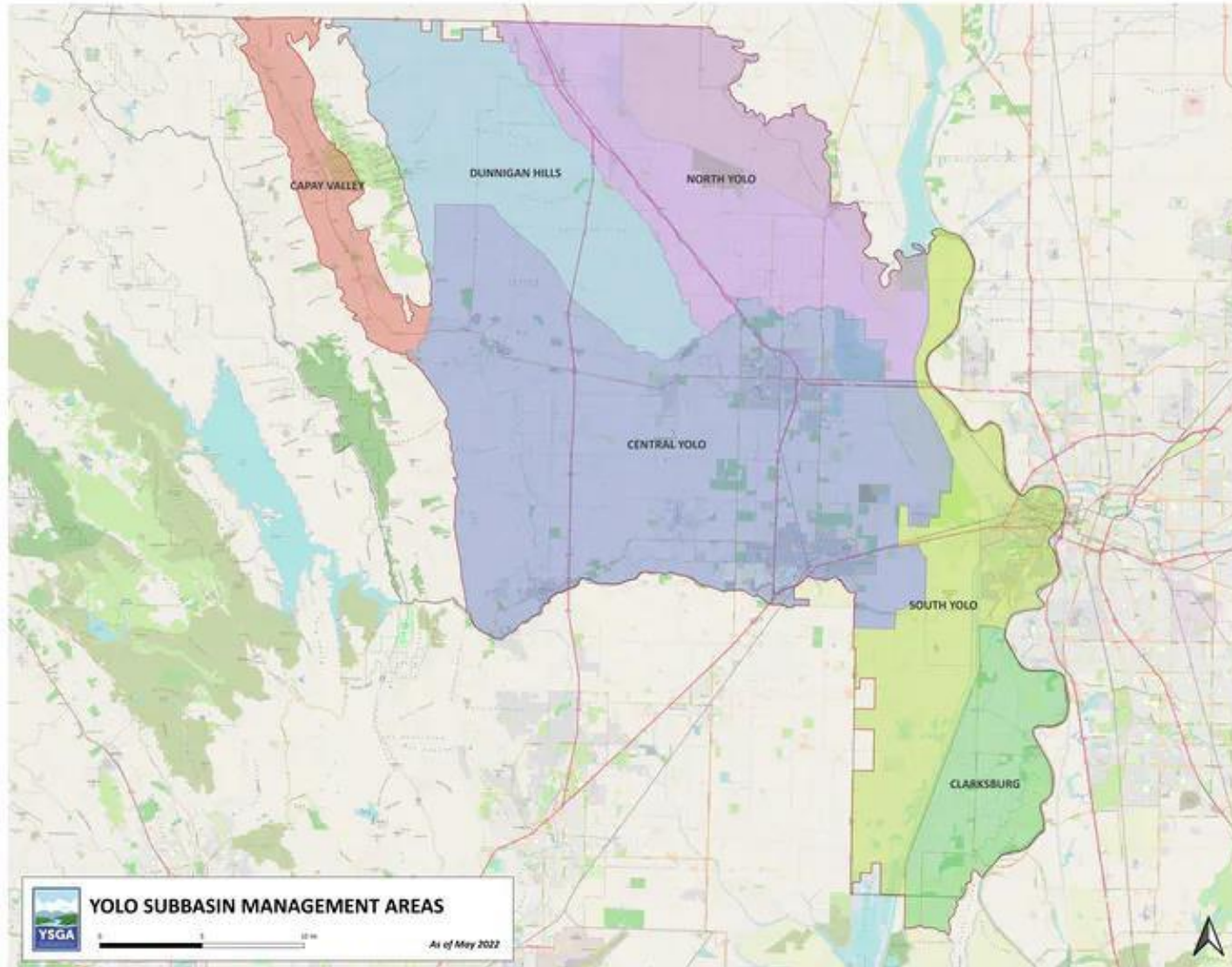
- **GGA GSA: Example of Irrigated/Non-Irrigated Fees approved for 2024**
- Fee Structure - three proposed maximum fee rates (one for each user class) as follows:
- \$0.52 per non-irrigated acre per year, [**addressing low groundwater users**]
- \$2.40 per irrigated-surface water acre per year, and
- \$5.39 per irrigated-groundwater acre per year.
- The fees are in 2023 dollars, including inflation for the subsequent four years. The actual fee amounts will be set annually by Resolution of the GGA GSA (not exceeding maximum fees)

Yolo Subbasin Groundwater Agency – Fee Options Evaluation Criteria

For future project implementation efforts with respect to Management Areas.

Include in Outreach:
Framework for outreach.
Cost Allocation.

Separate from YGSA.



Yolo Subbasin Groundwater Agency – Fee Options - Public Outreach Efforts

Outreach Strategy:

Develop Fact Sheet & FAQ

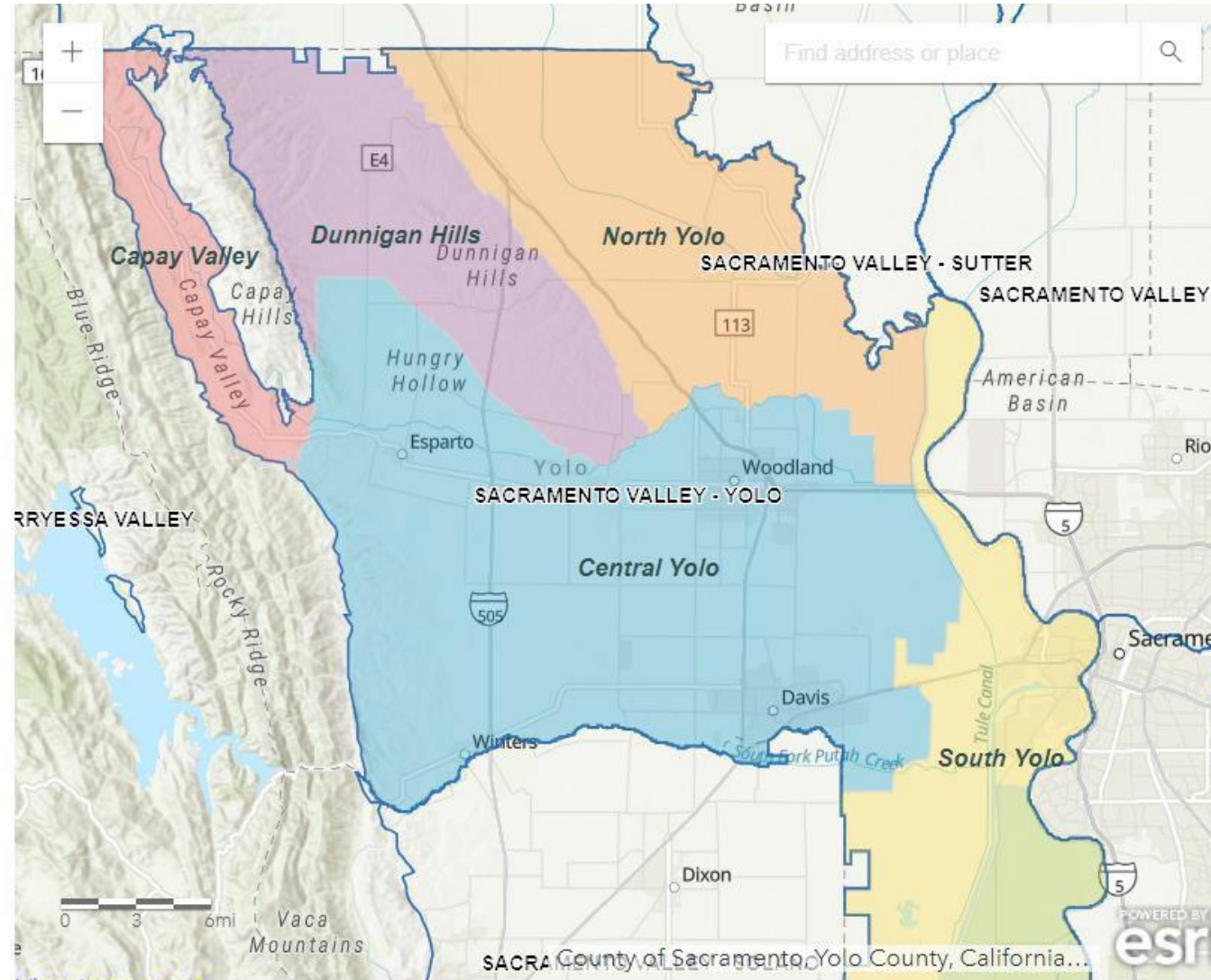
Use Technology (Interactive Map)

Conduct 2023 workshops (4).

Discuss revenue projections and fee options.

Document feedback, ideas, questions and concerns.

Information available on YSGA website.



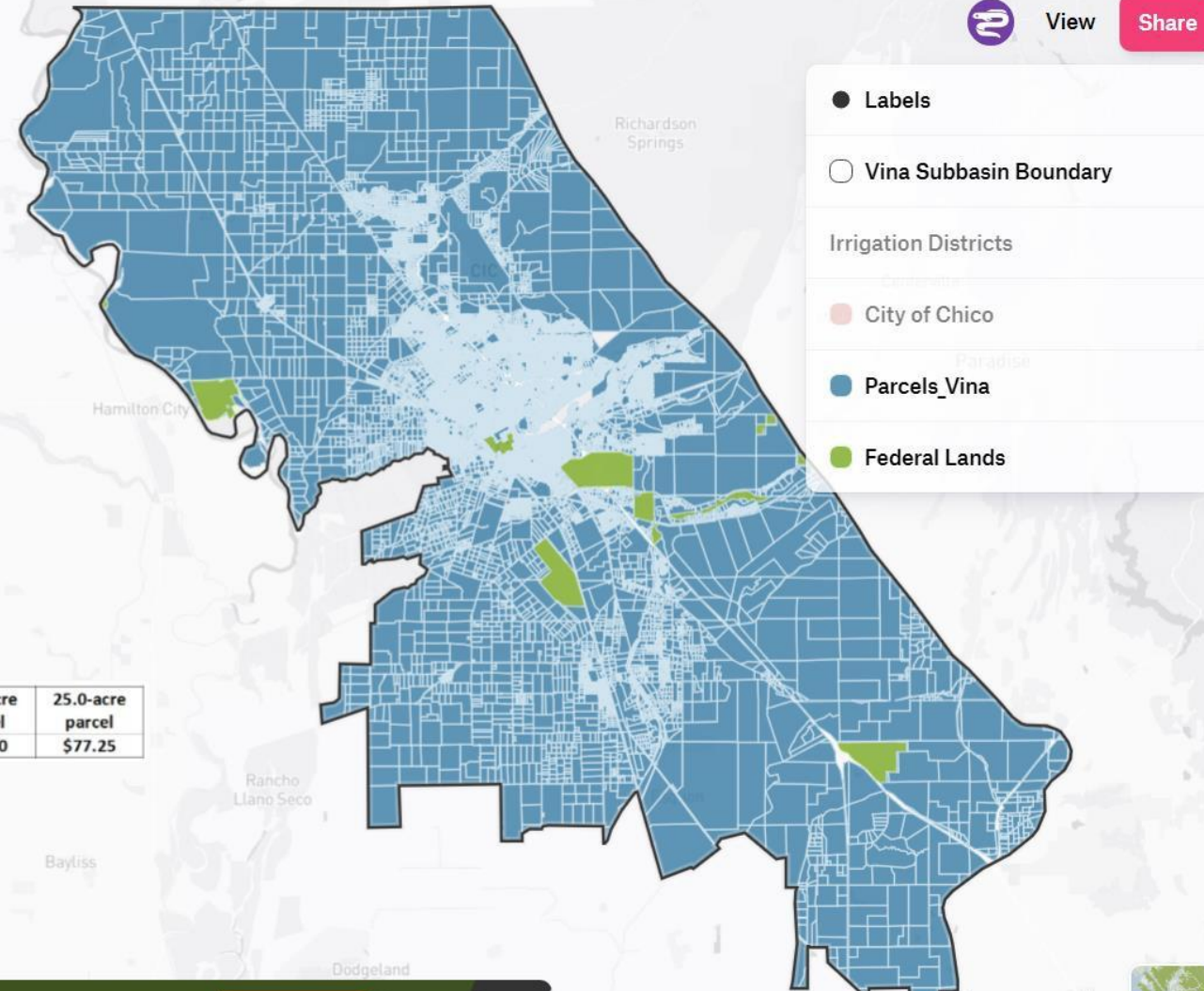
Yolo Subbasin Groundwater Agency – Fee Options - Public Outreach Efforts (using technology)

Felt

Vina_UserClasses

Welcome!
 Navigate to your parcel OR
 [on computer] sign in with your
 gmail account and search for
 your address using the
 magnifying glass in top right
 corner OR [on phone] turn on
 location permissions for
 browser and click arrow in
 bottom right corner to navigate
 to your current location.

How to turn on location
 settings:



Ex: Fee Calculation

Maximum fee: \$3.09/acre

Estimate: 0.10 acre parcel x \$3.09 = \$0.31

0.10-acre parcel	0.25-acre parcel	0.50-acre parcel	1.0-acre parcel	5.0-acre parcel	10.0-acre parcel	25.0-acre parcel
\$0.31	\$0.78	\$1.55	\$3.09	\$15.45	\$30.90	\$77.25



2.5mi 5mi
 Mapbox

This map was created with Felt [Learn more](#) [Log in](#)



YSGA Project Outreach Options

Type	YSGA GSA
Fact Sheet	Yes
Frequently Asked Questions (FAQs)	Yes
Website Updates	Yes
Public Workshops (4)	Yes
Bi-lingual (if needed)	Yes
Document meetings/outcomes	Yes
Other (e.g. newsletter coordination)	Yes

Recommend majority of outreach materials are published during fee options evaluation phase of project for timeliness and effectiveness. Some Website updates will be required as milestones progress.

YSGA Project – Tentative Public Outreach Workshops

Yolo Subbasin Groundwater Agency 2023 Long Term Fee Project Public Outreach - Community Meetings		
Date	Location	Discussion
10.25.23 (6:00 p.m.)	Espartero Community Fairgrounds	2023 revenue projections and fee options
10.26.23 (6:00 p.m.)	Espartero Community Fairgrounds	2023 revenue projections and fee options
11.01.23 (6:00 p.m.)	Winters Community Center	2023 revenue projections and fee options
11.02.23 (6:00 p.m.)	Yolo County Library- Clarksburg Branch	2023 revenue projections and fee options

Proposed workshop schedule, subject to Board review and approval. Meeting notices and presentations will be available on the YSGA website.

Yolo Subbasin Groundwater Agency – Next Steps – 2023 Long Term Funding Project

Action Items

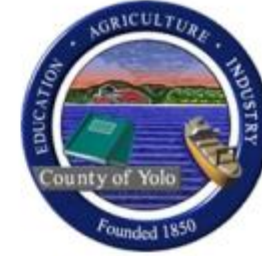
1. Approve Draft Revenue Projections – for use with outreach efforts
2. Approve Fee Options To Evaluate – for use with outreach efforts
3. Approve Public Outreach Plan
Fact Sheet and FAQs
Conduct Public Workshops (4)

Agenda

1. Call to Order and Determination of Quorum
2. Adding Items to the Posted Agenda
3. Public Forum
4. CONSIDERATION - Consent Items
5. Report of the Chair and Executive Officer
6. Update from LSCE on Fee Study Development
- 7. CONSIDERATION: Adopt Resolution 23-01**
8. CONSIDERATION - WaterSMART Applied Science Grant Application
9. Member's Reports and Future Agenda Items
10. Next Meeting - October Special Board Meeting
11. Adjournment

July 11, 2023

Board of Supervisors



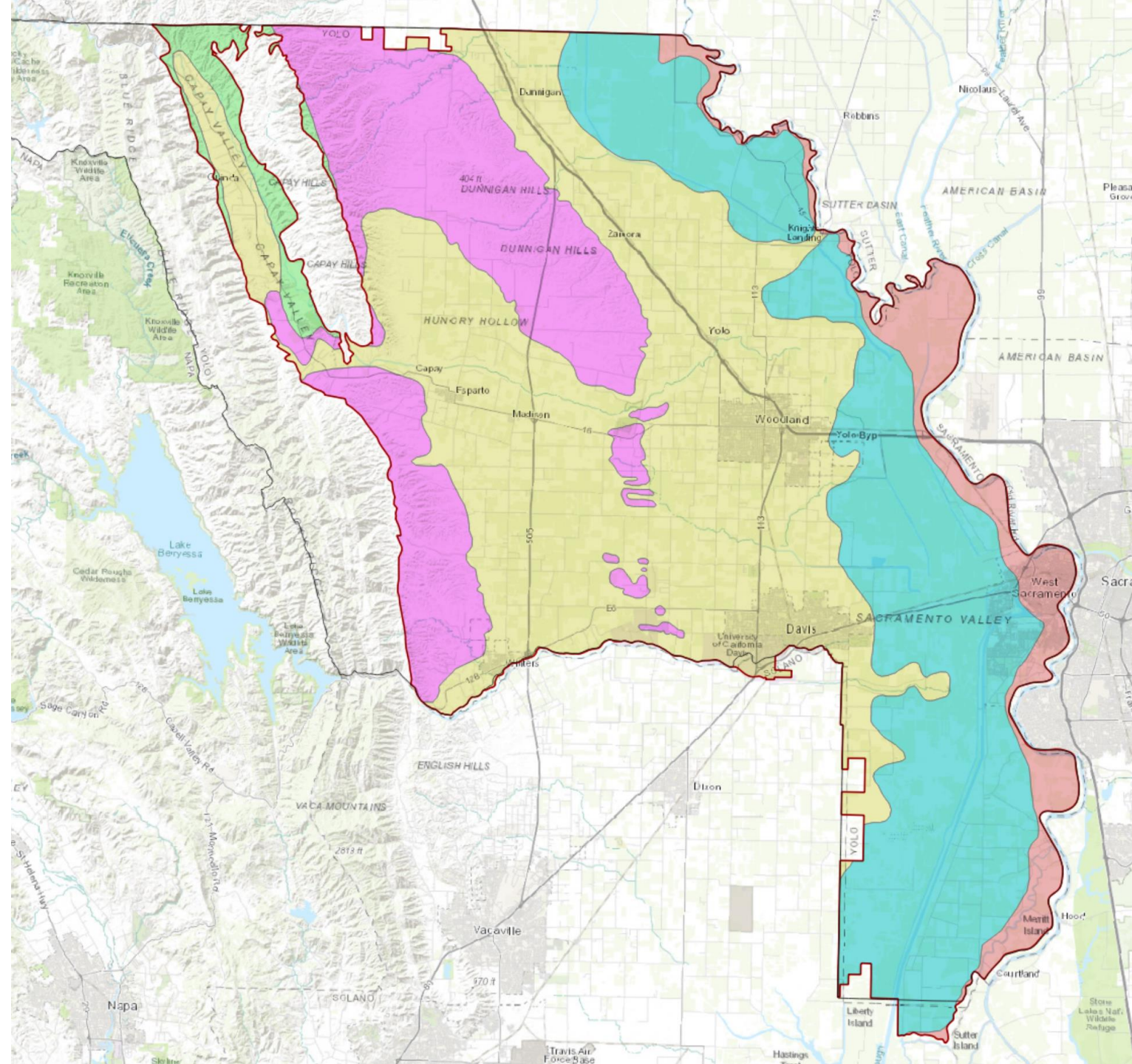
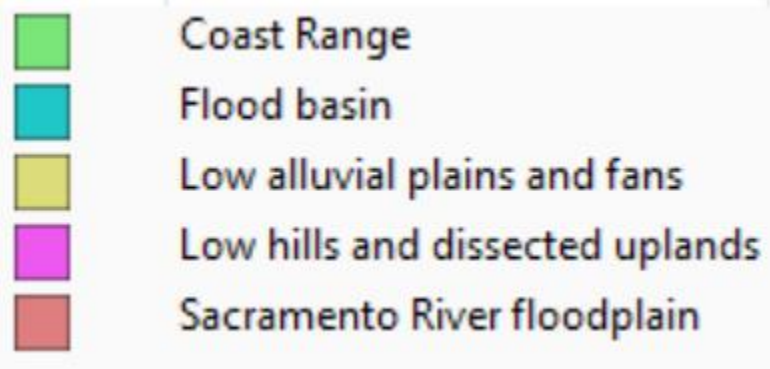
- The Board formally ended the local drought emergency proclaimed on July 27, 2021 (Resolution 21-98).
- The Board directed staff to return by the September 12, 2023, Board meeting with options for consideration, including a pause for new agricultural well permits in areas of special concern including Hungry Hollow, Western Winters (Golden Bear Estates), Yolo-Zamora, and the Plainfield Ridge, and other areas with significant groundwater data gaps.

Ad Hoc Drought Contingency Planning Committee Update

- Met July 26 and August 23 with YSGA and West Yost Team to review AOSC and Data Gaps mapping process
- Criteria evaluated in analysis
- Public review process
- Concerns around precedent setting and map intentions

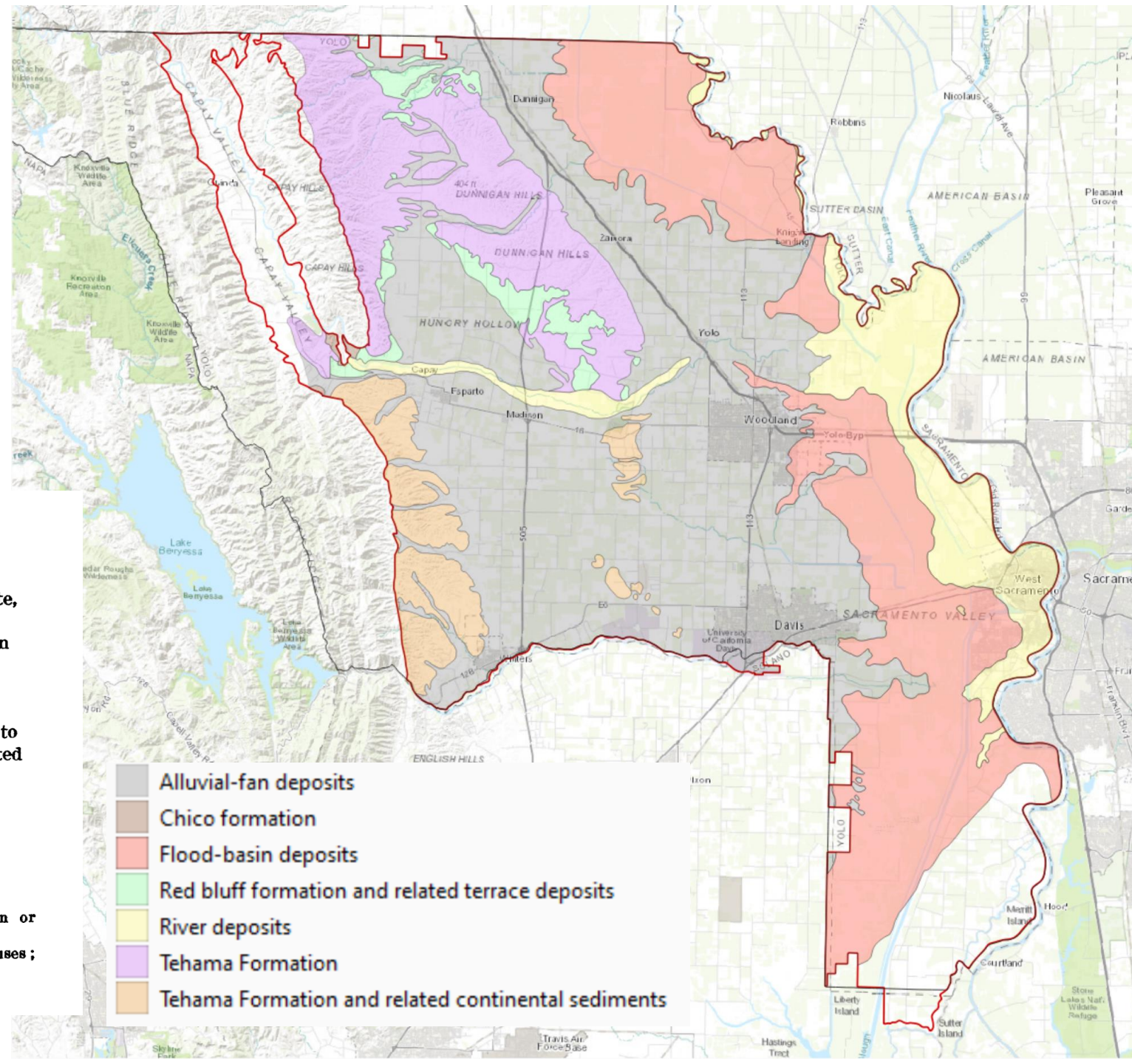
Geomorphic Units

- From USGS Water Supply Paper 1497, Plate 1
- Permeability?



Geologic Map

- From USGS Water Supply Paper 1497, Plate 2



Rocks that yield water more or less freely ¹

- River deposits
- Basin deposits
- Alluvial-fan deposits
- Victor formation and related deposits
- Red Bluff formation and related terrace deposits
- Fanglomerate from the Cascade Range
- Laguna formation and related continental sediments
- Tehama and Red Bluff formations and related continental sediments
- Tehama formation
- Tuscan formation ³
- Volcanic rocks from the Sierra Nevada ³

Rocks that yield little or no water ²

- Volcanic rocks of Sutter Buttes:
 - Tuff-breccia ⁴
 - Intrusive rhyolite and andesite, vent tuff
 - Volcanic sedimentary rocks on west side of Sacramento Valley ⁴
- Basalt
- Sedimentary rocks of Paleocene to Oligocene (?) age, undifferentiated
- Chico formation
- Shasta series
- Basement complex of the Sierra Nevada block

¹ Rocks that for the most part yield water in quantities sufficient for irrigation or other large-capacity wells.

² Rocks that yield water in quantities insufficient for irrigation or other large uses; locally yield a few gpm to domestic and stock wells.




³ In part essentially non-water-bearing rocks.

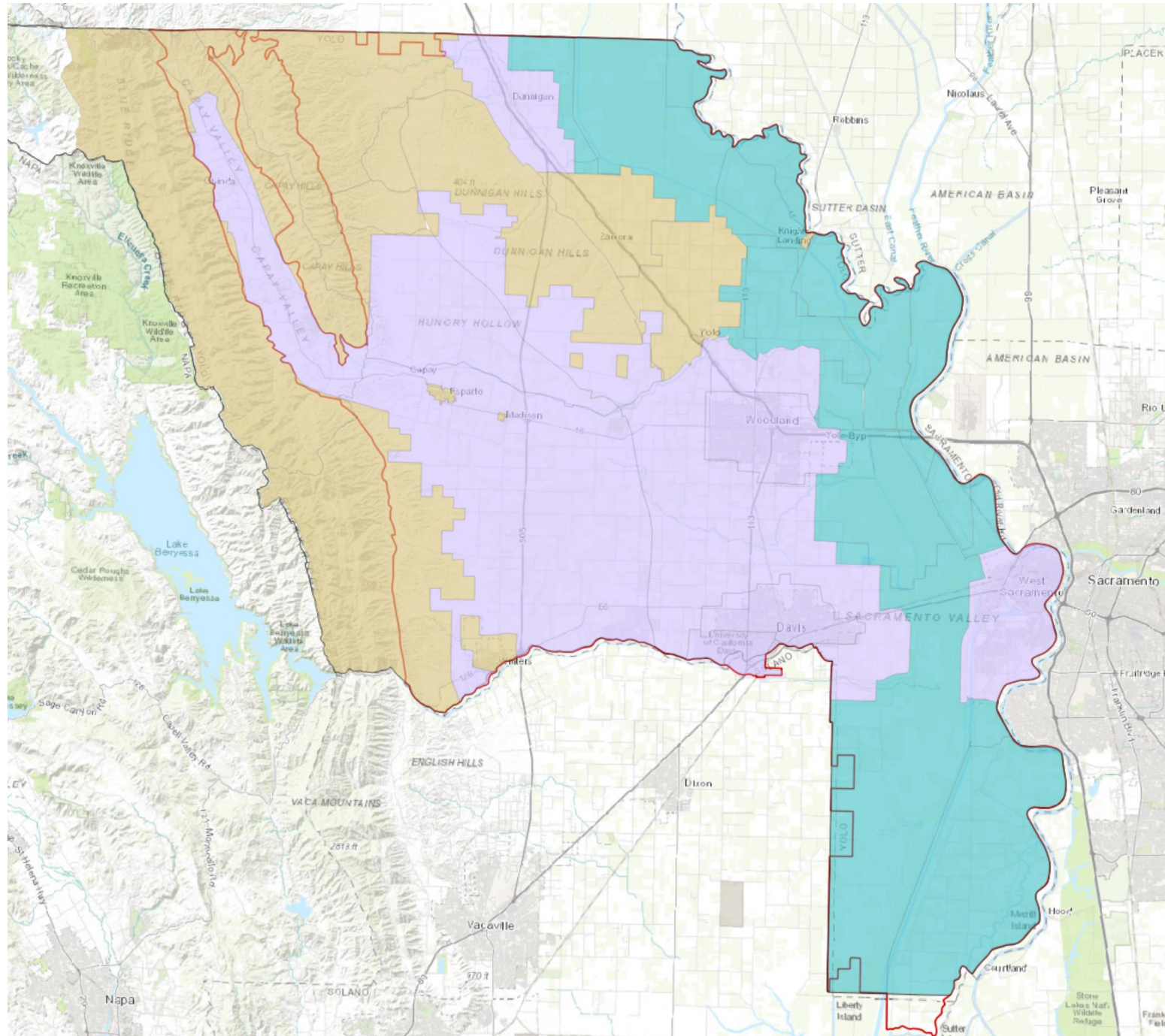
⁴ In part water bearing.

Water Source

- GW Dependence by model catchment

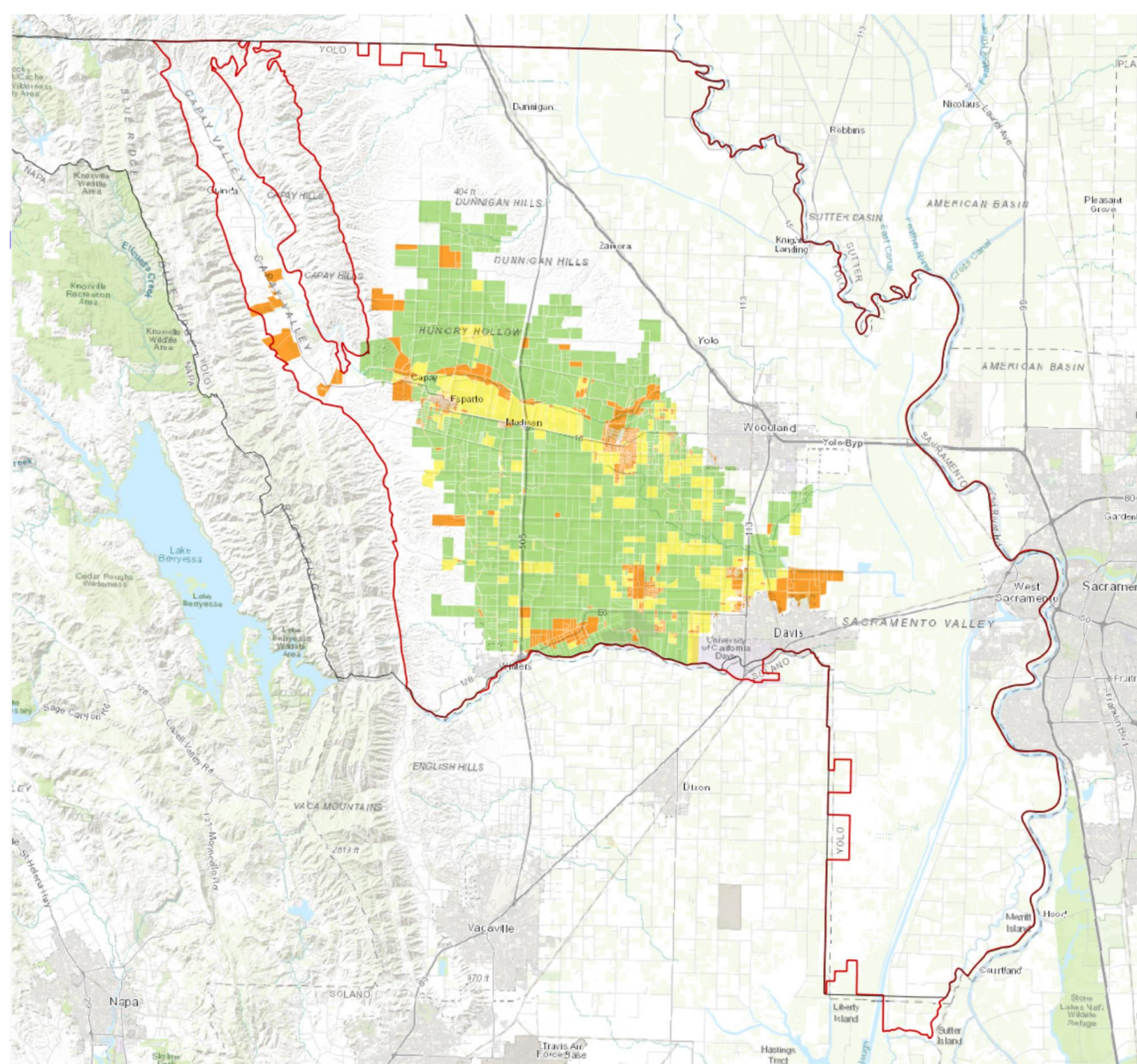
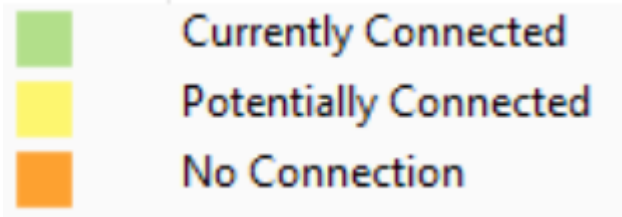
Water Source by Catchment

-  Groundwater Dependent
-  Mixed Surface Water and Groundwater
-  Mainly Surface Water



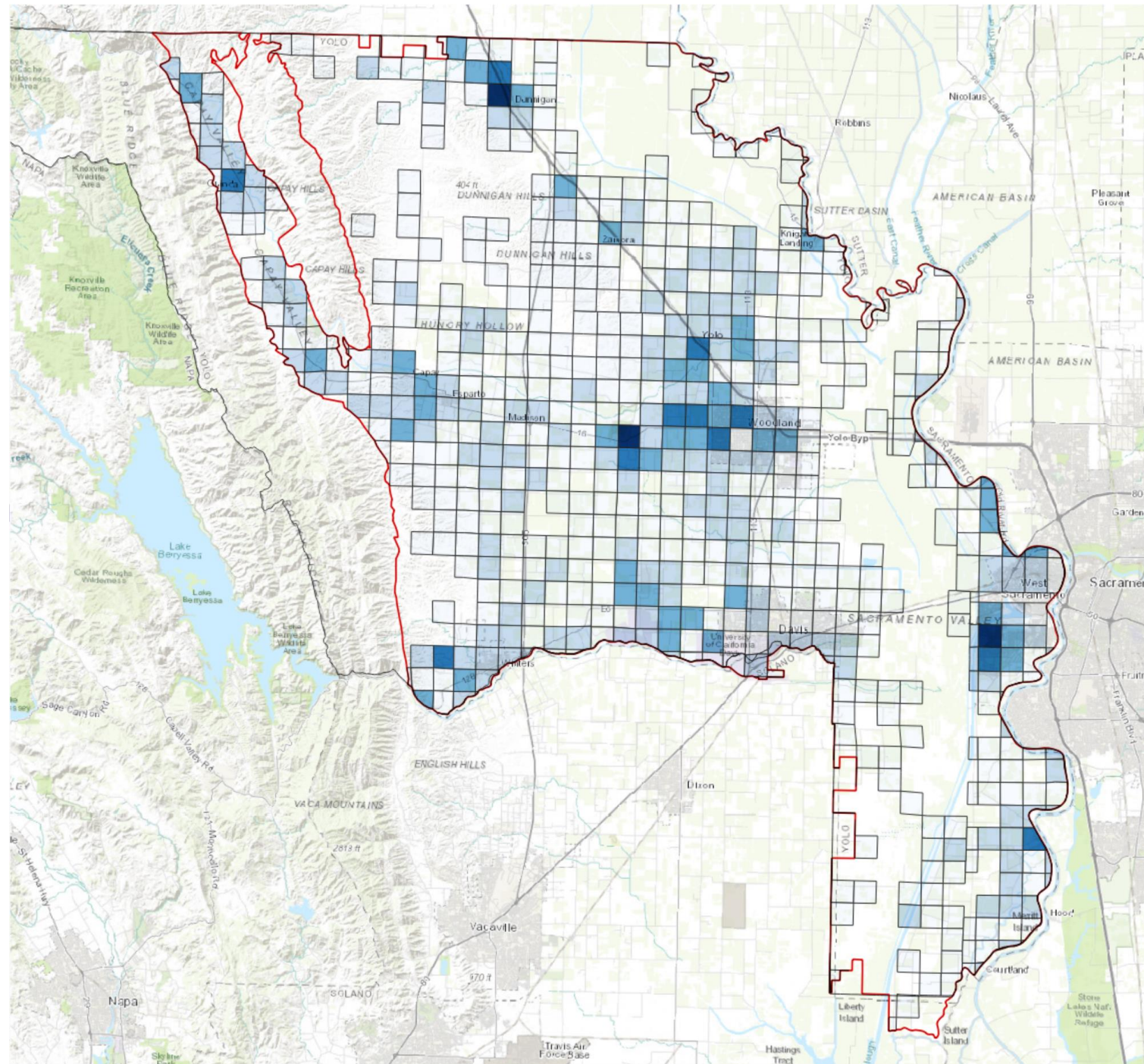
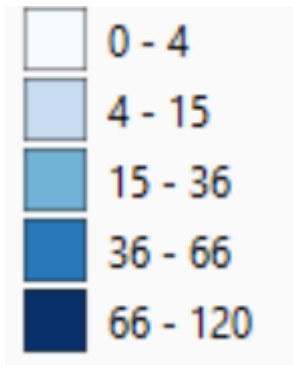
Water Source

- Additional detail for YCFC Area



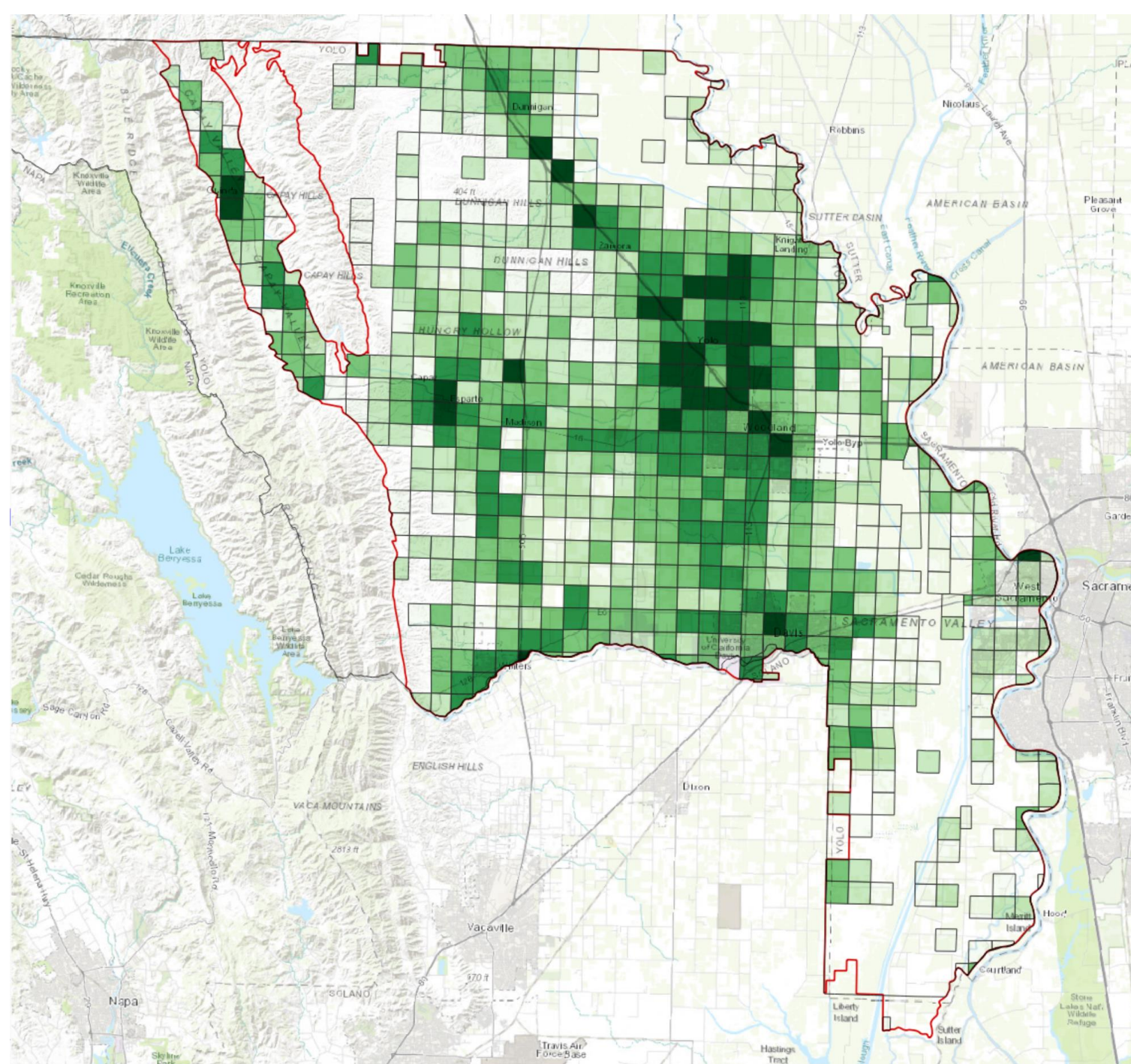
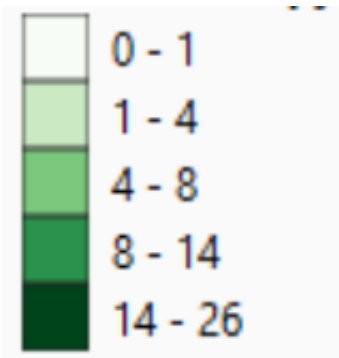
Well Density

- Domestic Well Density
 - From DWR's WCR Database
 - Well Count by PLSS Section



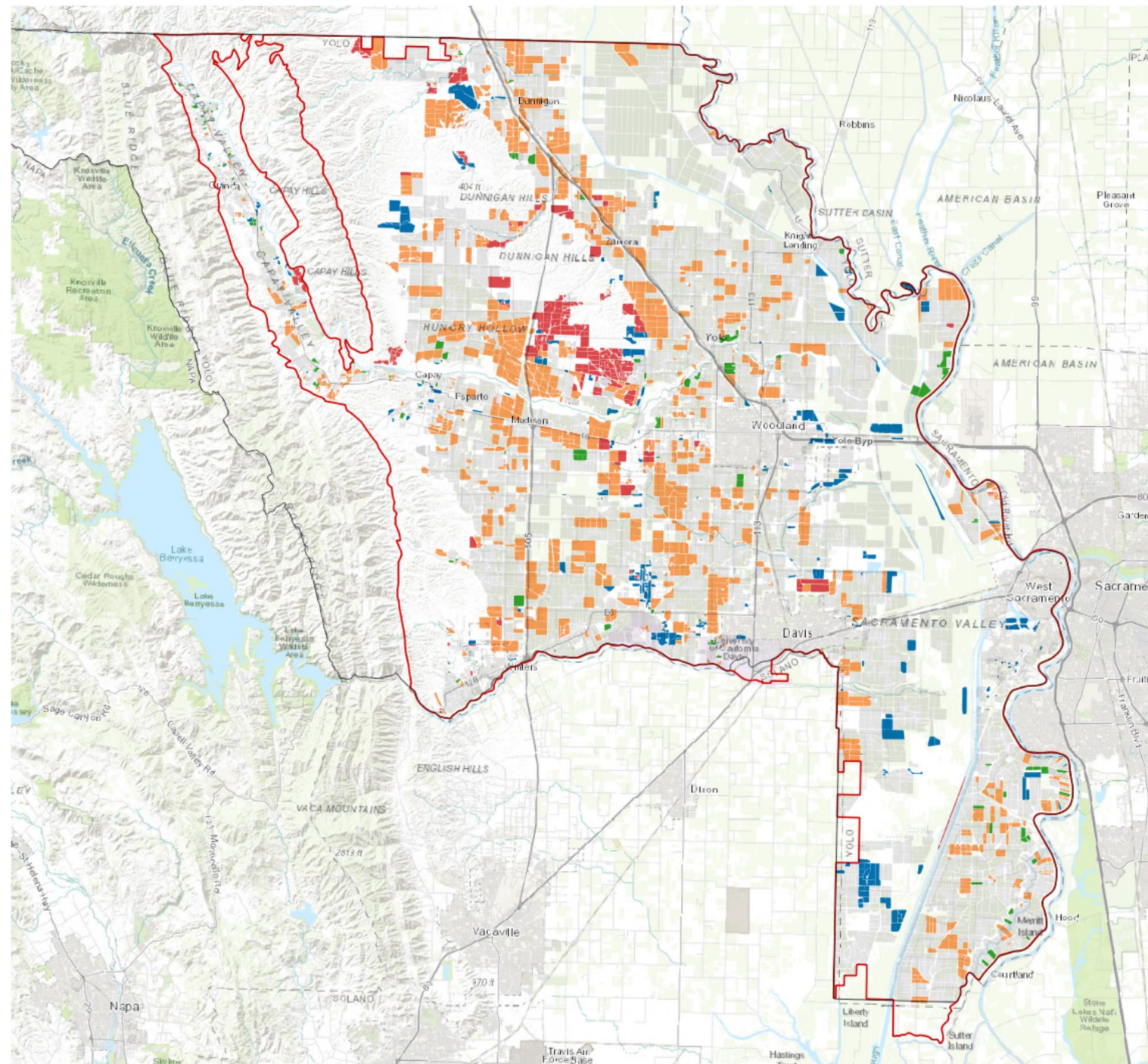
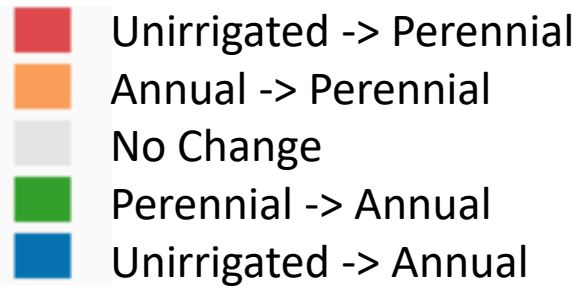
Well Density

- Production Well Density
 - From DWR's WCR Database
 - Well Count by PLSS Section



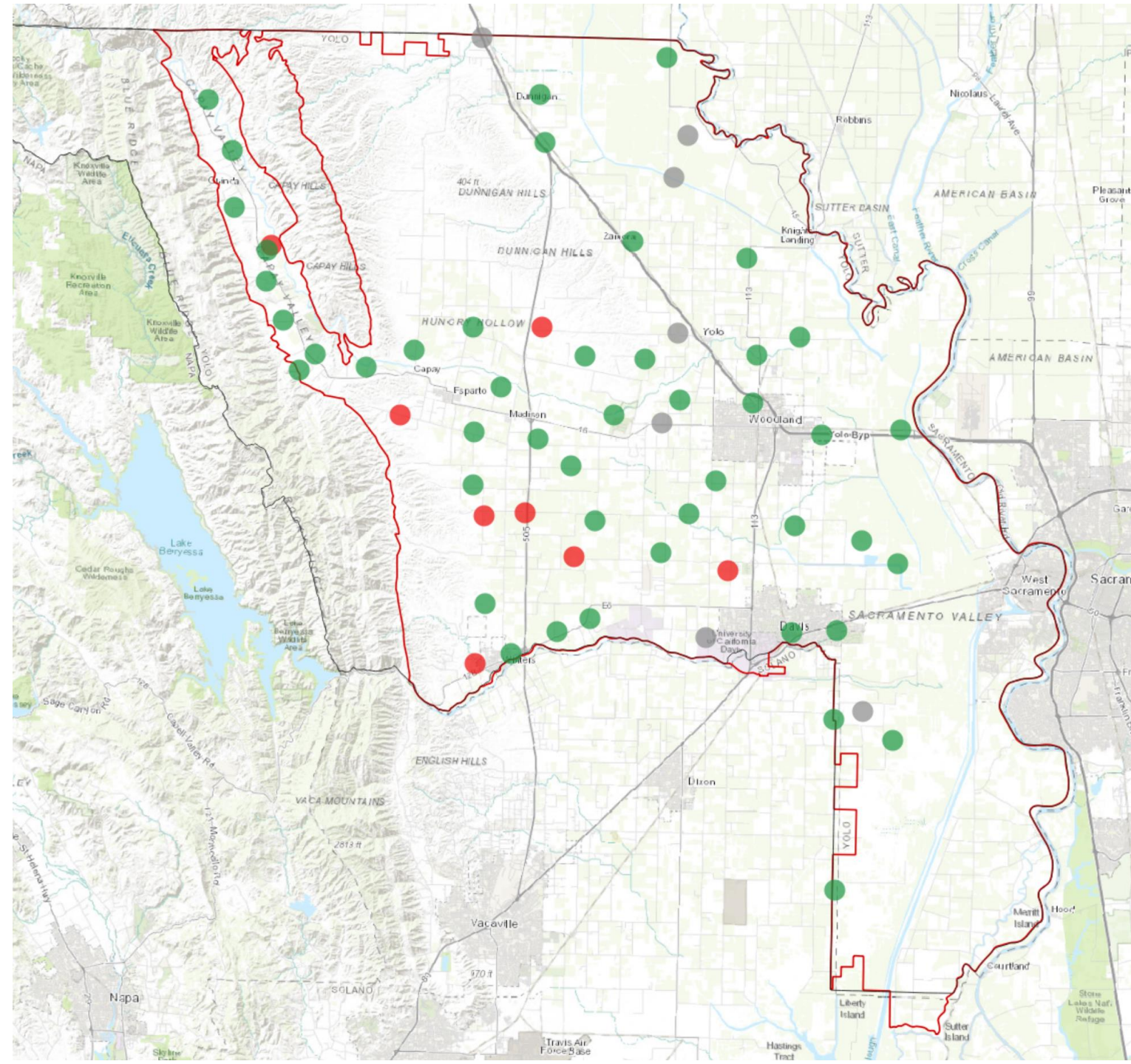
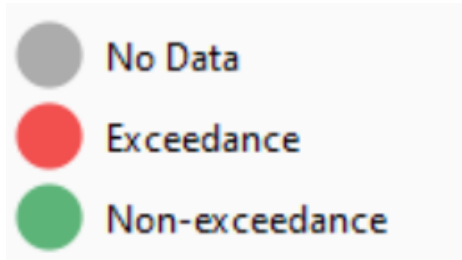
Land Use?

- Land use changes between 2008 -2021



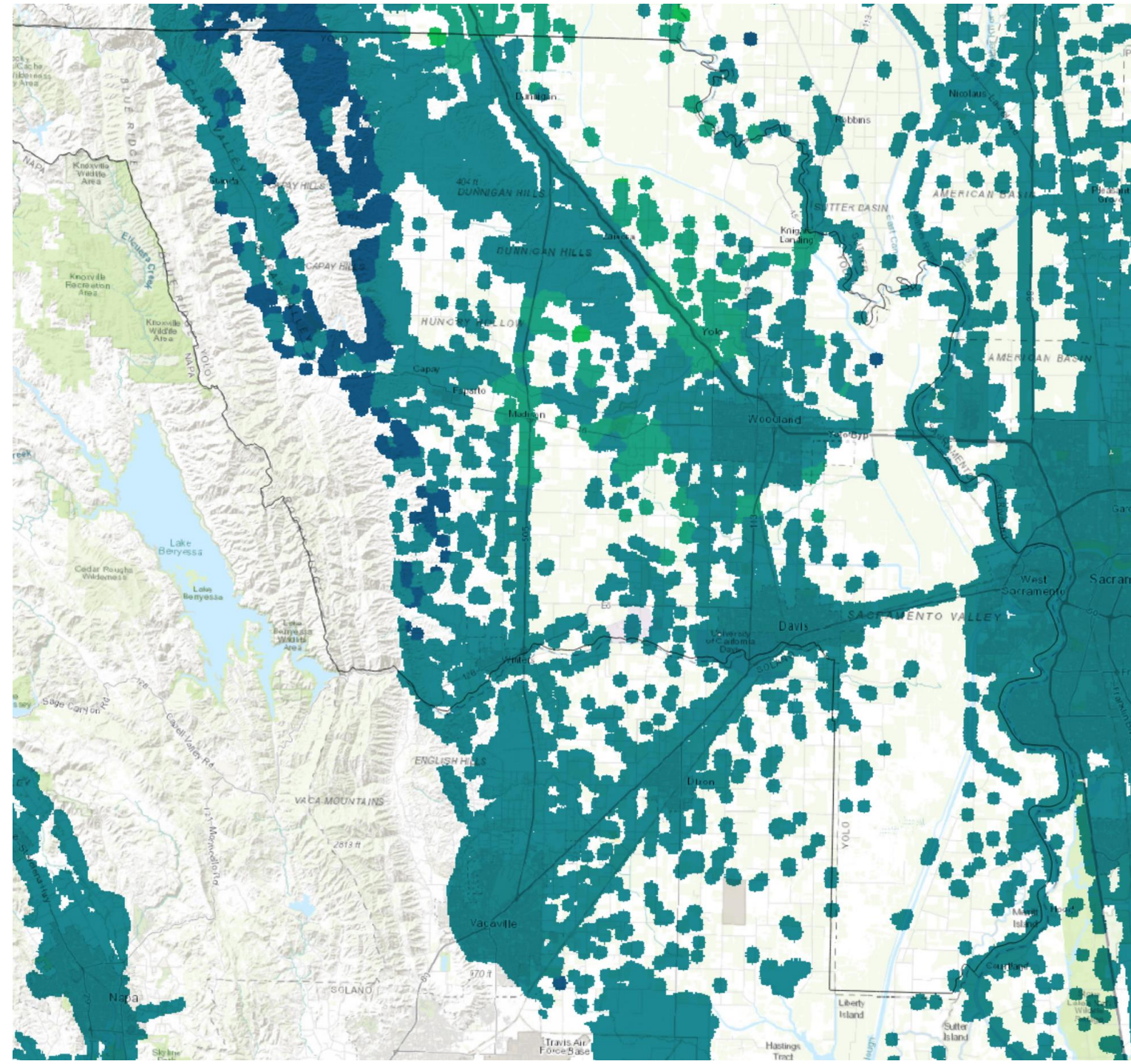
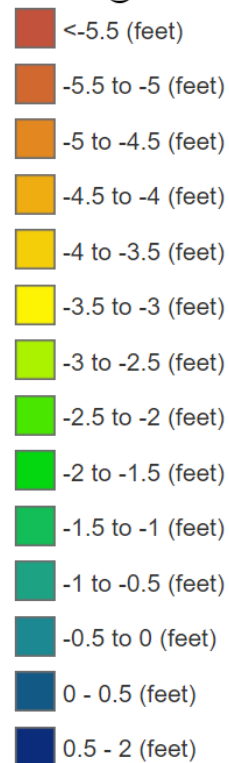
Groundwater Levels

- Fall 2022 Comparison to Minimum Threshold



Land Subsidence

- Period of record:
June 2015 – April 2023



Agricultural Well Permit Update

Yolo County Board of Supervisors

SEPTEMBER 12, 2023



Agricultural Well Permit Options

C. Temporary Ordinance: Moratorium on New Ag Well Permits

- Exclude replacement ag well, domestic wells, and de minimis users
- Exclude Clarksburg, South Yolo, and Capay Valley Management Areas
- Temporary until YSGA process updated – November/December 2023
- Return on 9/26 with proposed ordinance

Benefits:

- Removes geographic ambiguity
- Affects potential permittees equally

Concerns:

- Unknown impacts on agricultural operations





RESOLUTION NO. 23-01

Directing the Preparation and Implementation of
Updated Well Permit Review Procedures

NOW, THEREFORE, BE IT RESOLVED:

- YSGA is responsible for and committed to achieving the sustainability goals set out in the GSP. Adoption of standardized Well Permit Procedures will provide a clear framework for evaluating a permit application’s consistency with the GSP.
- YSGA recognizes data gaps and localized groundwater conditions may sometimes require a specialized approach for particular portions of the basin; appropriately addressing these issues can assist the YSGA in its pursuit of basinwide sustainability.
- YSGA staff are directed to prepare proposed Well Permit Procedures for consideration and review by the YSGA Board no later than November 20, 2023.
- The Well Permit Procedures to be proposed to the Board will include, at a minimum:
 - An outline of the processes to be followed in YSGA’s issuance of the written verifications required by the Executive Orders.
 - A draft map depicting regions identified as “Areas of Special Concern,” as well as a description of the characteristics that would trigger that special designation.
 - A draft map depicting regions of known gaps in groundwater monitoring data (“Data Gap Map”), identifying those portions of the basin where additional groundwater monitoring data is necessary to assist the YSGA in achieving the sustainability goals for the Subbasin.
 - Proposed standardized criteria for the hydrogeologist reports or other additional supporting information that will be required in the “Areas of Special Concern” and “Data Gap” regions for new agricultural well permits.
 - A proposed schedule for public review and comment on these materials.
- In response to stakeholder requests and separate from the Well Permit Procedures, the *Ad Hoc Drought Contingency Planning Committee* is authorized to work with the Executive Officer and Legal Counsel to investigate the potential demand management strategies, including but not limited to voluntary allocation systems, in the designated “Areas of Special Concern.” The Committee’s findings will be reported back to the YSGA Board before the agency takes any binding action to implement such a system.
- No later than January 22, 2024, the Executive Officer, supported by Legal Counsel, will present a proposed structure and schedule for the implementation of Management Area Advisory Committees, which shall be tasked with providing feedback on unique regional groundwater concerns, as well as serving as a public advisory forum to inform the Board’s continued pursuit of the sustainability goals.

Agenda

1. Call to Order and Determination of Quorum
2. Adding Items to the Posted Agenda
3. Public Forum
4. CONSIDERATION - Consent Items
5. Report of the Chair and Executive Officer
6. Update from LSCE on Fee Study Development
7. CONSIDERATION: Adopt Resolution 23-01
- 8. CONSIDERATION - WaterSMART Applied Science Grant Application**
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WaterSMART Applied Science Proposal

Builds on SGMA Implementation Grant funding & SEI's work with State Water Board

1. Improvements to the Yolo Subbasin Groundwater Model
2. Develop and Model Projects and Management Actions to Support Policy Decisions
3. Develop a Seasonal Forecasting Platform
4. Improve Data Management and Public Data Access

Groundwater Model Improvements



Incorporate new climate change models



Purchase up-to-date land use data for annual reporting



Develop future land use change scenarios



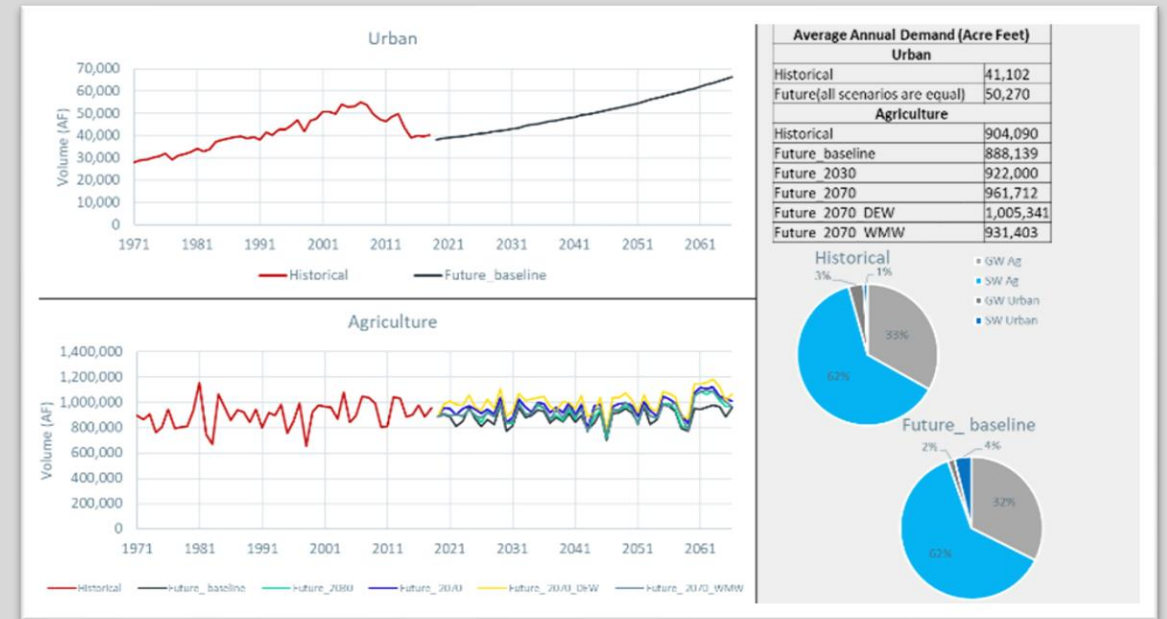
Correct modeling of managed wetlands



Incorporate economic elements into model



Use model to assess domestic well impacts



Develop and Model Projects and Management Actions to Support Policy Decisions

- Model planned projects
- Develop potential demand management strategies
- Model potential demand management strategies
- Financial analysis of potential demand management strategies

Project	Estimated AF/yr
YCFCWD Winter Recharge	20,000
East Adams & Acacia Canal Improvements	4,000
China Slough Rehabilitation	2-4,000
Dunnigan Area Recharge Program	5,000
ASR Well 31	700
Woodland Recycled Water Phase III	70
Oat Creek/Zamora Recharge	600

Develop a Seasonal Forecasting Platform

Forecast for SacWAM Upper Watersheds

Prepared by: [Stockholm Environment Institute](#), using the Water Evaluation And Planning system (WEAP)

Forecast date: March 1, 2023

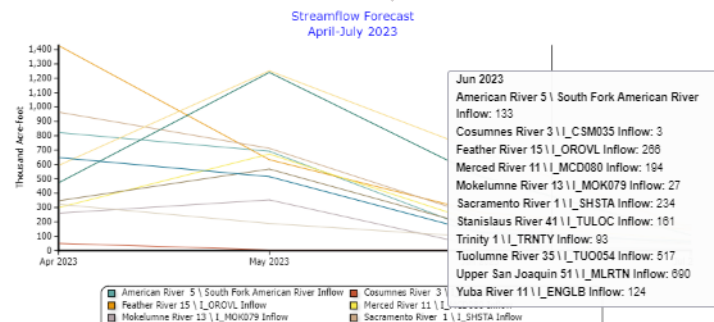
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SacWAM Forecast Summary (TAF)

Location	Oct '22	Nov '22	Dec '22	Jan '23	Feb '23	Mar '23	Apr '23	May '23	Jun '23	Jul '23	Aug '23	Sep '23	Apr-Jul	WY '23	% of WY Avg
Trinity	0.8	8.9	42.1	231.1	60.9	241.2	322.4	188.7	93.4	44.1	25.3	17.2	649	1,278	100%
Sacramento	141.3	159.1	272.0	1,137.3	304.8	828.8	964.2	712.3	233.8	179.2	188.5	161.6	2,090	5,261	93%
Feather	73.1	115.0	393.0	1,224.6	338.5	1,379.8	1,428.0	633.1	285.5	146.2	98.8	78.4	2,473	6,174	150%
Yuba	17.8	24.9	184.2	557.0	131.2	413.5	647.8	515.1	124.3	64.8	38.7	27.8	1,352	2,747	126%
American	9.9	20.0	219.4	1,050.5	214.0	664.8	822.0	691.8	132.7	53.9	26.8	17.3	1,700	3,923	145%
Cosumnes	1.4	3.2	52.2	431.9	64.6	112.7	49.9	5.1	3.2	3.0	2.9	2.8	61	733	194%
Mokelumne	0.6	8.7	40.6	253.7	59.2	170.8	260.5	353.0	27.3	12.1	7.9	6.6	653	1,198	161%
Stanislaus	6.8	10.3	74.4	402.1	87.3	192.9	347.0	567.7	180.8	46.4	25.1	17.2	1,122	1,938	166%
Tuolumne	5.3	24.7	200.3	537.4	128.8	318.9	471.6	1,241.0	517.0	106.9	54.1	34.5	2,338	3,641	188%
Merced	3.3	7.7	40.1	391.4	78.5	155.5	298.7	672.4	194.3	72.1	39.2	24.7	1,238	1,978	202%
San Joaquin	10.0	29.3	99.2	439.0	140.1	302.7	592.6	1,251.8	690.4	155.5	81.0	51.1	2,690	3,843	214%

Details

1. Seasonal Forecast at 11 Key Locations



- 7-month forecasting of water conditions within YSGA boundary
- Automated using YSGA model and climate forecasts from UC Merced

Improve Data Management & Access

- Migrate WRID to modern system
- Add support for additional sustainability indicators
- Improve connection to statewide database
- Upgrades to yologroundwater.org site

CONSIDERATION

WaterSMART Applied Science Grant Application

- A) Adopt Resolution No. 23-02 Directing and Authorizing the Executive Officer to Prepare and Submit a WaterSMART Applied Science Grant Application**
- B) Approve the Letter of Support for the Groundwater Recharge Data Sharing and Modeling Improvements Project



RESOLUTION NO. 23-02

Directing and authorizing the Executive Officer to prepare and submit a WaterSMART Applied Science Grant to the U.S. Bureau of Reclamation (Bureau) and to enter into an agreement with the Bureau if successfully awarded

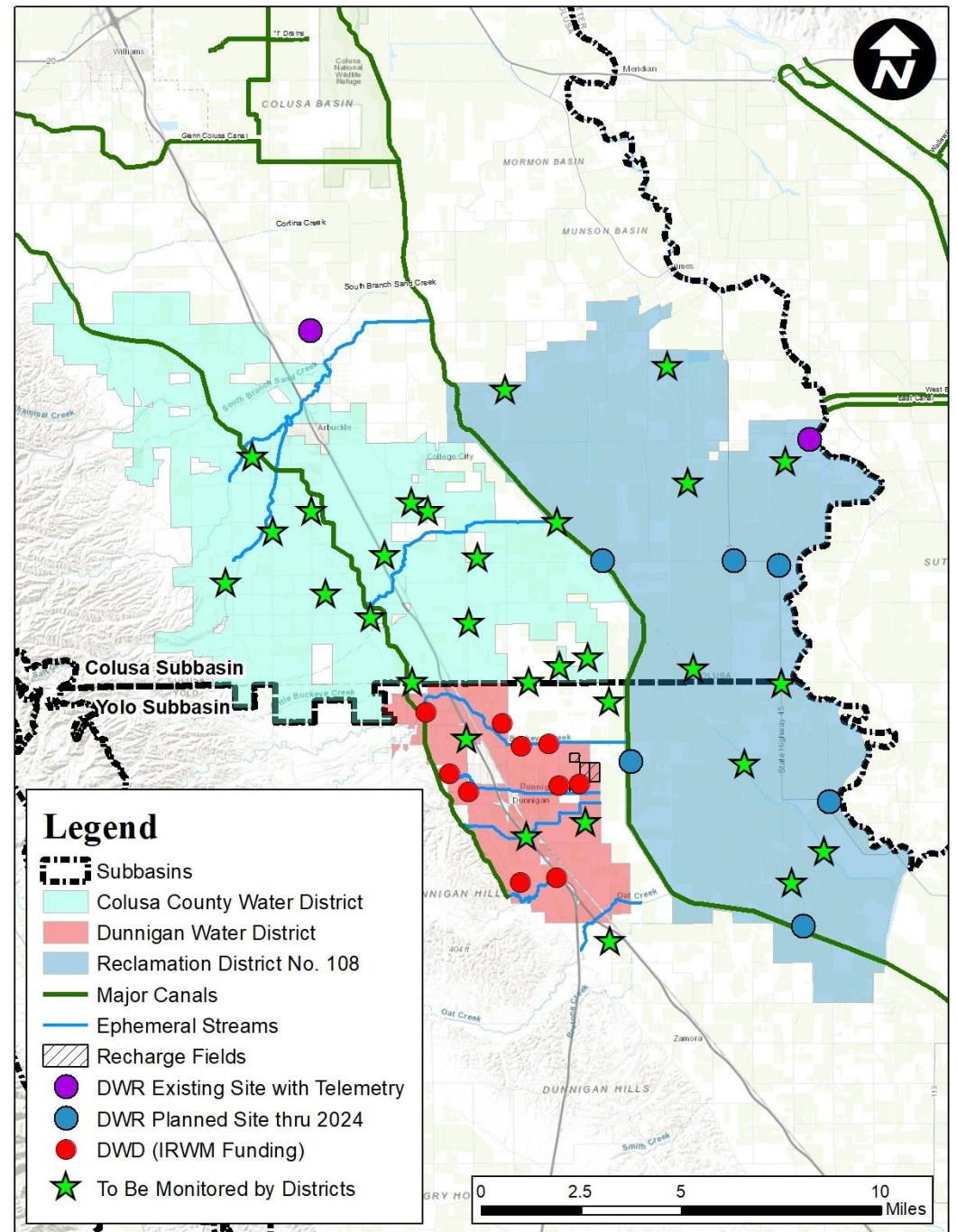
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WaterSMART Applied Science Grant Application

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B) Approve the Letter of Support for the Groundwater Recharge Data Sharing and Modeling Improvements Project

RD108, CCWD, and DWD Groundwater Recharge Data Sharing and Modeling Improvements



Agenda

1. Call to Order and Determination of Quorum
2. Adding Items to the Posted Agenda
3. Public Forum
4. CONSIDERATION - Consent Items
5. Report of the Chair and Executive Officer
6. Update from LSCE on Fee Study Development
7. CONSIDERATION: Adopt Resolution 23-01
8. CONSIDERATION - WaterSMART Applied Science Grant Application
- 9. Member's Reports and Future Agenda Items**
10. Next Meeting - October Special Board Meeting
11. Adjournment

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