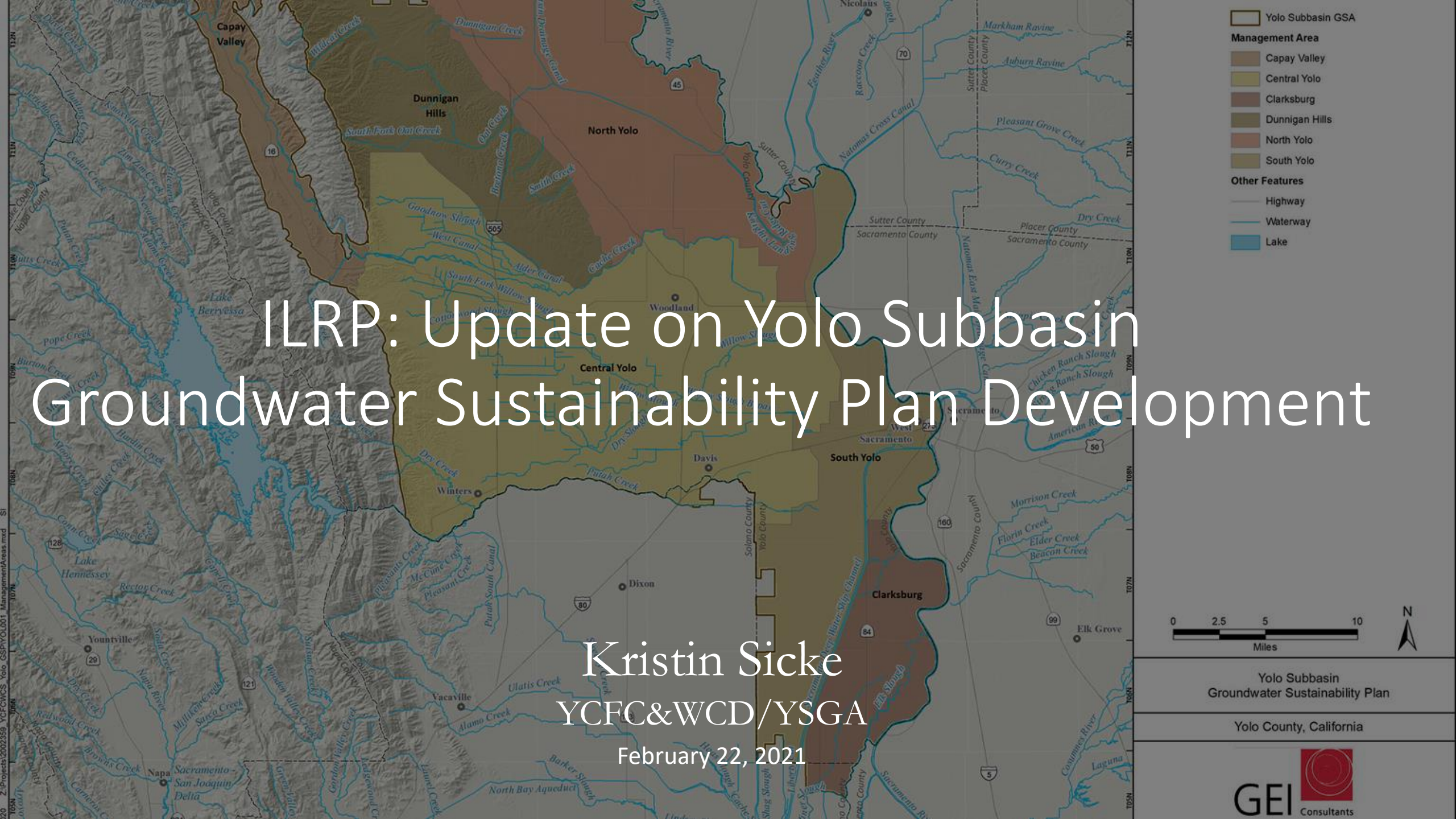


ILRP: Update on Yolo Subbasin Groundwater Sustainability Plan Development

Kristin Sicke
YCFC&WCD/YSGA

February 22, 2021

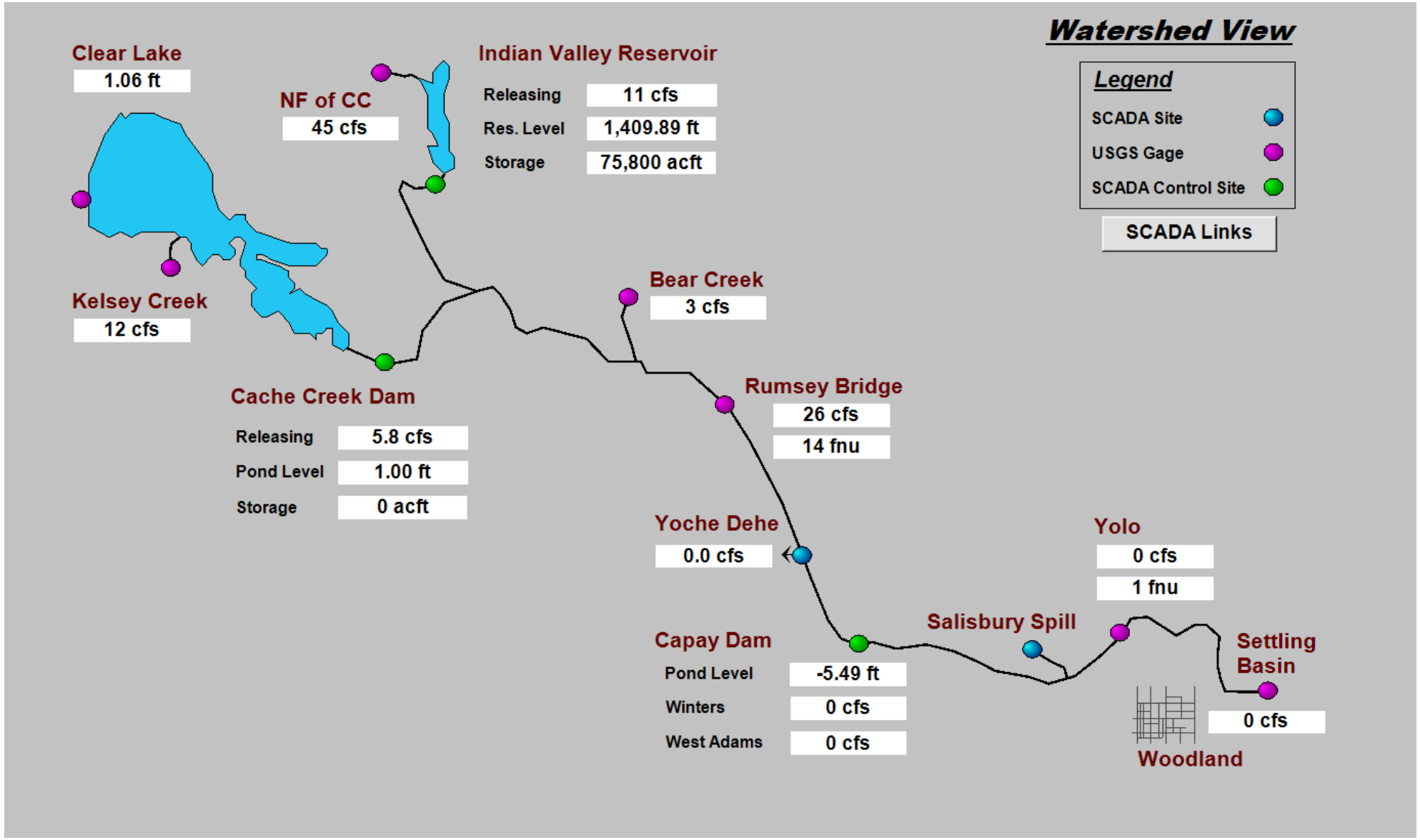
Agenda

- Water Conditions Update
- Overview of YSGA
- Update on the Development of the Yolo Subbasin GSP
- Multi-Benefit Project Opportunity

Water Conditions Update

Current Water Conditions (02-22-2021)

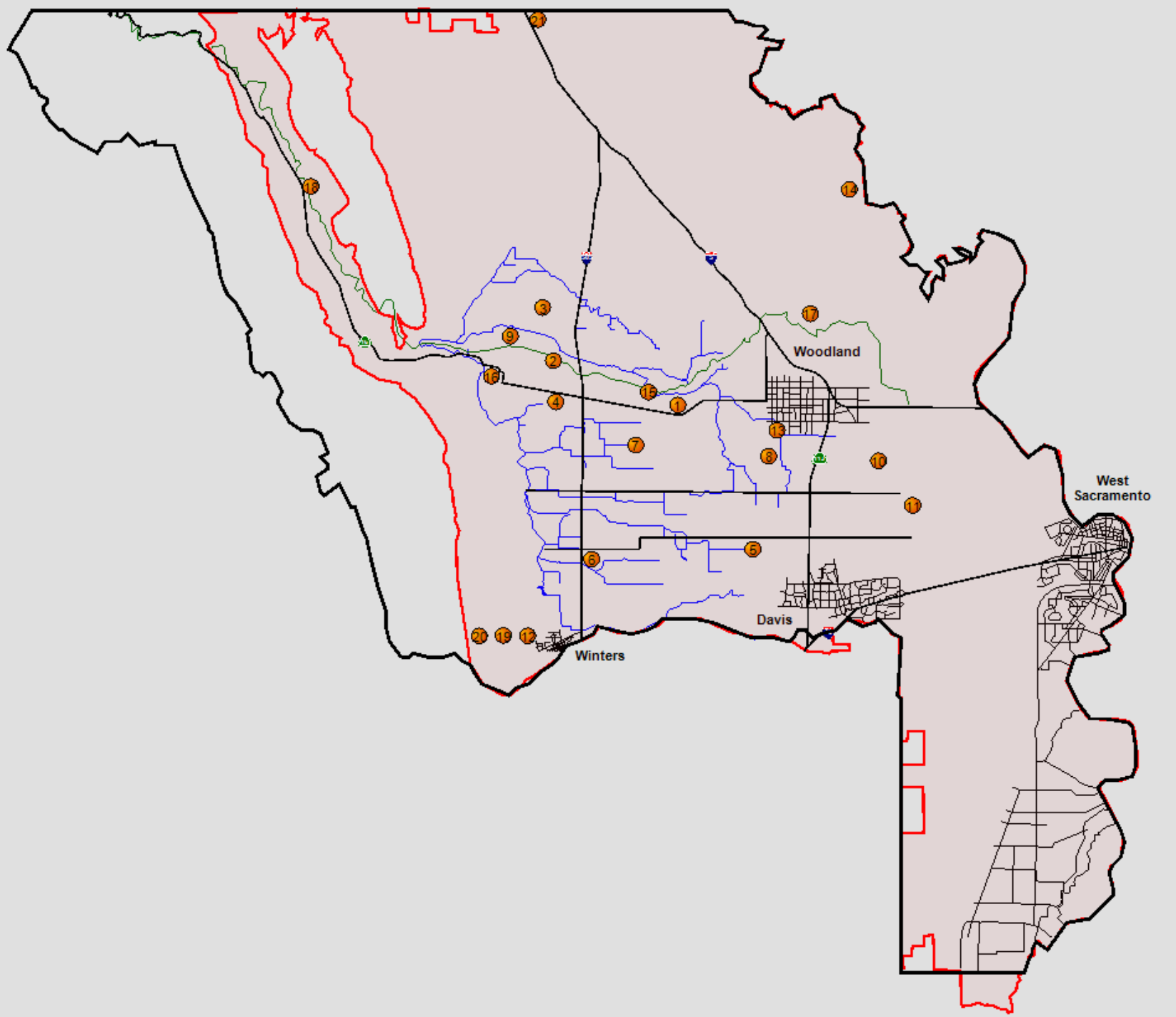
	Elevation	Available
Clear Lake		
• February 22	1.06	0
• January 22	0.66	0
• Total Gain	0.40	0
Indian Valley Reservoir		
• February 22	1,409.89	75,800
• January 22	1,407.73	71,814
• Total Gain	2.16	3,986
• Total Available Water:	75,800 AF (20,000 AF)	


Watershed View
Legend
SCADA Site
USGS Gage
SCADA Control Site
SCADA Links
Clear Lake
1.06 ft
NF of CC
45 cfs
Indian Valley Reservoir
Releasing 11 cfs
Res. Level 1,409.89 ft
Storage 75,800 acft
Kelsey Creek
12 cfs
Bear Creek
3 cfs
Cache Creek Dam
Releasing 5.8 cfs
Pond Level 1.00 ft
Storage 0 acft
Rumsey Bridge
26 cfs
14 fnu
Yoche Dehe
0.0 cfs
Yolo
0 cfs
1 fnu
Salisbury Spill
Capay Dam
Pond Level -5.49 ft
Winters 0 cfs
West Adams 0 cfs
Settling Basin
0 cfs
Woodland

Continuous Groundwater Level Monitoring

Well Monitoring

Real-Time



SCADA Links

Comparison Trends

Comparison Table 1

Comparison Table 2

Legend

Monitoring Site

YSGA

County

Well Monitoring

Depth to Water Historical Comparison

(Daily Average DTW in feet)

SCADA Links | Well Map | Select Date | 02/22/21

Comparison Trends | Comparison Table 2

Well	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Δ 2020 - 2021	Δ 2015 - 2021
1.	84.1	79.3	78.5	79.6	93.6	102.4		92.9	91.0	93.7	87.0	96.8	-9.7	5.7
2.	33.0	29.9	29.8	28.9	37.6	39.0	45.7	25.1	30.3	27.0	29.3	31.5	-2.2	7.4
3.		42.7	39.3	39.0	52.2	59.8	61.0	42.0	40.4	40.1	39.3	43.2	-3.9	16.6
4.		25.9	25.9	23.5	33.5	38.4	41.5	22.1	32.2	21.2	28.2	30.2	-2.0	8.2
5.		22.2	21.0	22.1	29.8	32.8	39.9	12.0	28.1	12.1	22.4	29.2	-6.8	3.6
6.			36.0	33.5	46.6	48.8	54.1	25.6	39.0	24.7	33.4	39.9	-6.5	8.9
7.					21.4	32.8	35.5	16.7	21.3	16.2	19.1	26.0	-6.9	6.9
8.					52.2	59.9	64.3	50.4	43.7	40.6	36.9	45.1	-8.3	14.8
9.					51.6	58.0	60.6	39.3	41.7	37.2	40.4	44.9	-4.5	13.1
10.						23.9	27.9	14.3	13.6	12.0	9.9	16.5	-6.6	7.4
11.						11.0	13.4	5.3	9.2	7.0	8.9	12.4	-3.5	-1.5
12.										114.5	101.4	118.4	-17.0	
13.									56.2	51.4	47.5	56.3	-8.8	
14.										7.7	10.8	13.5	-2.7	
15s.										36.5	36.8	45.5	-8.6	
16.										28.2	32.8	36.0	-3.3	

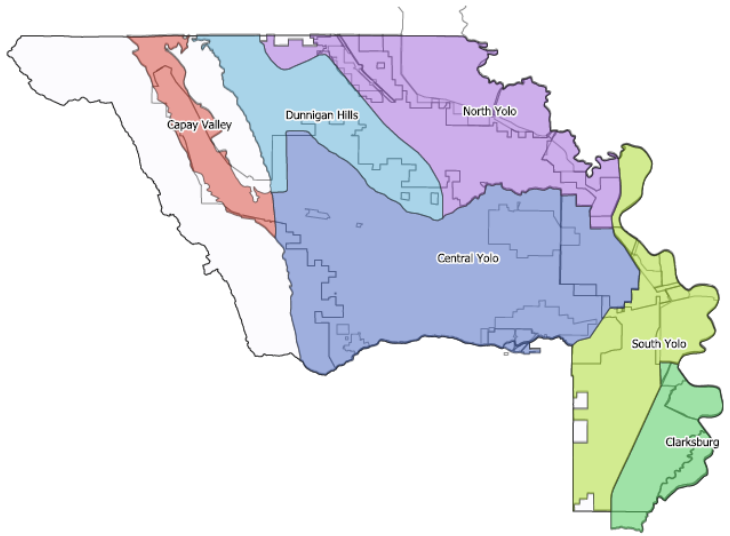
Overview of Yolo Subbasin Groundwater Agency

The Sustainable Groundwater Management Act

Implementation in Yolo County

GSA Formation Public Workshops
2016/2017

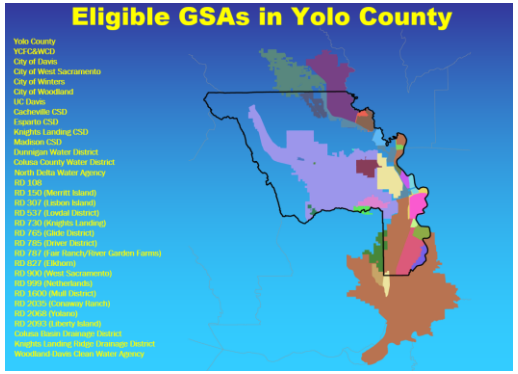
Draft – For internal discussion purposes only
October 1, 2020



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

Advisory Committee
Public

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

Advisory Committee
Public

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

Advisory Committee
Public

Dunnigan Hills

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

Advisory Committee
Public

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

Advisory Committee
Public

Clarksburg

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

Advisory Committee
Public

Update on Development of the Yolo Subbasin Groundwater Sustainability Plan

GSP Components

- Hydrogeologic Conceptual Model
- Water Budget
- Stakeholder Communication and Engagement
- Groundwater Monitoring and Reporting
- Surface Water and Groundwater Modeling
- Sustainable Management Criteria

Due to DWR January 31, 2022

Overall goal of SGMA/GSP:

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

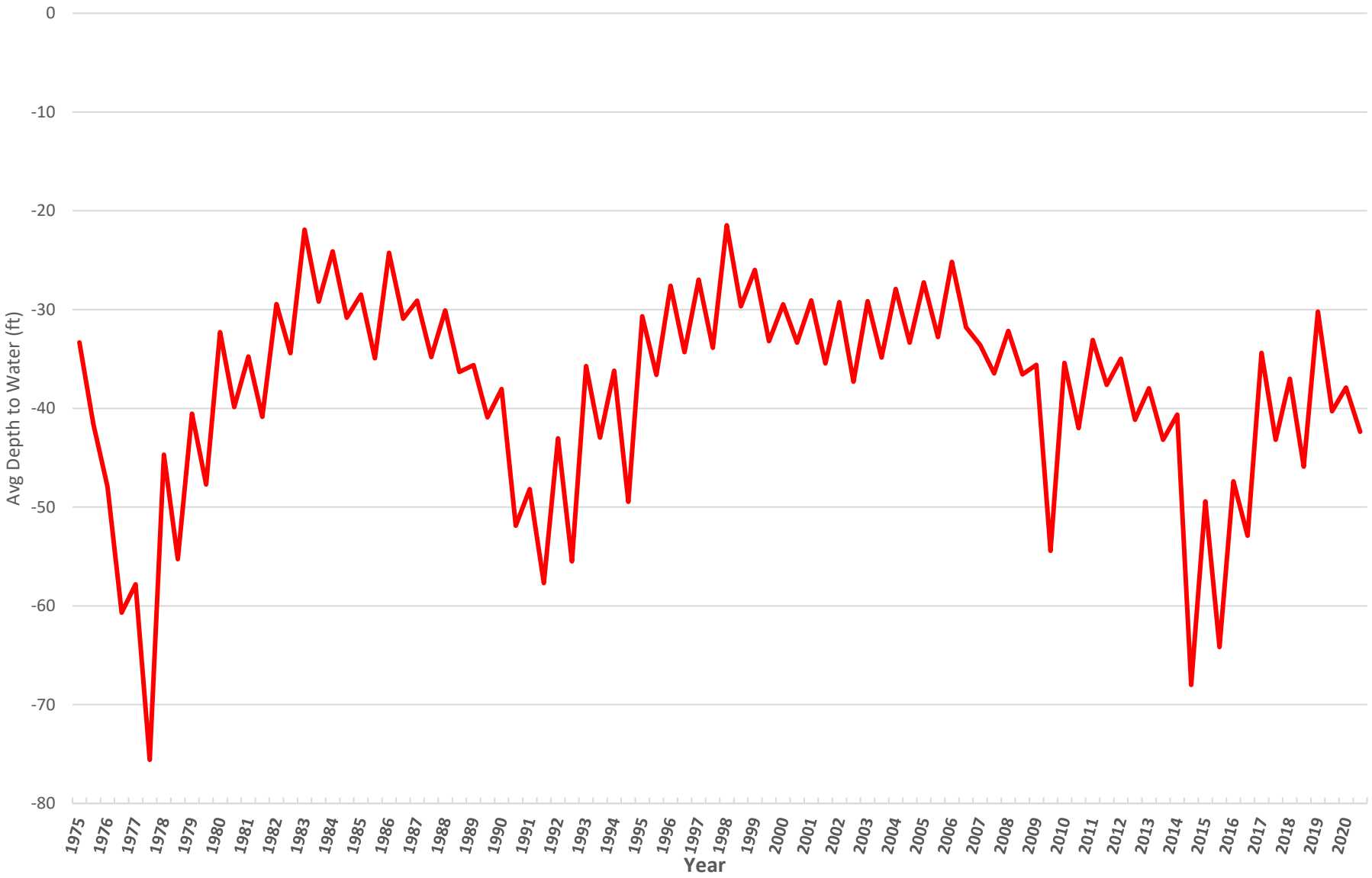

Land subsidence


Depletions of interconnected surface water

Source: [GSP Emergency Regulations Guide]

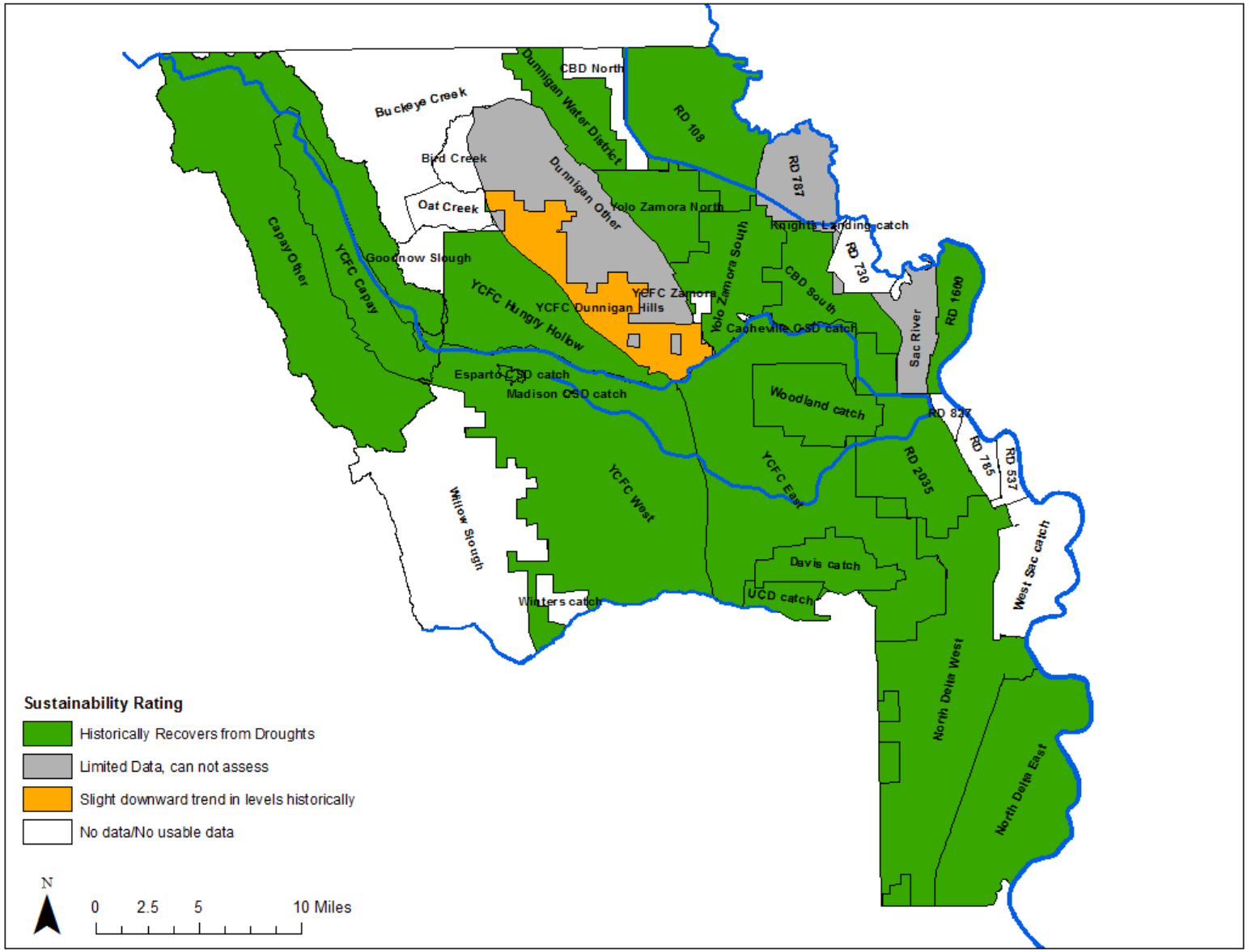
YCFCWCD Average Groundwater

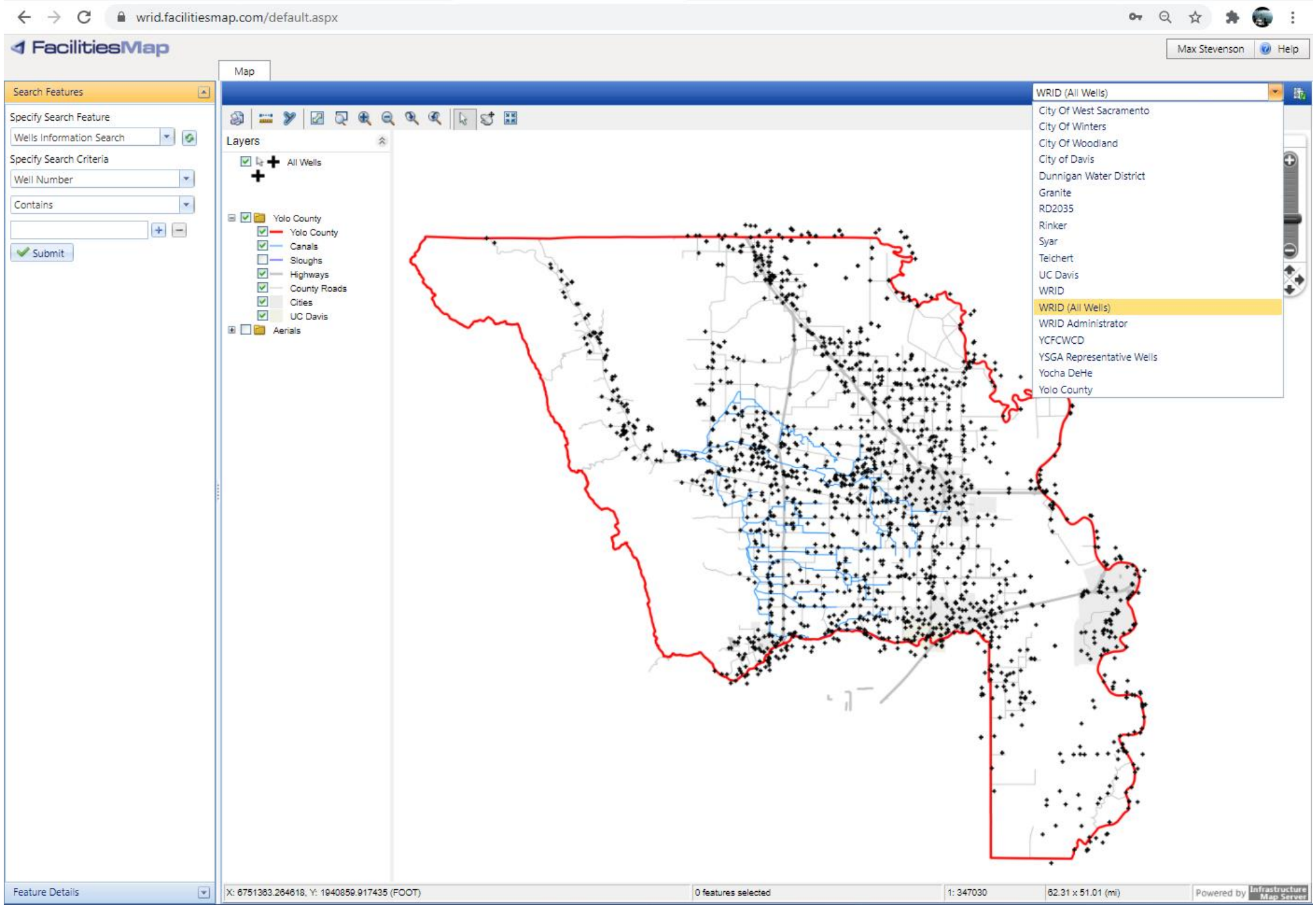
Depth by Season *(Fall 2020 is 110 wells)*



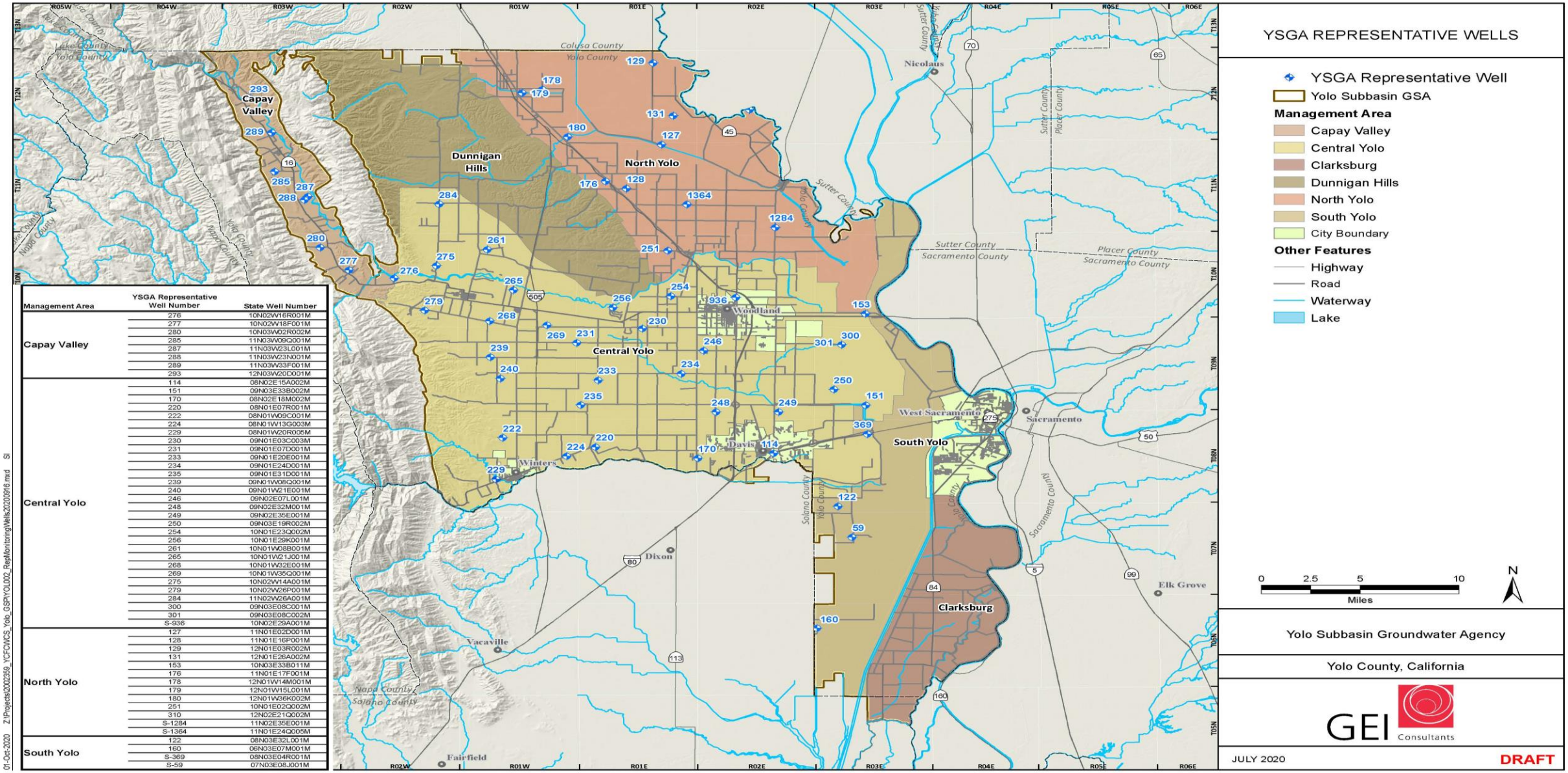
What we found

a) Suggested sustainability based only on observations




wrid.facilitiesmap.com/default.aspx
FacilitiesMap
Max Stevenson
Help
Map
Search Features
Specify Search Feature
Wells Information Search
Specify Search Criteria
Well Number
Contains
Submit
Layers
All Wells
Yolo County
Yolo County
Canals
Sloughs
Highways
County Roads
Cities
UC Davis
Aerials
WRID (All Wells)
City Of West Sacramento
City Of Winters
City Of Woodland
City of Davis
Dunnigan Water District
Granite
RD2035
Rinker
Syar
Teichert
UC Davis
WRID
WRID (All Wells)
WRID Administrator
YCFCWCD
YSGA Representative Wells
Yocha DeHe
Yolo County
Feature Details
X: 6751383.264618, Y: 1940859.917435 (FOOT)
0 features selected
1: 347030
62.31 x 51.01 (mi)
Powered by

REPRESENTATIVE MONITORING WELLS



Management Area	YSGA Representative Well Number	State Well Number
Capay Valley	276	10N02W16R001M
	277	10N02W18F001M
	280	10N03W02R002M
	285	11N03W09Q001M
	287	11N03W23L001M
	288	11N03W23N001M
	289	11N03W33F001M
	293	12N03W20D001M
Central Yolo	114	08N02E15A002M
	151	09N03E33B002M
	170	08N02E18M002M
	220	08N01E07R001M
	222	08N01W09C001M
	224	08N01W13G003M
	229	08N01W20R005M
	230	09N01E03C003M
	231	09N01E07D001M
	233	09N01E20E001M
	234	09N01E24D001M
	235	09N01E31D001M
	239	09N01W08Q001M
	240	09N01W21E001M
	246	09N02E07L001M
	248	09N02E32M001M
	249	09N02E35E001M
	250	09N03E19R002M
	254	10N01E23Q002M
	256	10N01E29K001M
	261	10N01W08B001M
	265	10N01W21J001M
	268	10N01W32E001M
	269	10N01W35Q001M
	275	10N02W14A001M
	279	10N02W26P001M
	284	11N02W26A001M
	300	09N03E08C001M
	301	09N03E08C002M
	S-936	10N02E29A001M
North Yolo	127	11N01E02D001M
	128	11N01E16P001M
	129	12N01E03R002M
	131	12N01E26A002M
	153	10N03E33B011M
	176	11N01E17F001M
	178	12N01W14M001M
	179	12N01W15L001M
	180	12N01W36K002M
	251	10N01E02Q002M
	310	12N02E21Q002M
	S-1284	11N02E35E001M
	S-1364	11N01E24Q005M
South Yolo	122	08N03E32L001M
	160	06N03E07M001M
	S-369	08N03E04R001M
	S-59	07N03E08J001M

01-Oct-2020 Z:\Projects\20022359_YCFCWCS_Yolo_GSP\YOL002_RepMonitoringWells\20200916.mxd SI

GSP Sustainability Indicators

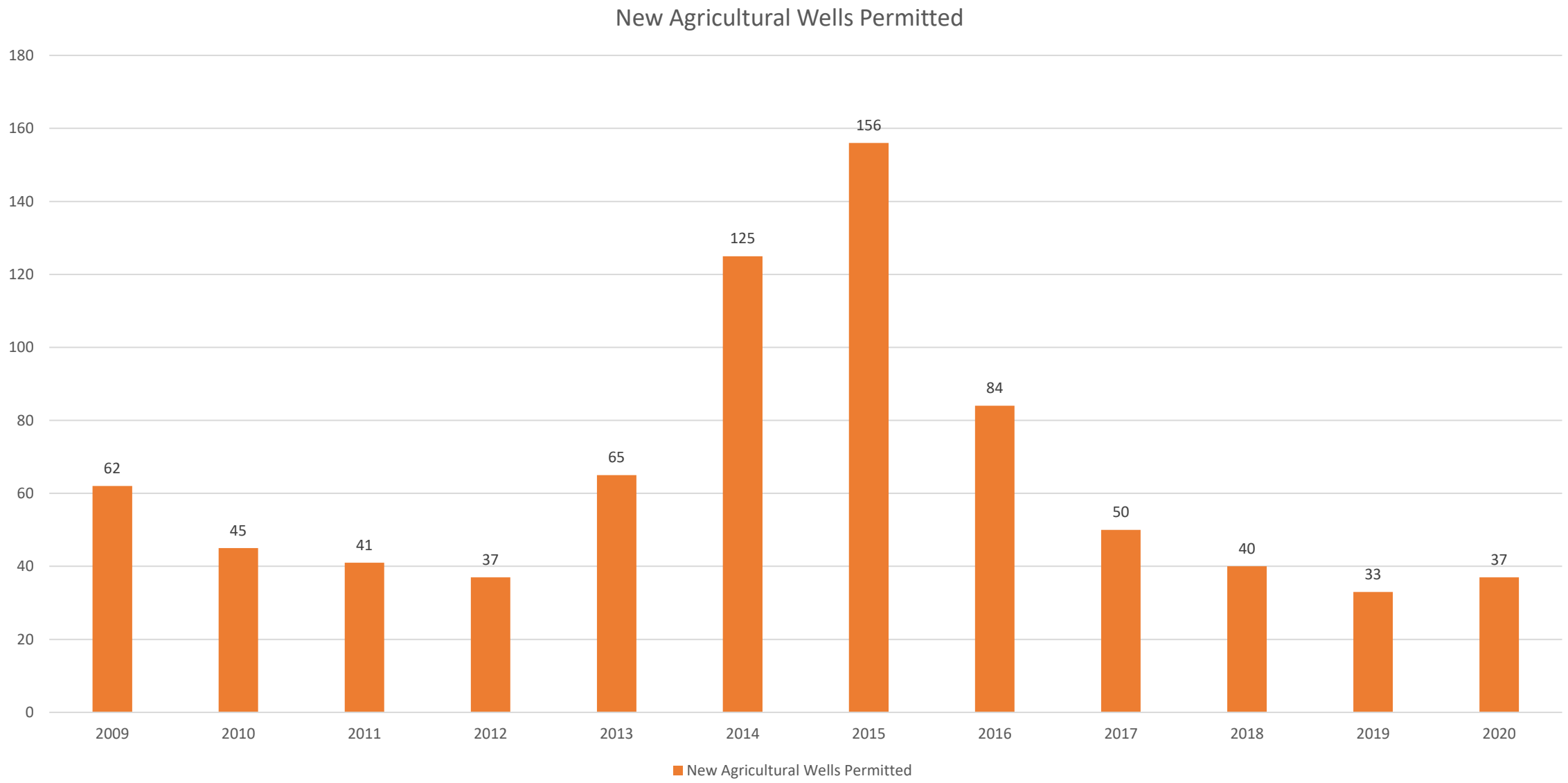
- Lowering Groundwater Levels
- Reduction of Groundwater Storage
- Depletion of Interconnected Surface Waters
- Land Subsidence

New thresholds and objectives tied to representative wells

- Degradation of Water Quality – *existing programs (Drinking Water Programs, CV-SALTS, ILRP, etc.)*
- Seawater Intrusion – N/A

Sustainable Management Criteria

- Sustainability Goal
- Undesirable Results
- Minimum Thresholds
- Measurable Objectives
- Monitoring Network


New Agricultural Wells Permitted
180
160
140
120
100
80
60
40
20
0
62
45
41
37
65
125
156
84
50
40
33
37
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
New Agricultural Wells Permitted

Projects/Management Actions

PROJECTS

- Excess storm flow diversions into canals, sloughs, etc. (China Slough to Zamora)
- Water transfers/imported water supplies
- In-lieu recharge
- Outreach to YCFC&WCD service area landowners: optimized conjunctive management

MANAGEMENT ACTIONS

- Maintain and enhance existing groundwater monitoring network
- Continue to coordinate with member entities, landowners, beneficial users, etc.
- Improve public access to groundwater data - transparency
- Gather information on known data gaps
  - Groundwater-dependent ecosystems (GDEs)
  - Environment beneficial users
  - Surface water groundwater interaction
  - Dunnigan Hills MA, etc.
- Adaptive Management

Projects/Management Actions

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- Adaptive Management

Flood-MAR Multi-Benefit Groundwater Recharge Pilot Program

ksicke@yolosga.org or 530.662.0265

Yolo Subbasin Groundwater Agency

Contact Us: (530) 662-3211

Search... Go!

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Groundwater Sustainability Plan

The Yolo Subbasin Groundwater Sustainability Plan (GSP) will be completed by January 1, 2022 to meet the State's deadline. The YSGA...

QUICKLINKS

- MEETINGS
- BOARD MEMBERS
- BOARD OFFICERS AND STAFF
- GROUNDWATER WELL NEWS
- PUBLIC OUTREACH
- YSGA UPDATE TO YOLO SUBBASIN FARMERS ON GSP DEVELOPMENT

Sustainable Groundwater Management Act (SGMA)

Public Agency Transparency

Our JPA is dedicated to operating in a

Contact Us

The Yolo Subbasin Groundwater Agency

Questions?

Kristin Sicke

ksicke@yolosga.org

530.662.0265

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

Minimum Threshold

➢ Minimum Threshold

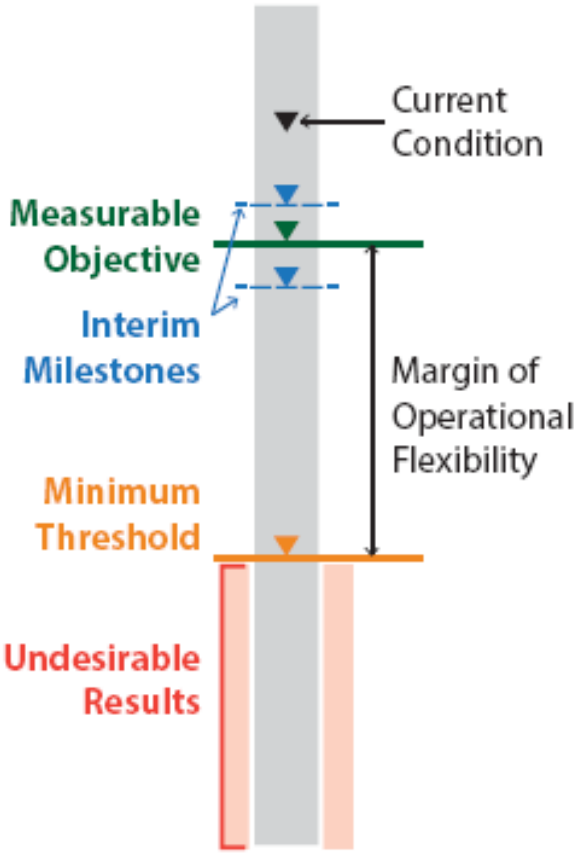
- The level that you never want to go below or exceed
- Violation of Minimum Threshold is an indication that a portion of the Subbasin is not being managed sustainably
- Local call to action to avoid further declines
- YSGA's goal is to proactively manage the basin and to take local action to keep the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

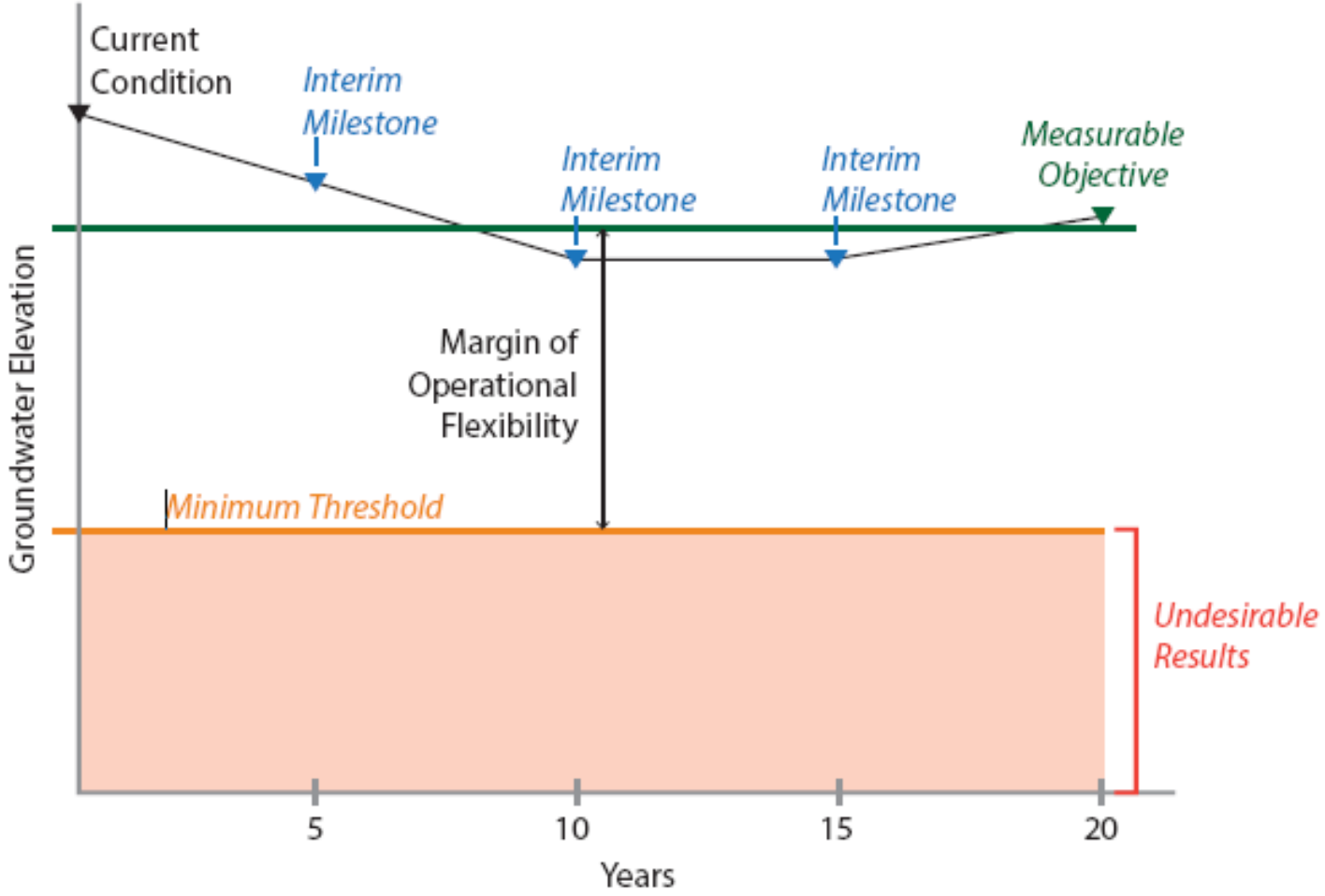
Measurable Objective

➢Measurable Objective

- Where you want to be operating most of the time
- Represents a long-term average, not annual values

MINIMUM THRESHOLD / MEASURABLE OBJECTIVE





WELL 222

YSGA Representative Well: 222 / SWN: 08N01W09C001M
Central Yolo (1949-2020)

Groundwater Elevation (msl)

180
160
140
120
100
80
60
40
20
0

Depth to Water (ft)

48.8
68.8
88.8
108.8
128.8
148.8
168.8

1949 1951 1953 1955 1957 1959 1961 1963 1965 1967 1969 1971 1973 1975 1977 1979 1981 1983 1985 1987 1989 1991 1993 1995 1997 1999 2001 2003 2005 2007 2009 2011 2013 2015 2017 2019 2021

GW Elevation
Minimum Threshold
Measurable Objective (Period)
Measurable Objective (2000-2011)
Ground Surface Elevation

Undesirable Results

➢ Chronic lowering of groundwater levels

- The point at which significant and unreasonable impacts over the planning and implementation horizon, as determined by depth/elevation of water, affect the reasonable and beneficial use of, and access to, groundwater by overlying users

➢ Reduction of groundwater storage

- The point at which significant and unreasonable impacts over the planning and implementation horizon, as determined by the amount of groundwater in the basin, affect the reasonable and beneficial use of, and access to, groundwater by overlying users.

➢ Degradation of Water Quality

- The point at which water quality is degraded to the extent of causing significant and unreasonable impacts from groundwater management actions in the Sub-Basin, that affect the reasonable and beneficial use of, and access to, groundwater by overlying users.