



# YOLO SUBBASIN GROUNDWATER AGENCY

PUBLIC WORKSHOP – AUGUST 25, 2021



# OUTLINE

1. Introductions
2. Updates on GSP Development Process
3. Groundwater Conditions in the Yolo Subbasin
4. Sustainable Management Criteria
5. Projects and Management Actions
6. Wrap-up and Next Steps

# INTRODUCTIONS – YSGA TECHNICAL TEAM

- Kristin Sicke, Yolo County Flood Control & Water Conservation District (YCFC&WCD) / Yolo Subbasin Groundwater Agency (YSGA)
- Max Stevenson, YCFC&WCD / YSGA
- Jack Cronin, YCFC&WCD / YSGA
- Sarah Leicht, YCFC&WCD / YSGA
- Larry Rodriguez, GEI Consultants
- Satya Gala, GEI Consultants

# ATTENDEE POLL



# GSP DEVELOPMENT PROCESS

KRISTIN SICKE



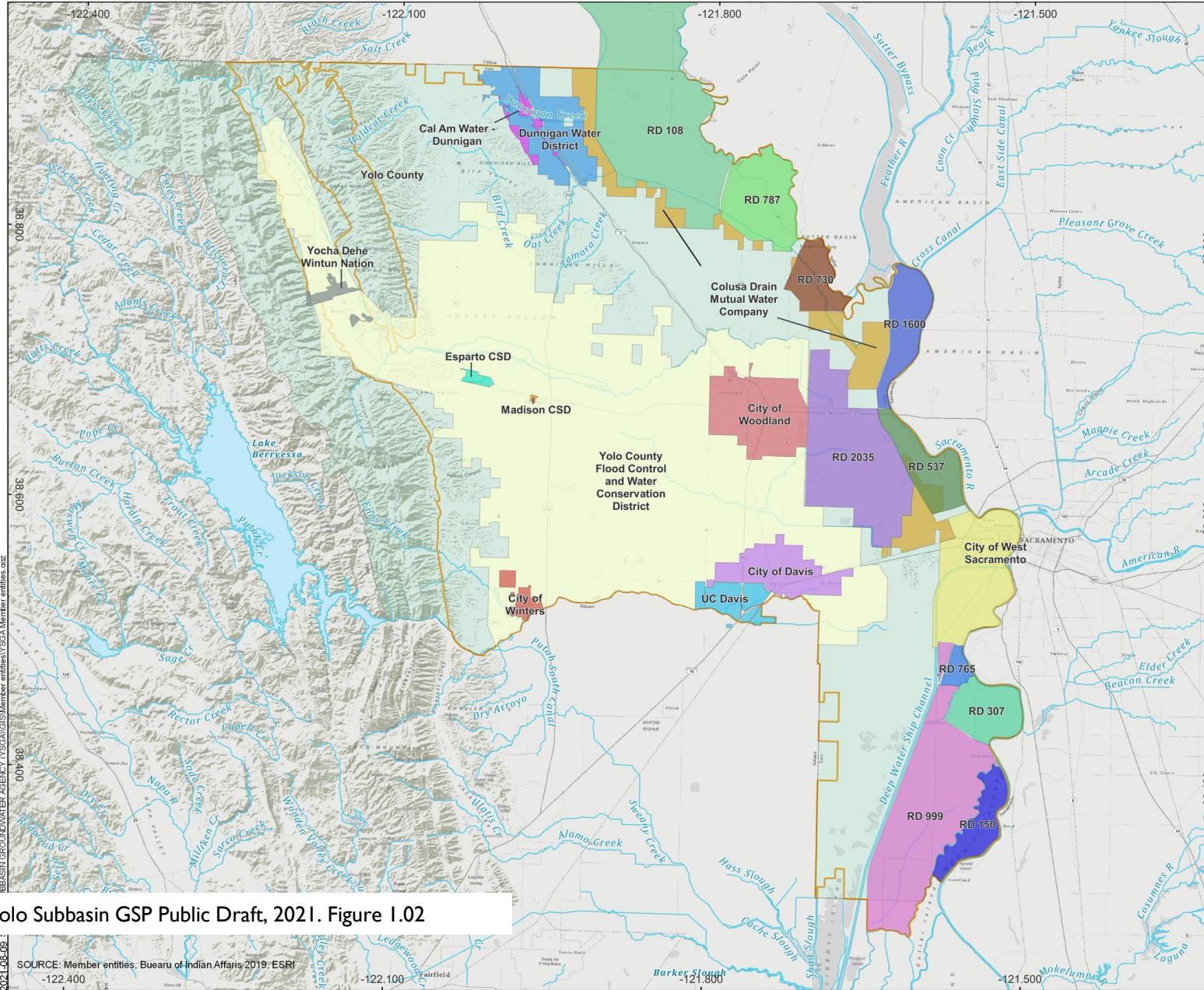
# SUSTAINABLE GROUNDWATER MANAGEMENT ACT

“Sustainable Groundwater Management Act” (SGMA) Passed by California Legislature August 29, 2014 and to become effective January 1, 2015.

The stated intent of the SGMA includes “To provide local groundwater agencies with the authority and technical and financial assistance necessary to sustainably manage groundwater”

Generally, “sustainability” means bringing the basin into balance by eliminating overdraft.

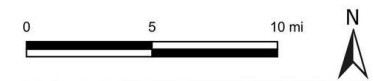




### MEMBER AGENCIES

- 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
  - YCFC&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



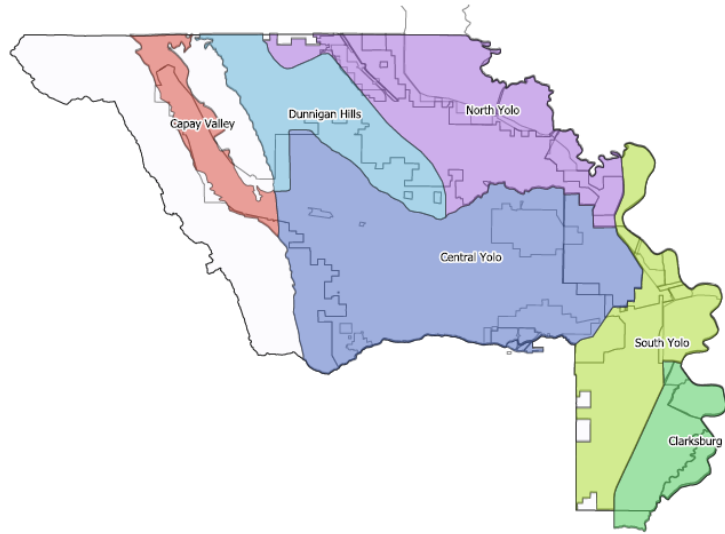
AUGUST 2021

**DRAFT**

Yolo Subbasin GSP Public Draft, 2021. Figure I.02

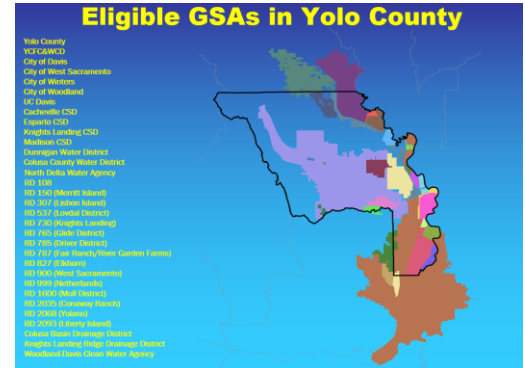
2021.08.09 SOURCE: Member entities, Bureau of Indian Affairs 2019. ESRI  
 -122.400 -122.100 -121.800 -121.500





**Yolo Subbasin Groundwater Agency**  
 25 Members

- Limited Authority
- For regional planning & reporting
- JPA defines authorities & responsibilities of GSA, Management Areas, and Eligible Entities



Groundwater Sustainability Plan

Management Areas are used to define sustainability goals and objectives for a hydrogeologic setting.

**Capay Valley**  
 YCFC&WCD  
 Yocha Dehe Wintun Nation  
 Yolo County (white area)  
 Yolo County Farm Bureau  
 Environmental Representative

**North Yolo**  
 Dunnigan WD  
 Colusa Drain Mutual Water Co.  
 California American Water  
 RDs 108, 730, and 787  
 YCFC&WCD  
 Yolo County (white area)  
 Yolo County Farm Bureau  
 Environmental Representative

**Central Yolo**  
 Cities of Davis, Woodland & Winters  
 UC Davis  
 YCFC&WCD  
 RD 2035  
 Esparto and Madison CSDs  
 Yolo County (white area)  
 Yolo County Farm Bureau  
 Environmental Representative

**Dunnigan Hills**  
 YCFC&WCD  
 Yolo County Farm Bureau  
 Yolo County (white area)  
 Environmental Representative

**South Yolo**  
 City of West Sacramento  
 Colusa Drain Mutual Water Co.  
 RDs 537 and 1600  
 YCFC&WCD  
 Yolo County Farm Bureau  
 Yolo County (white area)  
 Environmental Representative

**Clarksburg**  
 RDs 150, 307, 765, and 999  
 Yolo County Farm Bureau  
 Environmental Representative

Advisory Committee  
 Public

Advisory Committee  
 Public

Advisory Committee  
 Public

Advisory Committee  
 Public







Advisory Committee  
 Public

Advisory Committee  
 Public

# OVERALL GOAL OF GROUNDWATER SUSTAINABILITY PLAN

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

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

# GSP COMPONENTS

Hydrogeologic  
Conceptual  
Model

Water Budget

Stakeholder  
Communication  
and Engagement

Groundwater  
Monitoring and  
Reporting

Surface Water  
and Groundwater  
Modeling

Sustainable  
Management  
Criteria

# DRAFT GROUNDWATER SUSTAINABILITY PLAN

## PUBLIC DRAFT

### Yolo Subbasin Groundwater Agency 2022 Groundwater Sustainability Plan

Yolo County, CA

**Submitted to:**

Yolo Subbasin Groundwater Agency  
34274 State Highway 16  
Woodland, CA 95695

**Submitted by:**

GEI Consultants, Inc.  
2868 Prospect Park, Suite 400  
Rancho Cordova, CA 95670  
916.631.4500

August 2021

### Yolo Subbasin GSP Public Review

The Yolo Subbasin Groundwater Agency is requesting feedback on the Public Draft of the Groundwater Sustainability Plan (GSP).

Additionally, comments can be provided to us via E-mail at: [info@yolosga.org](mailto:info@yolosga.org)

1. What is your name?

2. What is your e-mail address?

3. What page number does your comment refer to?

4. Which line does your comment refer to?

5. What is your comment?

Done

# QUESTIONS/COMMENTS?

CLICK "RAISE HAND" OR TYPE IN CHAT

The Draft GSP is available at

<https://www.yologroundwater.org/yolo-groundwater-sustainability-plan>


To comment, visit

<https://www.surveymonkey.com/r/KB7DXYV>



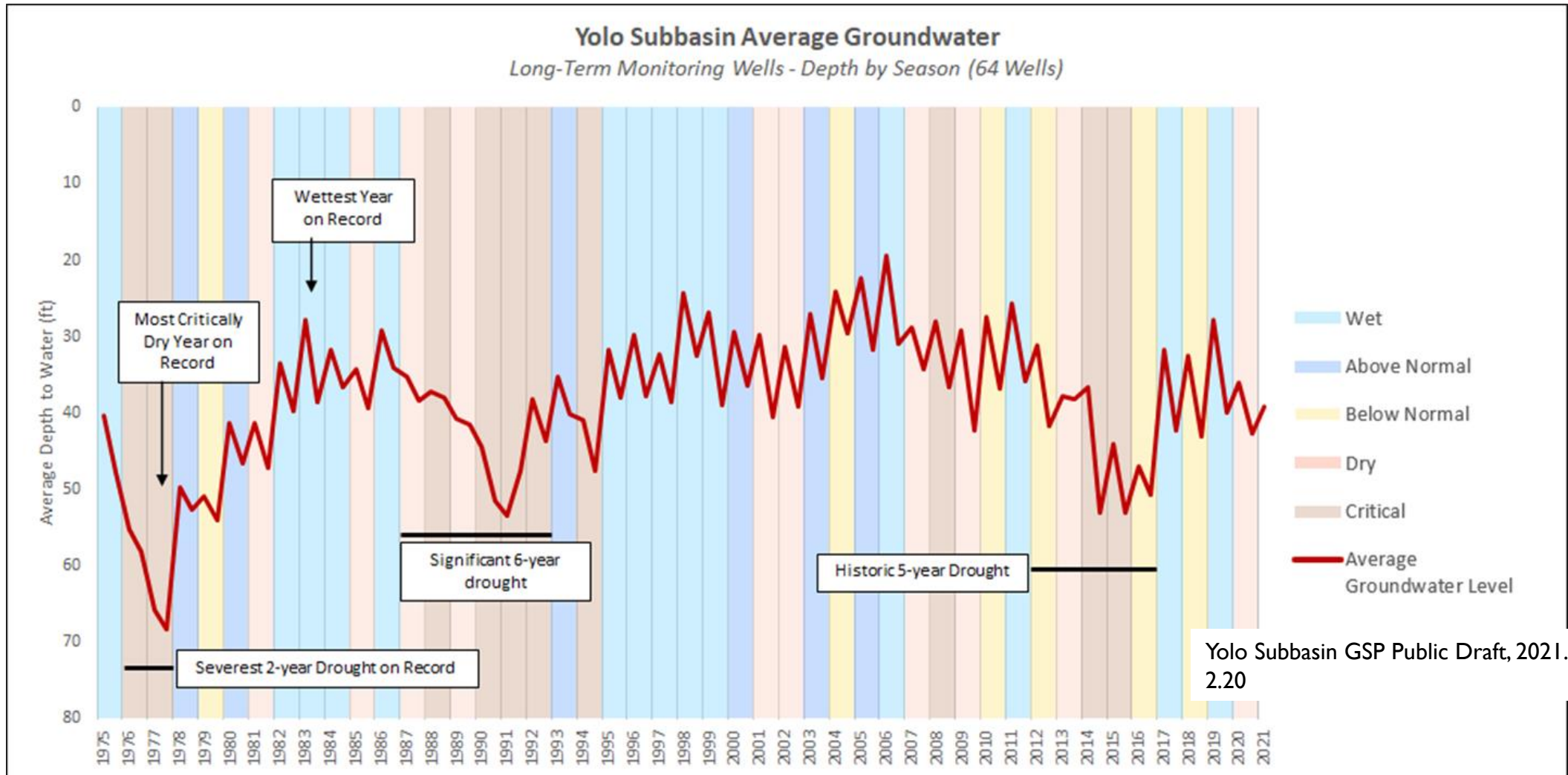
# GROUNDWATER CONDITIONS

MAX STEVENSON

- How is groundwater measured?
  - Historical groundwater conditions
  - Current conditions and 2021 drought
  - Future conditions
  - Data gaps and areas of concern
- 

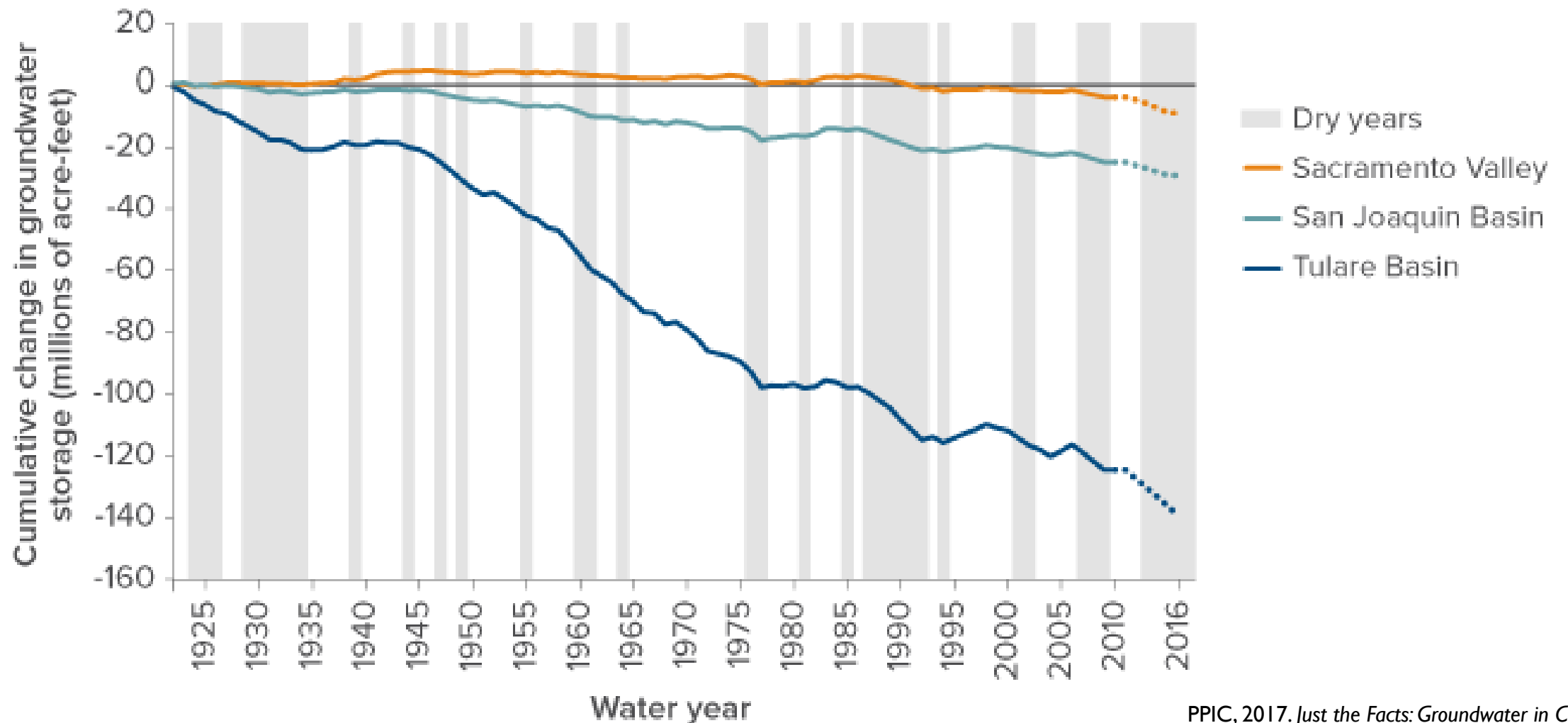


# HISTORICAL GROUNDWATER CONDITIONS





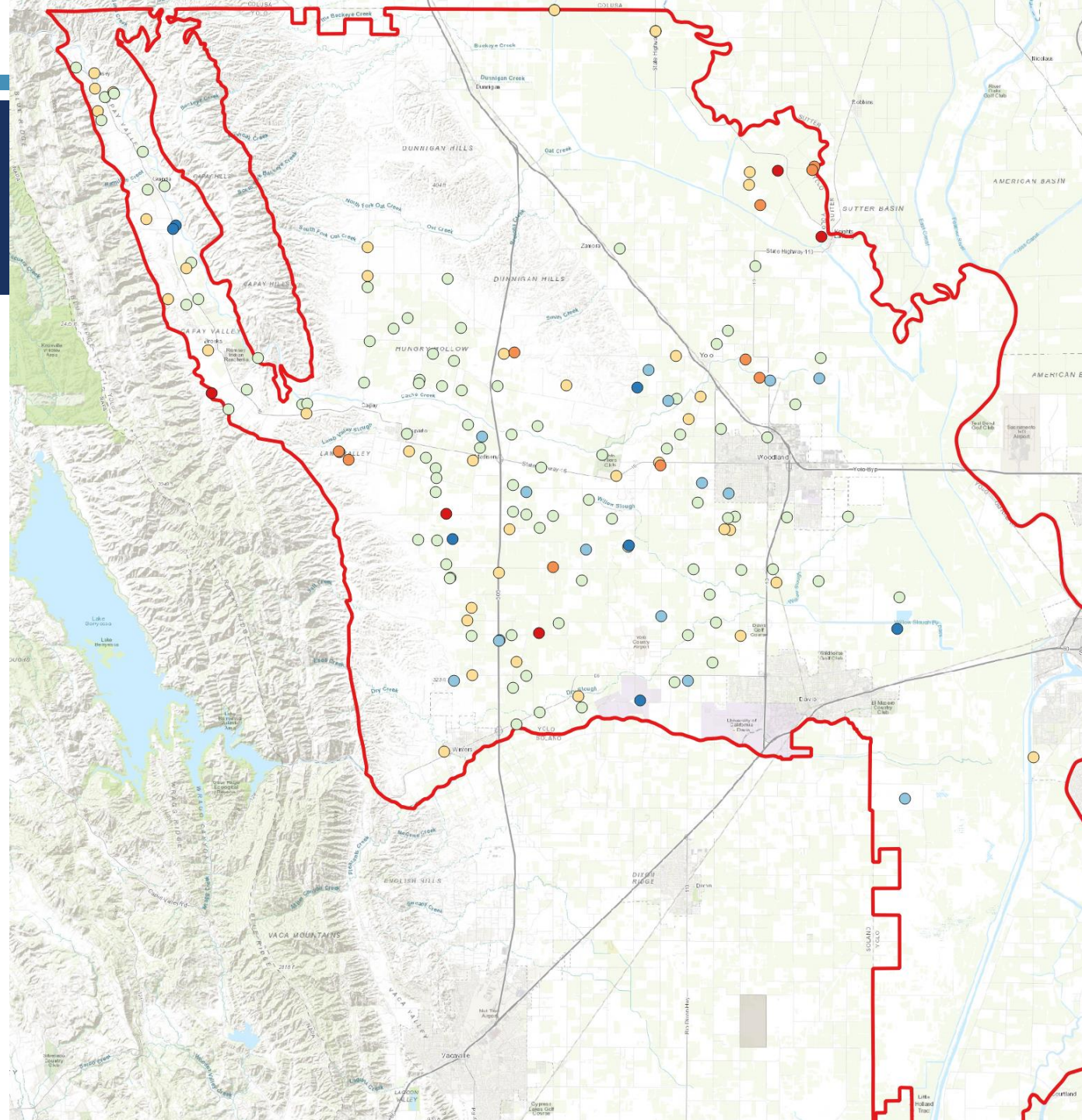
# HISTORICAL GROUNDWATER CONDITIONS



# 2021 DROUGHT CONDITIONS

- 33% of wells measured in August 2021 are below 2015 levels

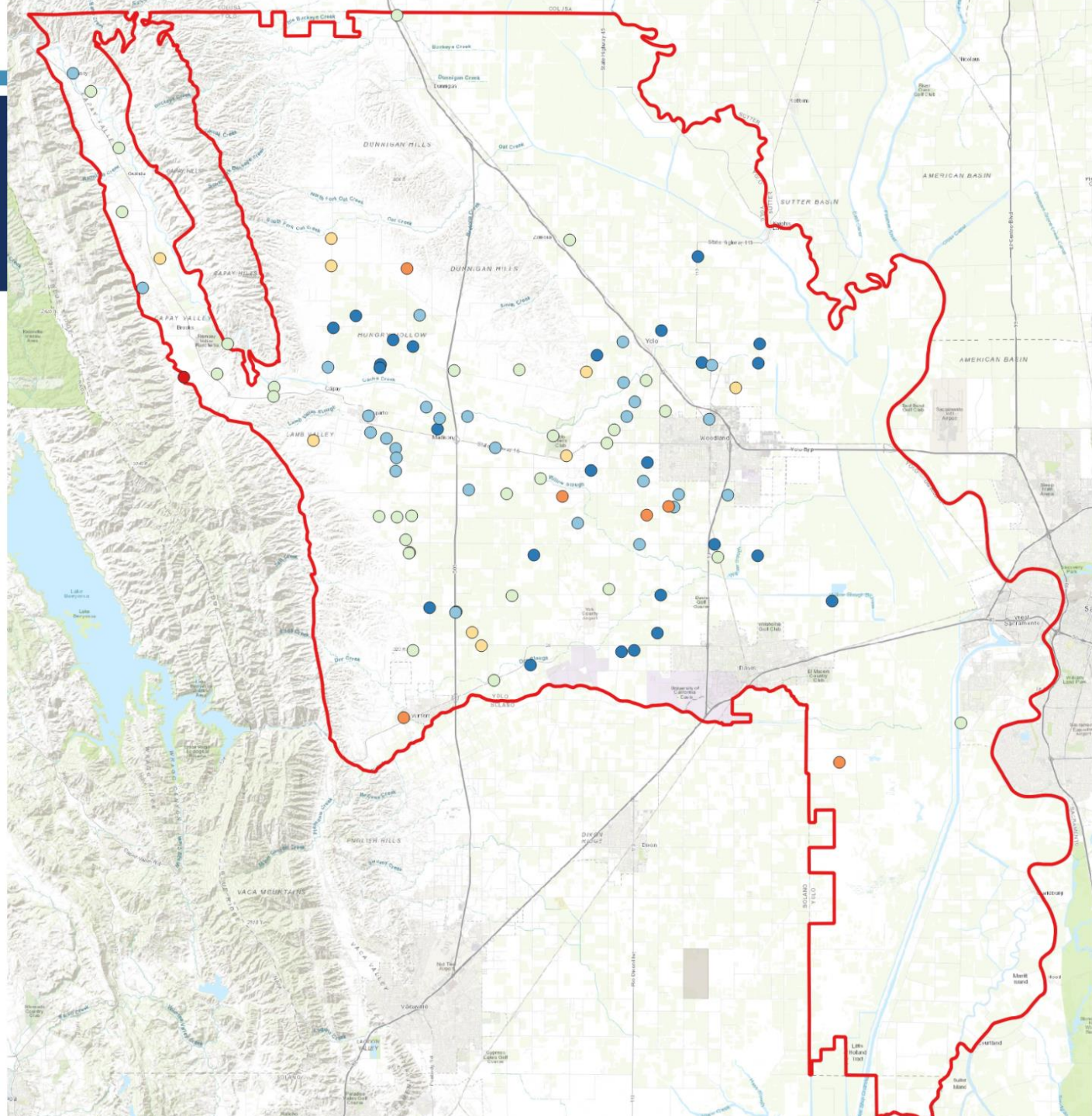
- > 30 ft below 2015 low
- 15 - 30 ft below 2015 low
- Less than 15 ft below 2015 low
- Less than 20 ft above 2015 low
- 15 - 30 ft above 2015 low
- > 30 ft above 2015 low



# 2021 DROUGHT CONDITIONS

- 17% of wells measured in August 2021 are below 1977 levels

- > 30 ft below 1977 low
- 15- 30 ft below 1977 low
- < 15 ft below 1977 low
- < 15 ft above 1977 low
- 15-30 ft above 1977 low
- > 30 ft above 1977 low



# DOMESTIC WELL IMPACT MITIGATION PROGRAM

- Drought conditions highlight a lack of County-wide resources for domestic wells going dry or experiencing issues
- The YSGA intends to develop a program to provide resources to domestic well owners during drought periods
- Management Action #8





# QUESTIONS/COMMENTS?


CLICK “RAISE HAND” OR TYPE IN CHAT

More information: [\*Chapter 2: Basin Setting\*](#)



# SUSTAINABLE MANAGEMENT CRITERIA

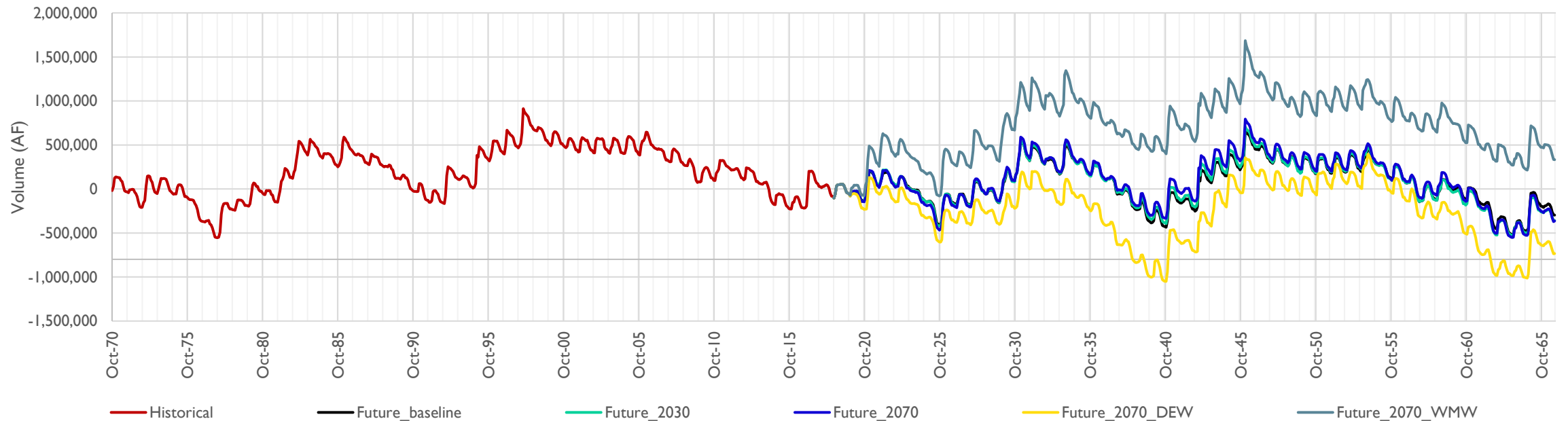
LARRY RODRIGUEZ

- Projected Future Conditions
  - What are Sustainable Management Criteria?
  - SMC's in the Yolo Subbasin
  - Representative Monitoring Network
- 

# PROJECTED FUTURE CONDITIONS

Change in Groundwater Storage, Yolo Subbasin

Yolo Subbasin GSP Public Draft, 2021. Figure 2.60



# WHAT ARE SUSTAINABLE MANAGEMENT CRITERIA?

## Sustainability Indicators



- **Sustainability Goal**
- **Undesirable Results**
  - Occurs when condition related to any of the six sustainability indicators become significant and unreasonable
- **Minimum Thresholds**
  - A groundwater condition that, when exceeded, may cause an undesirable result in the basin.
- **Measurable Objectives**
  - A quantitative “goal value” that represents a “normal” operational groundwater condition in the Subbasin



# YOLO SUBBASIN – SUSTAINABILITY GOAL

- Achieve sustainable groundwater management in the Yolo Subbasin by maintaining or enhancing groundwater quantity and quality through the implementation of projects and management actions to support beneficial uses and users.
- Maintain surface water flows and quality to support conjunctive use programs in the Subbasin that promote increased groundwater levels and quality.
- Operate within the established sustainable management criteria and maintain sustainable groundwater use through continued implementation of a monitoring and reporting program.
- Maintain sustainable operations to maintain sustainability over the implementation and planning horizon.

# SUSTAINABILITY

## ➤ SGMA Definition

- “The management and use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing **undesirable results**.”
  - Undesirable results are:
    - Chronic lowering of groundwater levels
    - Reduction of groundwater storage
    - Degraded water quality / contaminant plume migration
    - Land Subsidence
    - Depletion of interconnected surface water
    - Seawater intrusion

# MEASURABLE OBJECTIVES

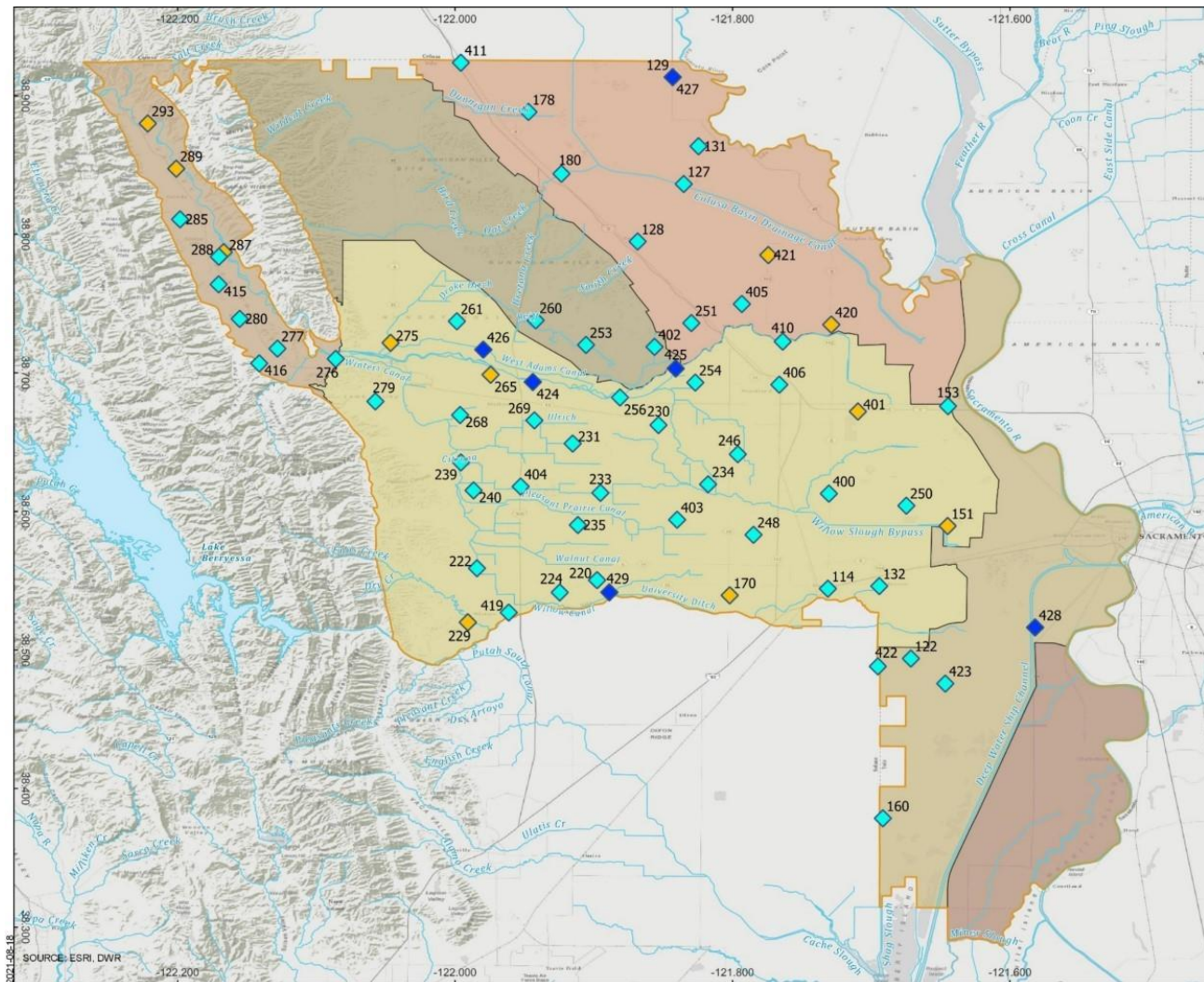
## ➤ Measurable Objective

- Where you want to be operating most of the time
- Represents a long-term average, not annual values
- YSGA's goal is to proactively manage the basin and to take local action to keep the basin at the MO

# MINIMUM THRESHOLD

## ➤ **Minimum Threshold**

- The level that you never want to go below or exceed
- Violation of Minimum Threshold is an indication that a portion of the Subbasin is not being managed sustainably
- Local call to action to avoid further declines
- YSGA's goal is to proactively manage the basin and to take local action to keep the basin above MT



### Representative Monitoring Well Network

- Representative Well Locations**
- ◆ Groundwater Storage and Elevation
  - ◆ Surface Water Groundwater Interaction
  - ◆ SW-GW Interaction Only
- YSGA Management Areas**
- Capay Valley
  - Central Yolo
  - Clarksburg
  - Dunnigan Hills
  - North Yolo
  - South Yolo
  - Yolo Subbasin
  - Water Bodies



Yolo Subbasin Groundwater Agency  
[yologroundwater.org](http://yologroundwater.org)

Yolo County, California



AUGUST 2021

**DRAFT**

# REPRESENTATIVE MONITORING



# QUESTIONS/COMMENTS?

CLICK “RAISE HAND” OR TYPE IN CHAT

More information: [\*Chapter 3: Sustainable Management Criteria\*](#)



# PROJECTS AND MANAGEMENT ACTIONS

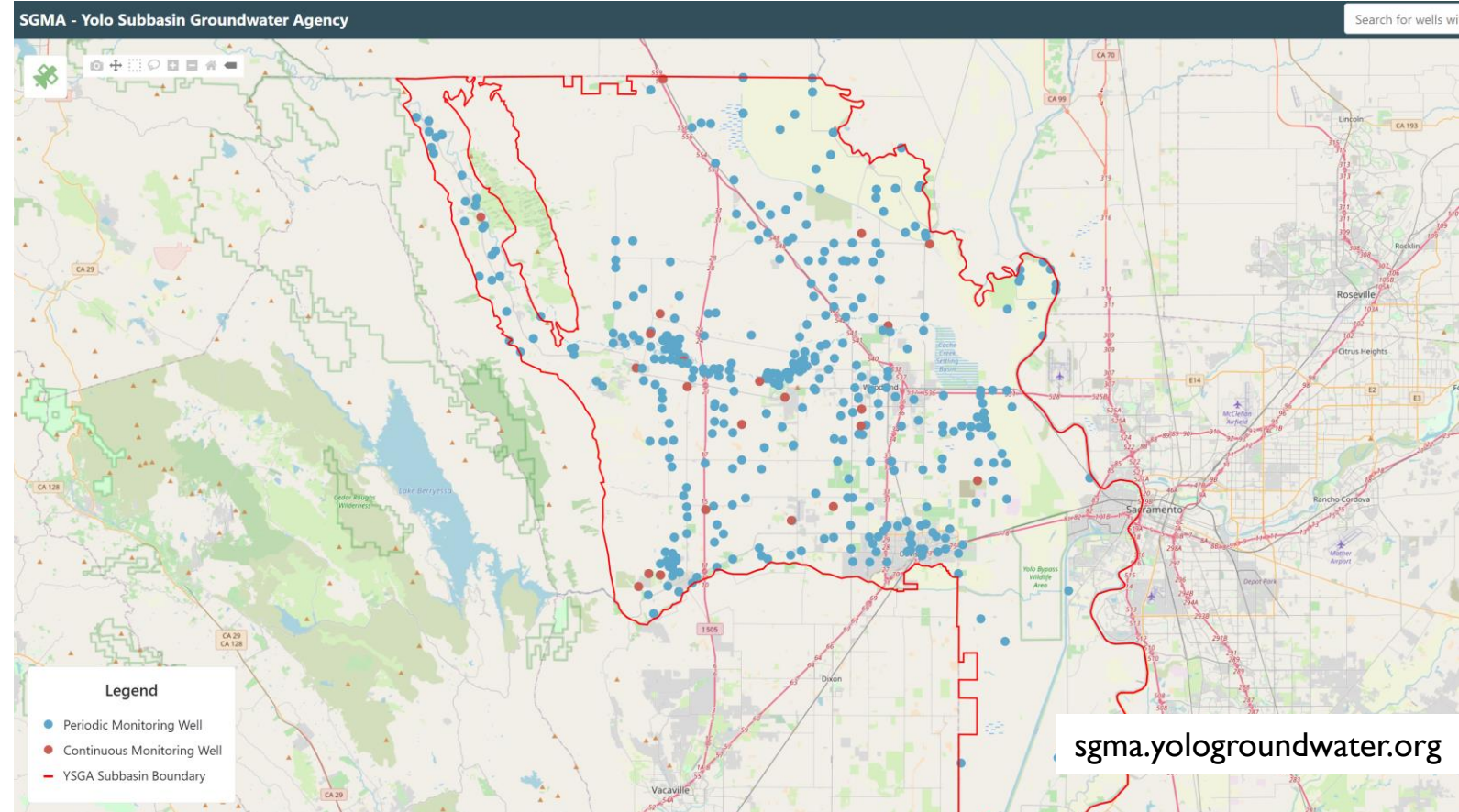
JACK CRONIN

- Purpose of Projects and Management Actions
  - Overview of Management Actions
  - Example Subbasin-wide Projects
- 

# PROJECTS AND MANAGEMENT ACTIONS

- The goals of the projects and management actions are to:
  - **Ensure** the subbasin remains sustainable over the next 50 years
  - **Keep** water levels at the measurable objective in the long term
  - **Prevent** the exceedance of minimum thresholds
  - **Prevent** undesirable results
- **12** Proposed & Ongoing Management Actions
- **75** Proposed & Ongoing Projects

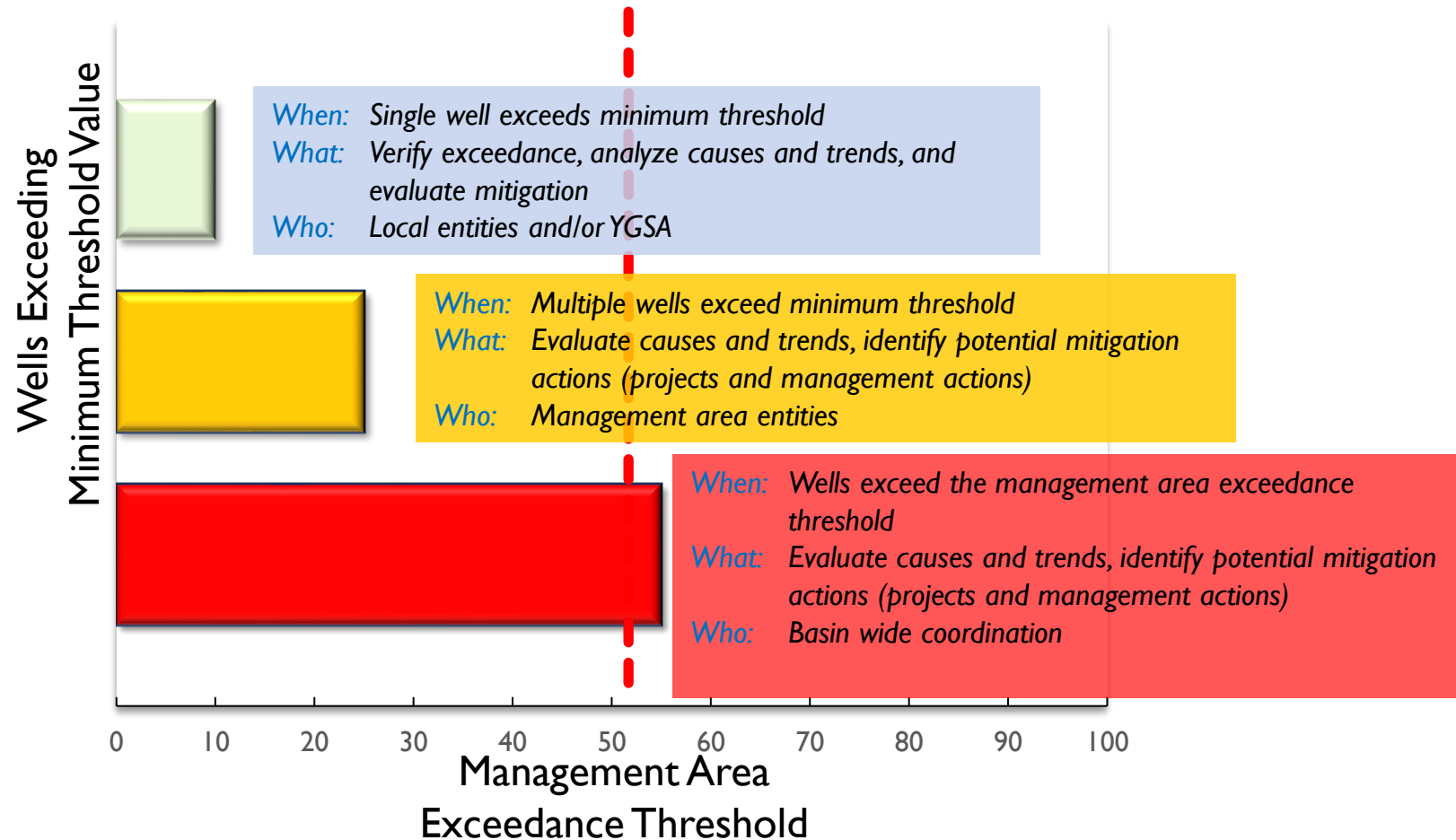




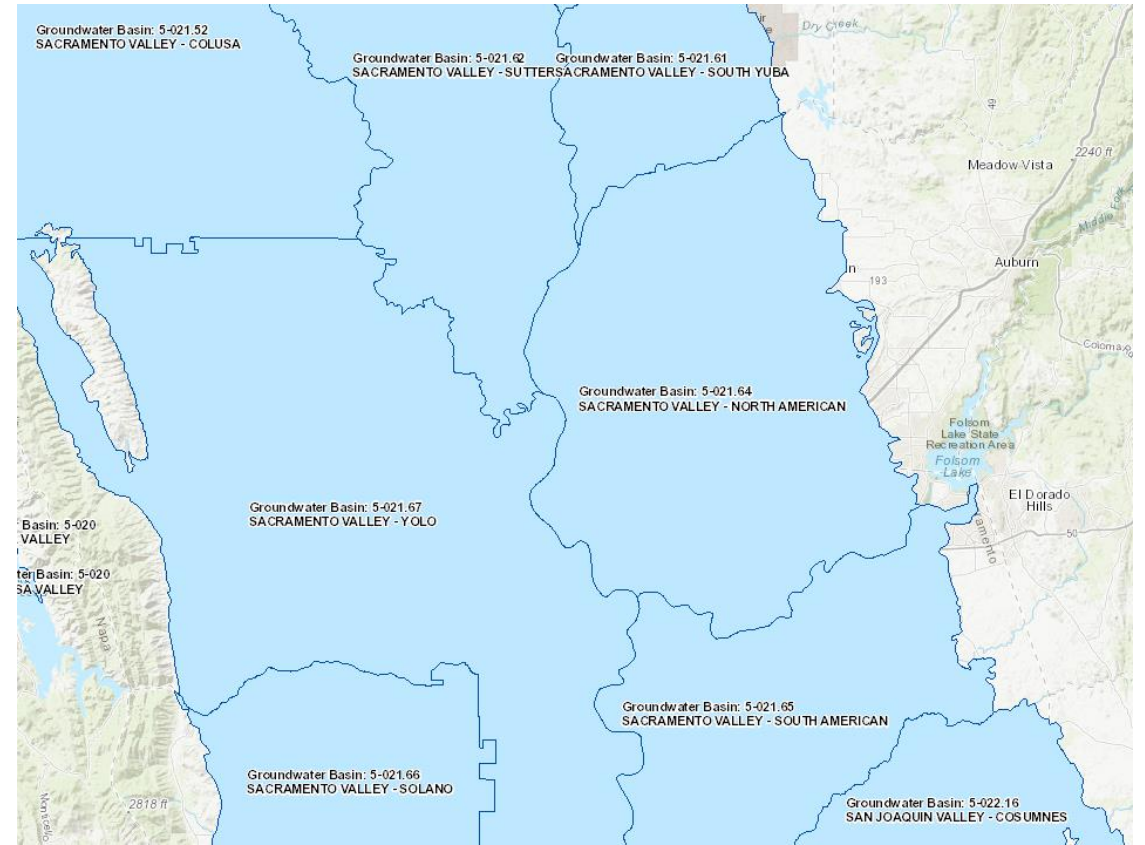
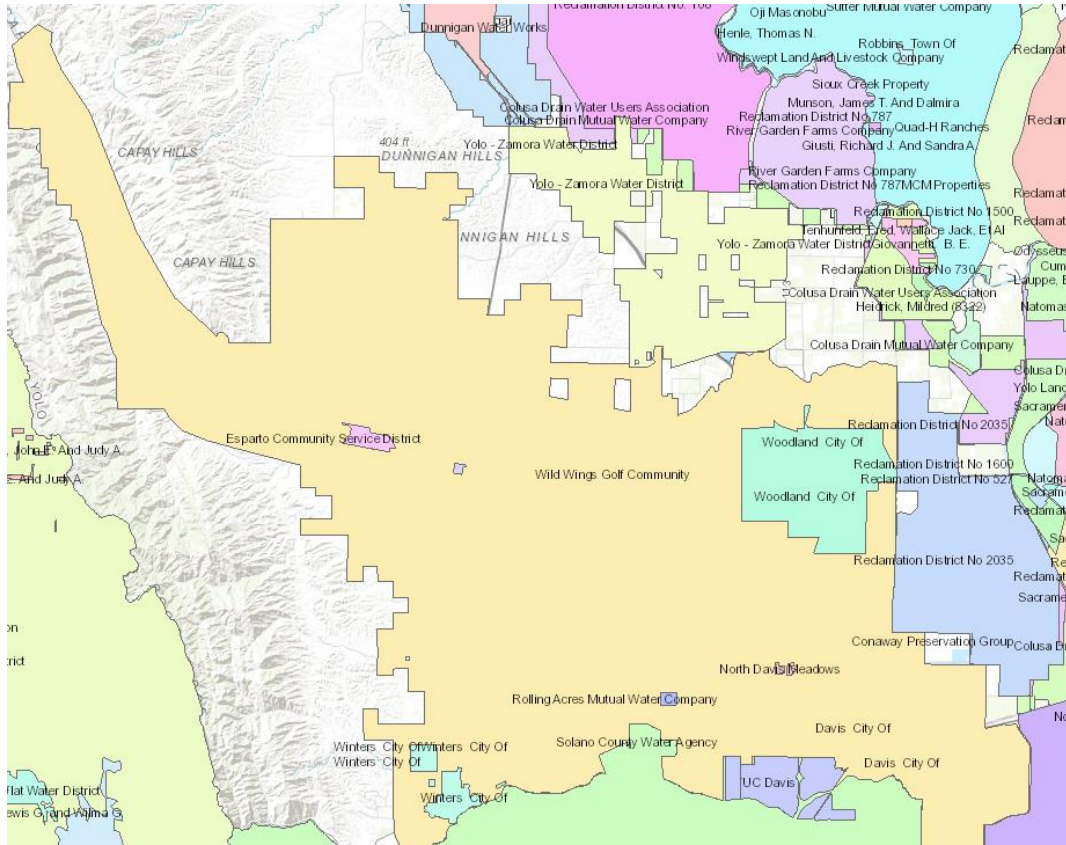
# MA I: CONTINUED AND IMPROVED GROUNDWATER MONITORING PROGRAM

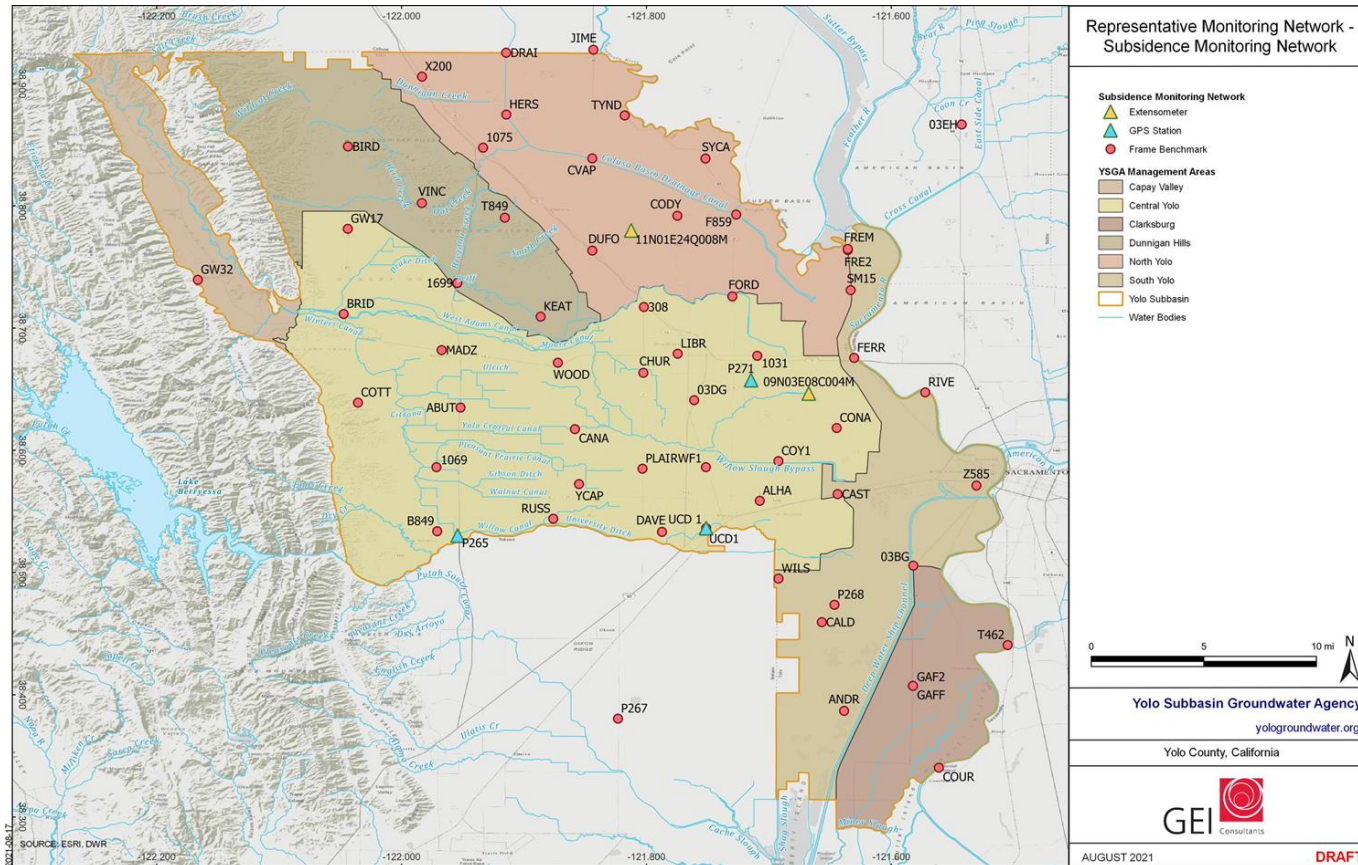
# MA 2: Coordinated Response to Minimum Threshold Exceedances

*Exceeding the Minimum Threshold in any well is important and will be addressed*



# MA 3: Continue Coordination Efforts with Other Management and Monitoring Entities





# MA 4: SUBSIDENCE MONITORING PROGRAM

# MA 5: Preparedness Through Increased Groundwater Recharge and Managed Aquifer Recharge Projects



Credit: Stanford University



# MA 6: CONJUNCTIVE WATER USE PROGRAM

# MA 7: Increased Outreach and Information Sharing of Groundwater Resources and Knowledge Within the Yolo Subbasin

## Yolo Subbasin Groundwater Agency

Contact Us: (530) 662-3211

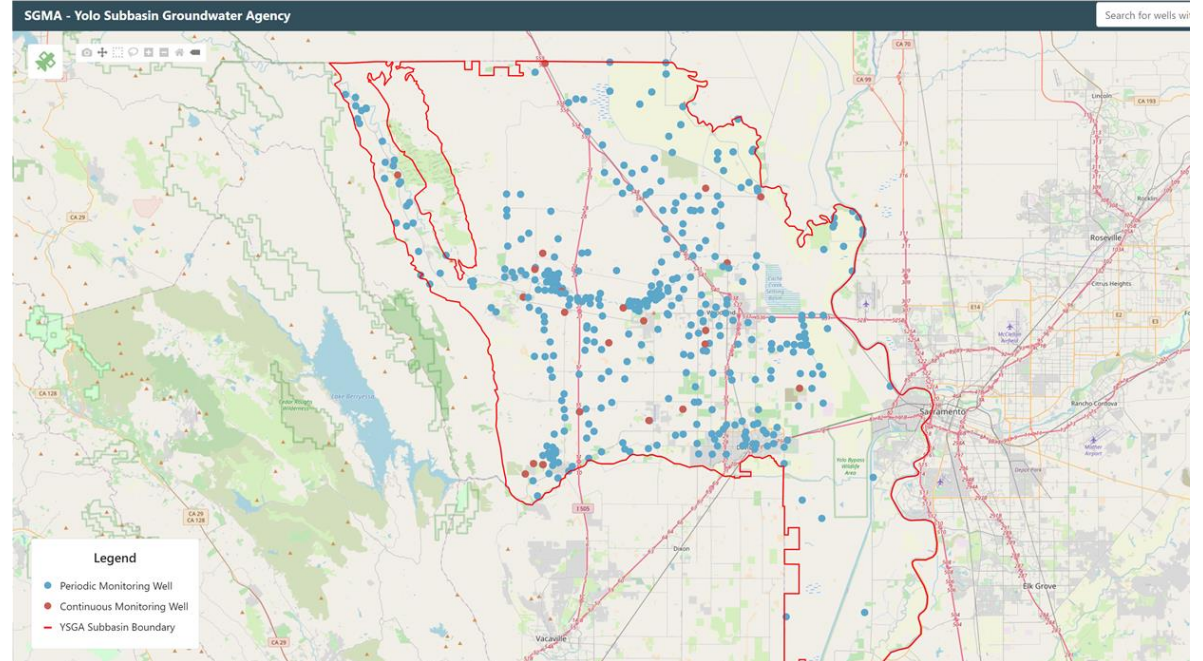
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### QUICKLINKS

- MEETINGS
- BOARD MEMBERS
- BOARD OFFICERS AND STAFF
- GROUNDWATER WELL NEWS
- PUBLIC OUTREACH
- GSP - DRAFT SECTIONS
- INDIVIDUAL WELL OWNER ASSESSMENT
- GSP - PROJECTS AND MANAGEMENT ACTIONS





## MA 8: DOMESTIC WELL IMPACT MITIGATION PROGRAM

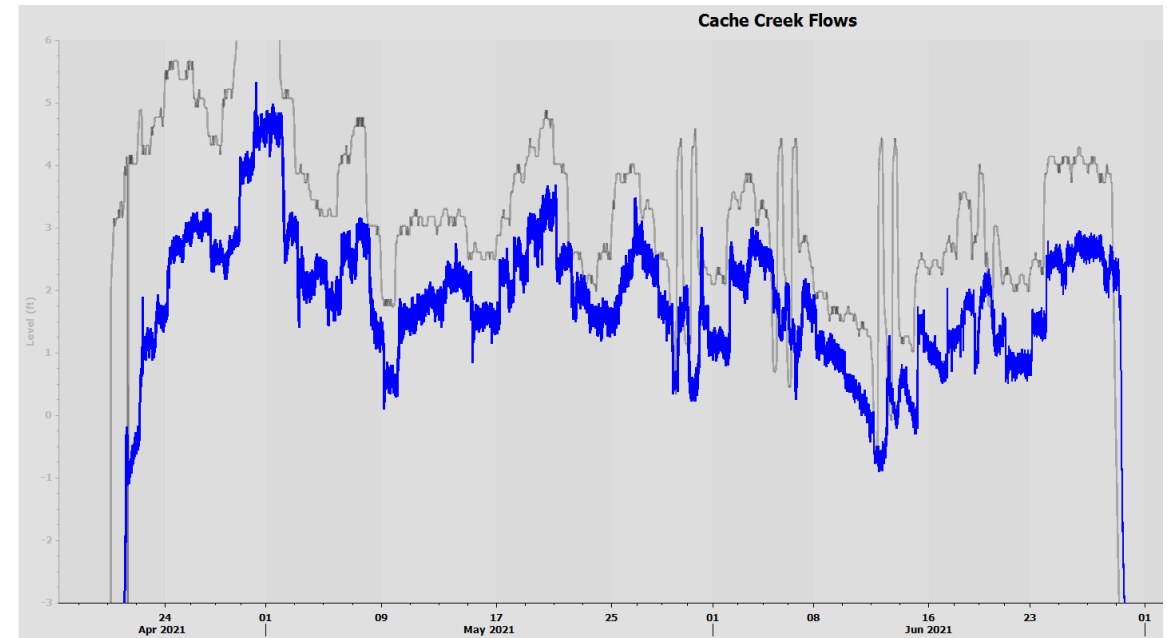
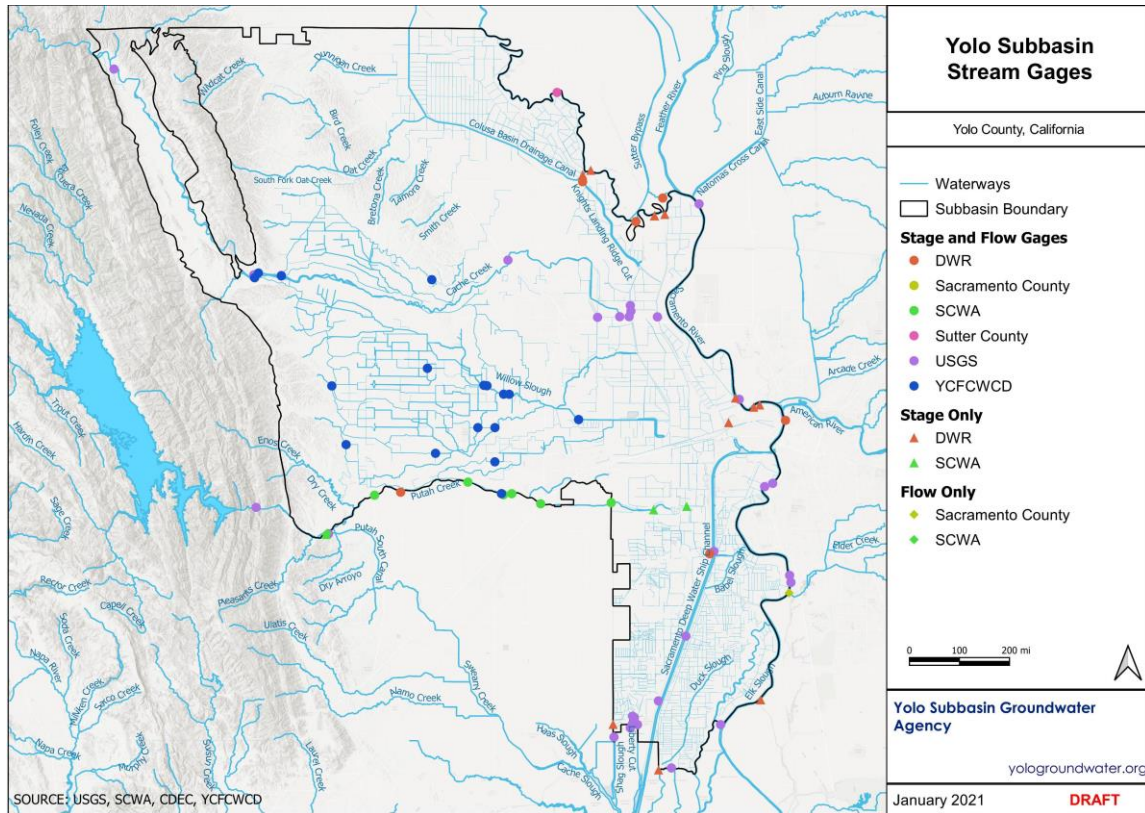
## Framework for a Drinking Water Well Impact Mitigation Program



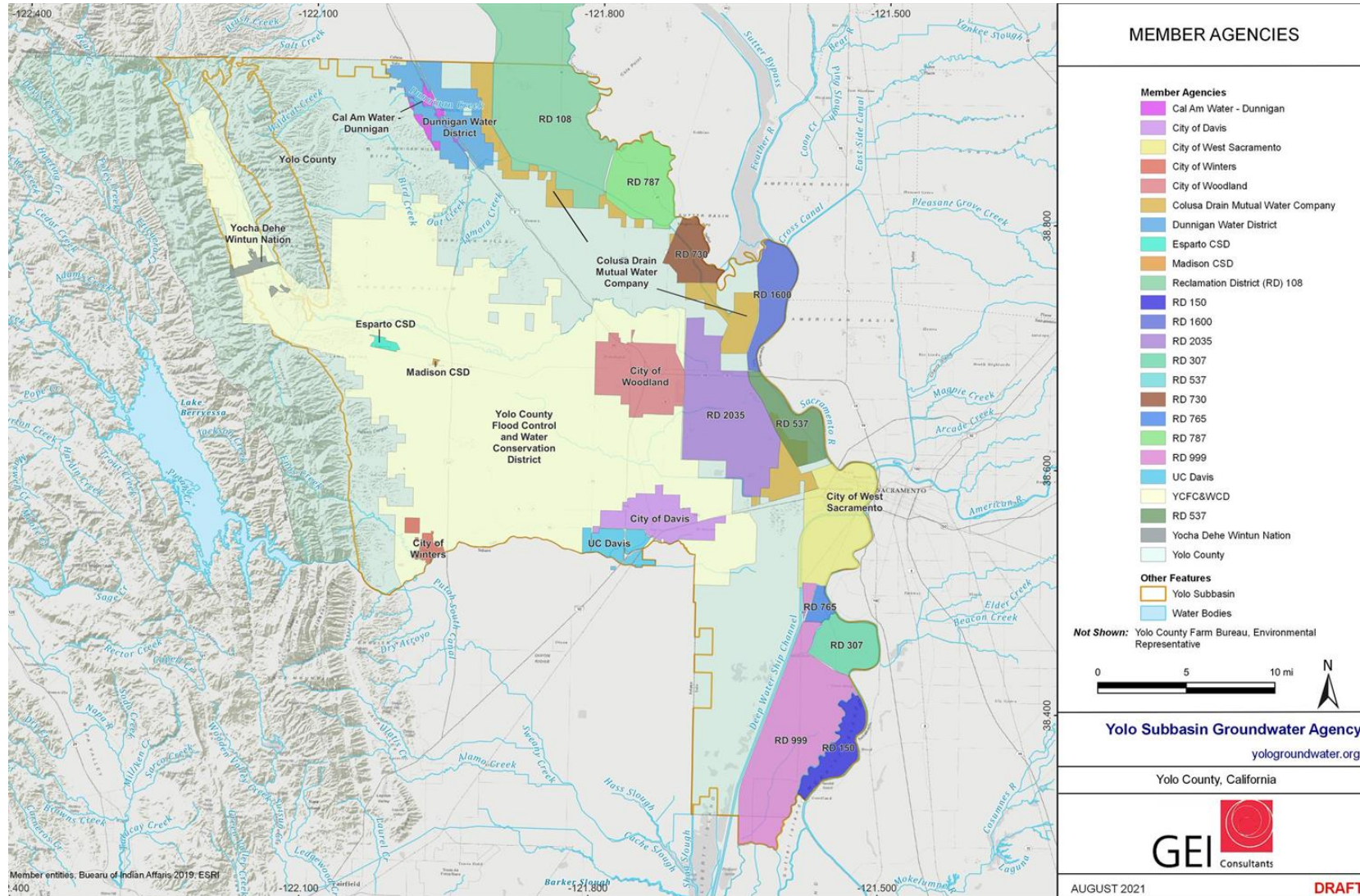
Written by Self-Help Enterprises, Leadership Council for  
Justice and Accountability, and the Community Water Center



# MA 9: Surface Water Monitoring Program

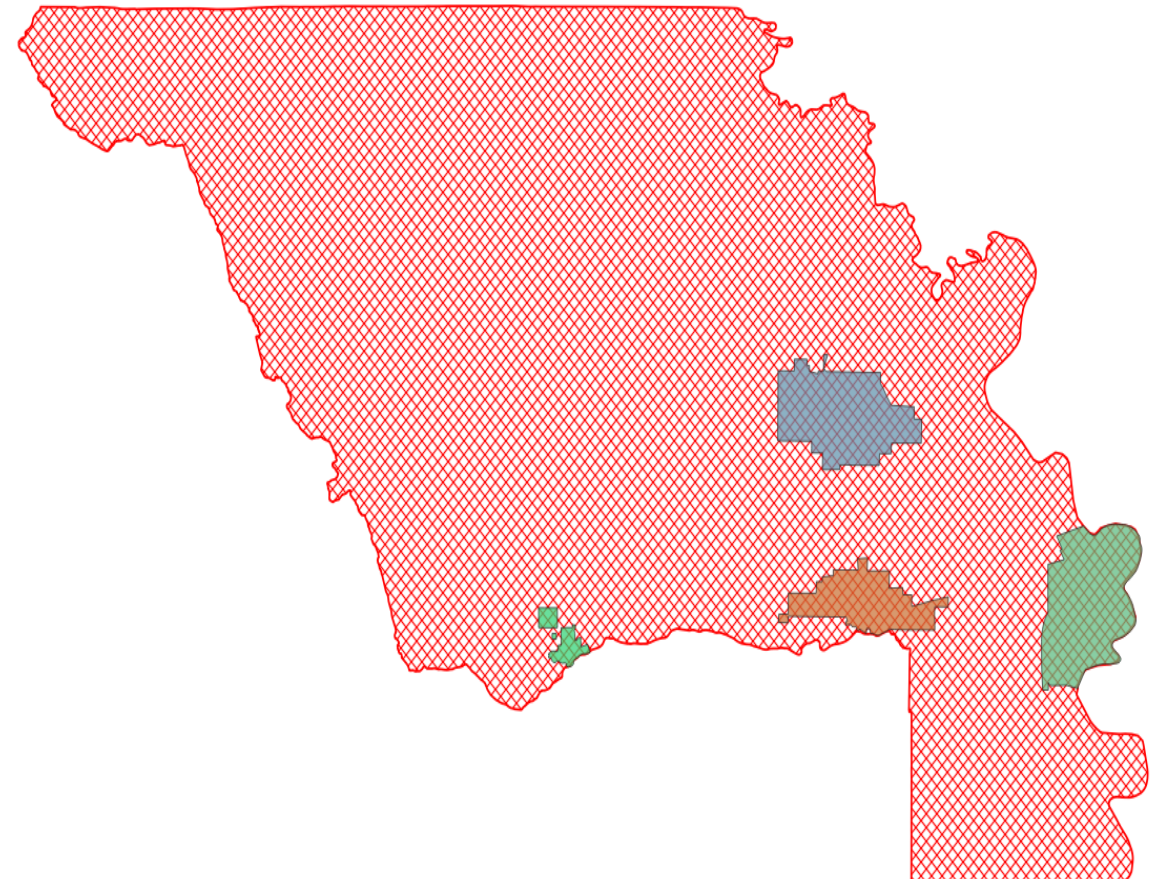


# MA 10: MANAGEMENT CONSIDERATION OF GREY AREAS IN THE YOLO SUBBASIN

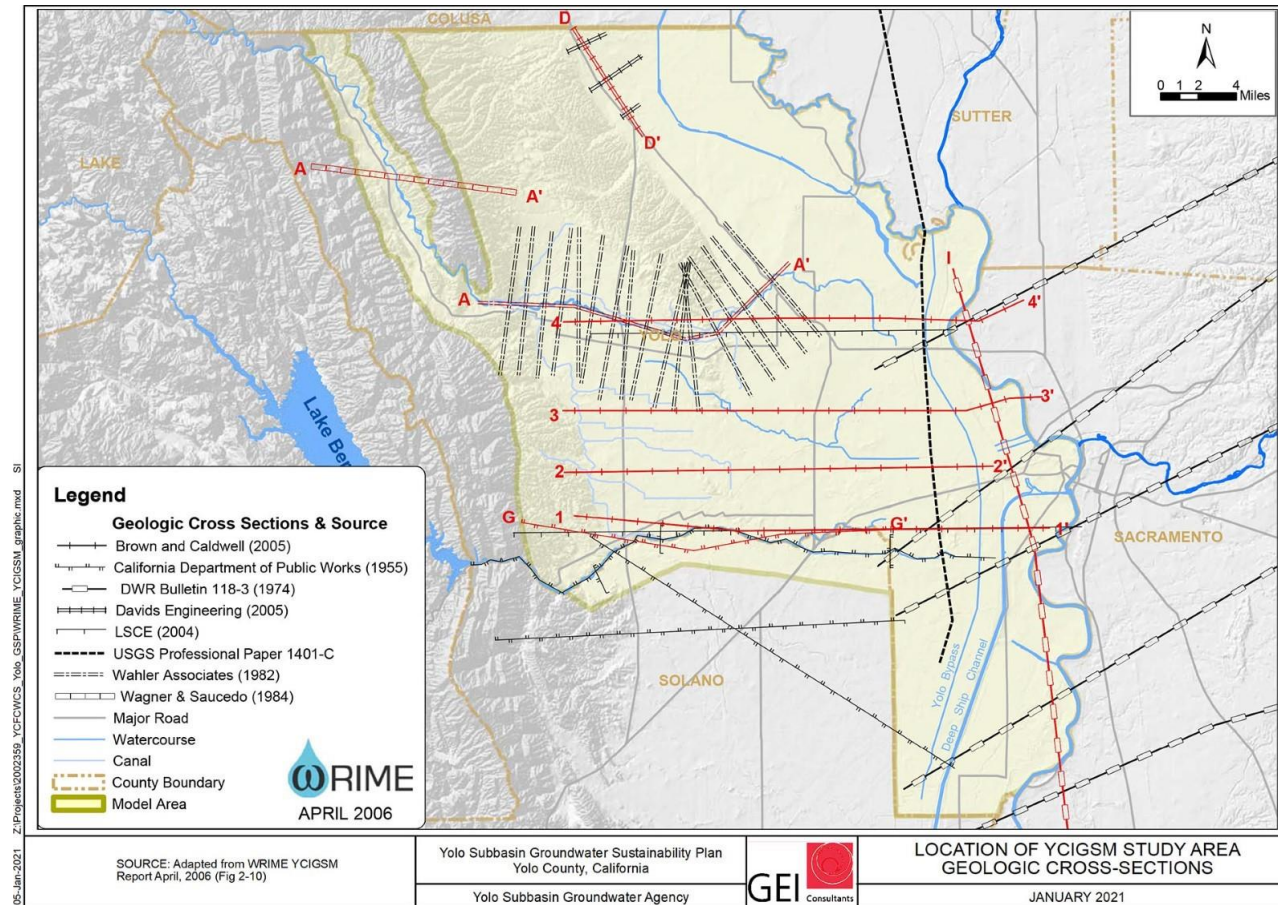
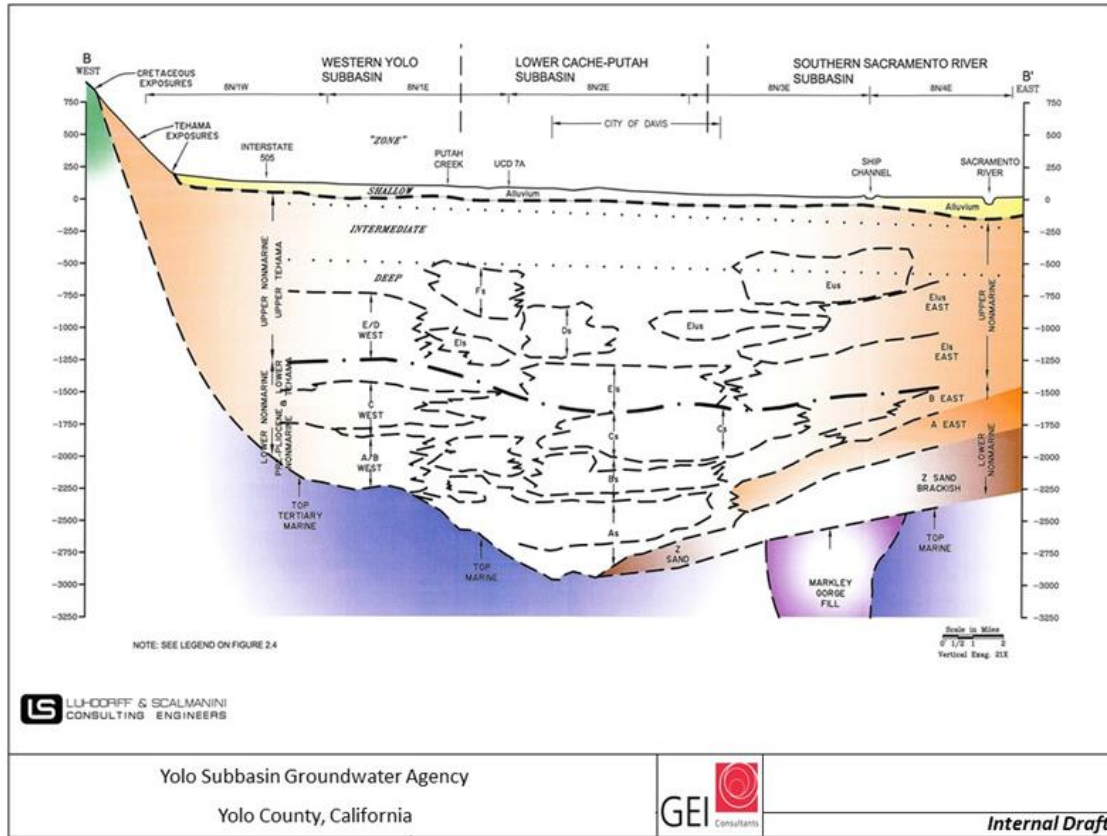


# MA 11: Coordination Efforts with Land Use Planning Entities

- Yolo County
- Davis
- Woodland
- Winters
- West Sacramento



# MA 12: Continued Investigation of Subsurface Geology and Aquifer Properties in the Yolo Subbasin



## EXAMPLE PROJECTS – SUBBASIN WIDE

- Identification of Locations Vulnerable to Damage from Subsidence – Catalog of Infrastructure Damage Reports
- Groundwater Model Enhancement Program/YSGA Model Improvements
- Water Resources Information Database Project
- Topographic Mapping (LiDAR Project)
- Additional Monitoring Wells Along Ephemeral Streams, Interconnected Surface Water Bodies, and near GDEs
- Vegetative and Aquatic Surveys in Related to Groundwater Dependent Ecosystems
- AEM Flights to Improve subsurface Geology Data
- Abandoned Well Incentive Program



# QUESTIONS/COMMENTS?

CLICK “RAISE HAND” OR TYPE IN CHAT

More information: [\*Chapter 5: Projects and Management Actions\*](#)



# WRAP-UP AND NEXT STEPS



## NEXT STEPS

- The Draft GSP is posted on the website; you will receive a link after this meeting
- The Draft GSP is available at
  - <https://www.yologroundwater.org/yolo-groundwater-sustainability-plan>
  - A hard copy is available at request – call 530-662-3211
- Submit comments on the Draft GSP by **October 27, 2021**
- The Final GSP will be submitted by **January 31, 2022**
- To sign up for YSGA updates, email **info@yolosga.org**



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# ADDITIONAL QUESTIONS/COMMENTS?

CONTACT US!

THANK YOU FOR ATTENDING!  
PLEASE ANSWER A SHORT SURVEY AFTER THE MEETING

[www.yologroundwater.org](http://www.yologroundwater.org)  
530-662-3211  
[info@yolosga.org](mailto:info@yolosga.org)