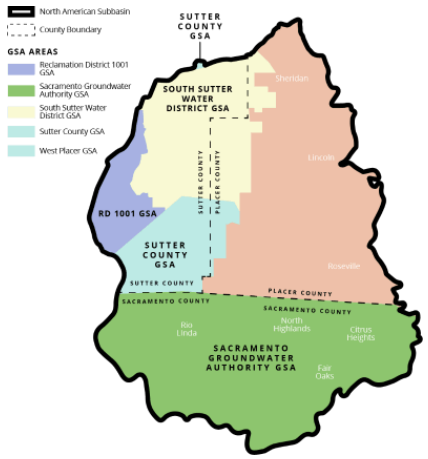
North American Groundwater Subbasin (NASb)

Water Year (WY) 2022 Annual Report

NASb 2023 Public Meeting

June 22, 2023



NORTH AMERICAN Subbasin

NORTH AMERICAN SUBBASIN

Groundwater Sustainability Plan

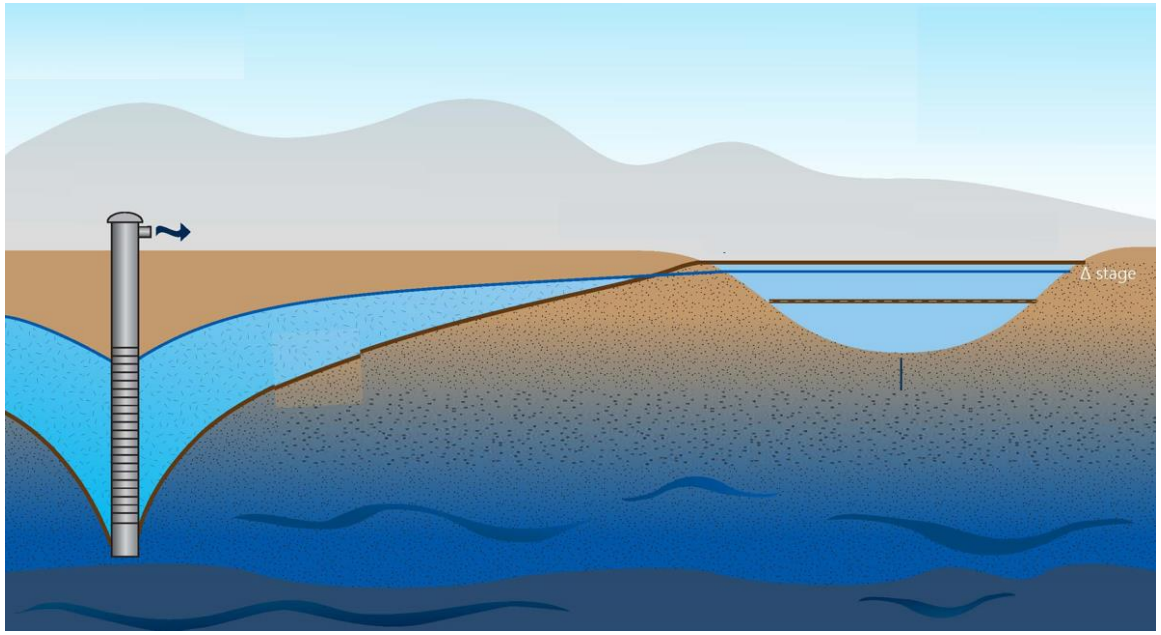
Executive Summary

PREPARED FOR:
RD1001 GSA
Sacramento Groundwater Authority GSA
South Sutter Water District GSA
Sutter County GSA
West Placer County GSA

DECEMBER 2021

Agenda

- Welcome and Meeting Purpose
- North American Subbasin Overview & Groundwater Sustainability Agency (GSA) Introduction
- SGMA Background
- SGMA GSP vs. Annual Reports
- 2022 Annual Report Overview
- California Department of Water Resources (DWR) SGM Grant Round 2
- NASb - Timeline



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Welcome and Meeting Purpose

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Meeting Purpose

The purpose of todays meeting is to:

- Present subbasin groundwater conditions based on data and information obtained and analyzed within the NASb Water Year 2022 Annual Report
- To strengthen public understanding of the groundwater conditions in the subbasin and to update/seek input from the public and other interested stakeholders
- Provide update on the progress and status of GSP and SGMA implementation

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How to Engage During the Meeting

- **On Zoom**:
  - "Raise hand" function to speak or
  - Type question in comment box
- **Via telephone**:
  - *9 to "Raise Hand"
  - *6 to unmute when called on

NASb Overview/GSA Introduction

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NASb Overview/GSA Introduction

Reclamation District 1001 (RD 1001 GSA)

Kimberly Reese | Reclamation District 1001
1959 Cornelius Ave | Rio Oso, CA 95674
530-656-2318 | kreese@rd1001.org

Sacramento Groundwater Authority GSA (SGA GSA)

Trevor Joseph | Manager of Technical Services | Sacramento Groundwater Authority
5620 Birdcage Street, Suite 180 | Citrus Heights, CA 95610
(916) 967-7692 | tjoseph@rwah2o.org

South Sutter Water District GSA

Hayden Cronwell| General Manager | South Sutter Water District
2464 Pacific Avenue | Trowbridge, CA 95659
530-656-2242 |hcornwell@soutsutterwd.com

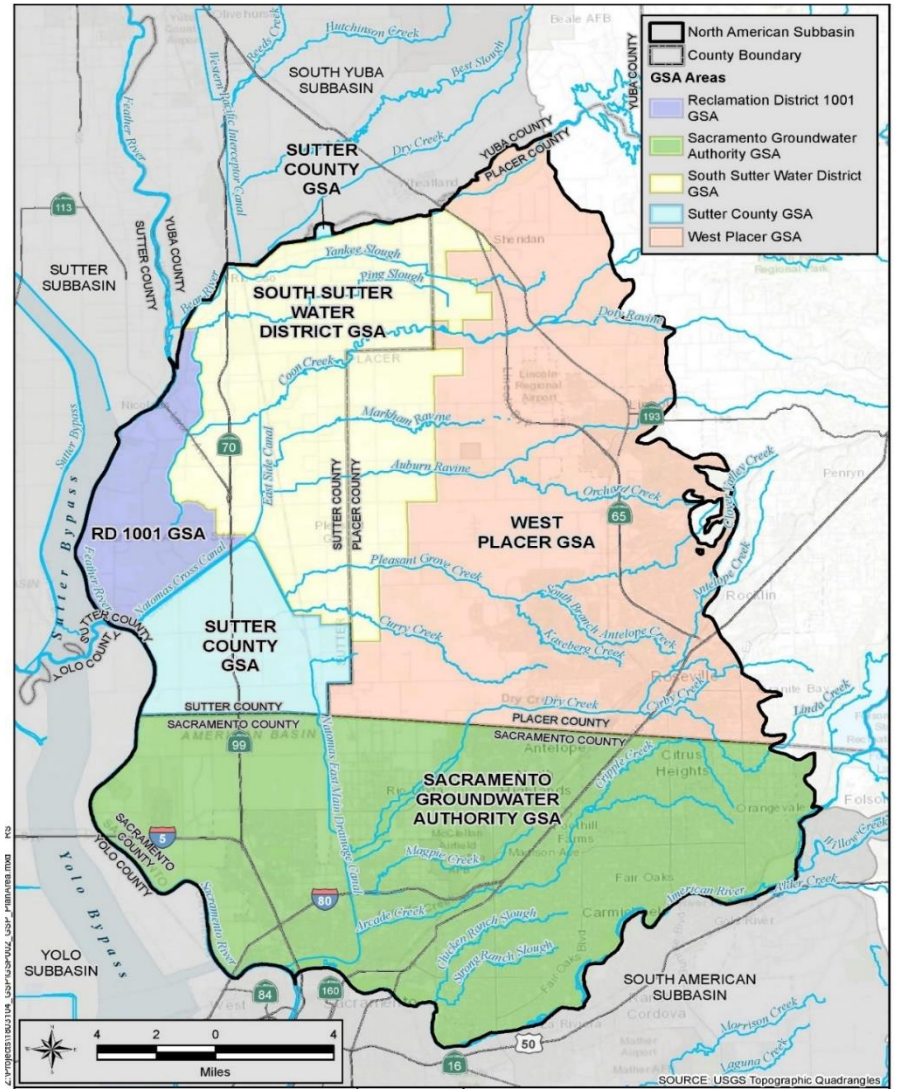
Sutter County GSA

Guadalupe Rivera | Principal Engineer | Sutter County
1130 Civic Center Blvd. | Yuba City, CA 95993
530-822-7400 | grivera@co.sutter.ca.us

West Placer GSA

Christina Hanson | Supervising Planner | Placer County
3091 County Center Drive, Suite 170 | Auburn, CA 95603
530-886-4965 | chanson@placer.ca.gov

NASb Website: nasbgroundwater.org



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SGMA Background

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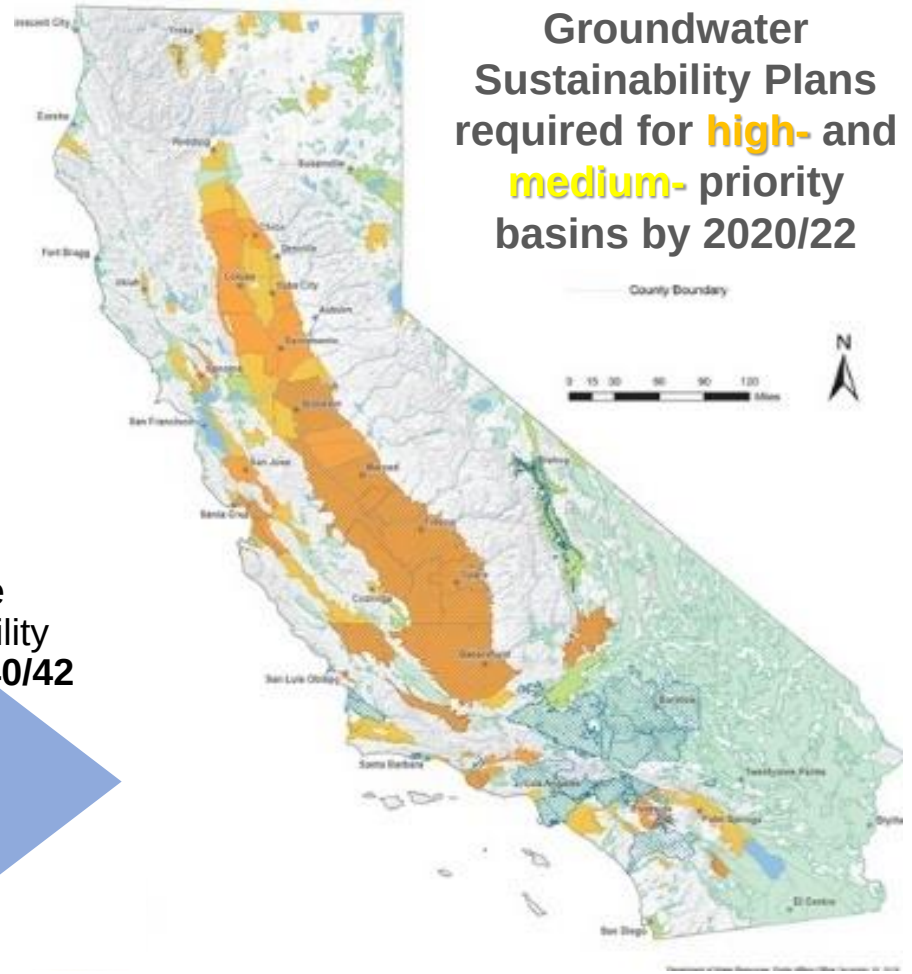
Sustainable Groundwater Management Act (SGMA)

Local Control

"A central feature of these bills is the recognition that groundwater management in California is best accomplished locally."
Governor Jerry Brown, September 2014

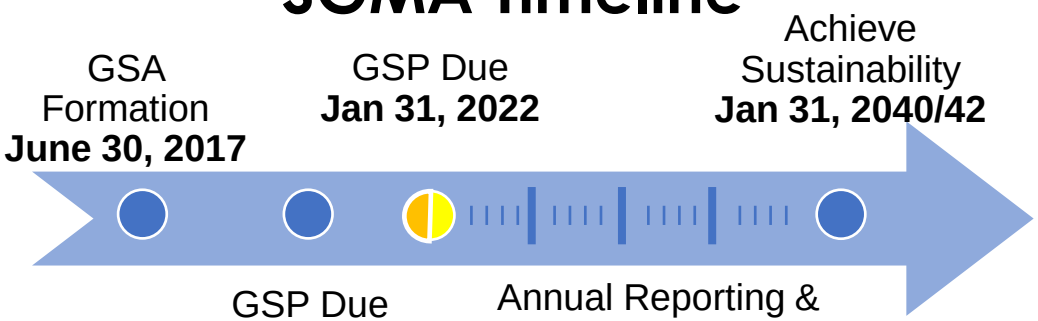
Roles

Groundwater Basins



Groundwater Sustainability Plans required for high- and medium- priority basins by 2020/22

SGMA Timeline



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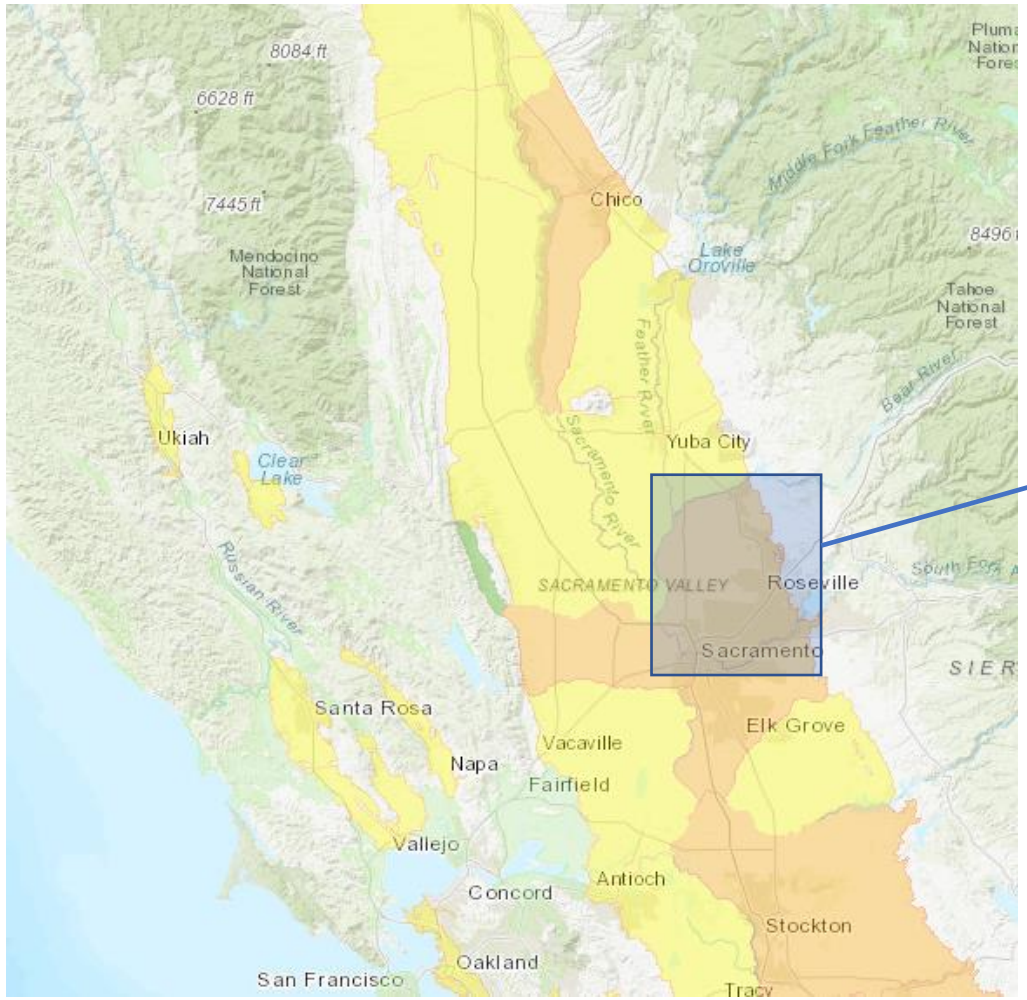
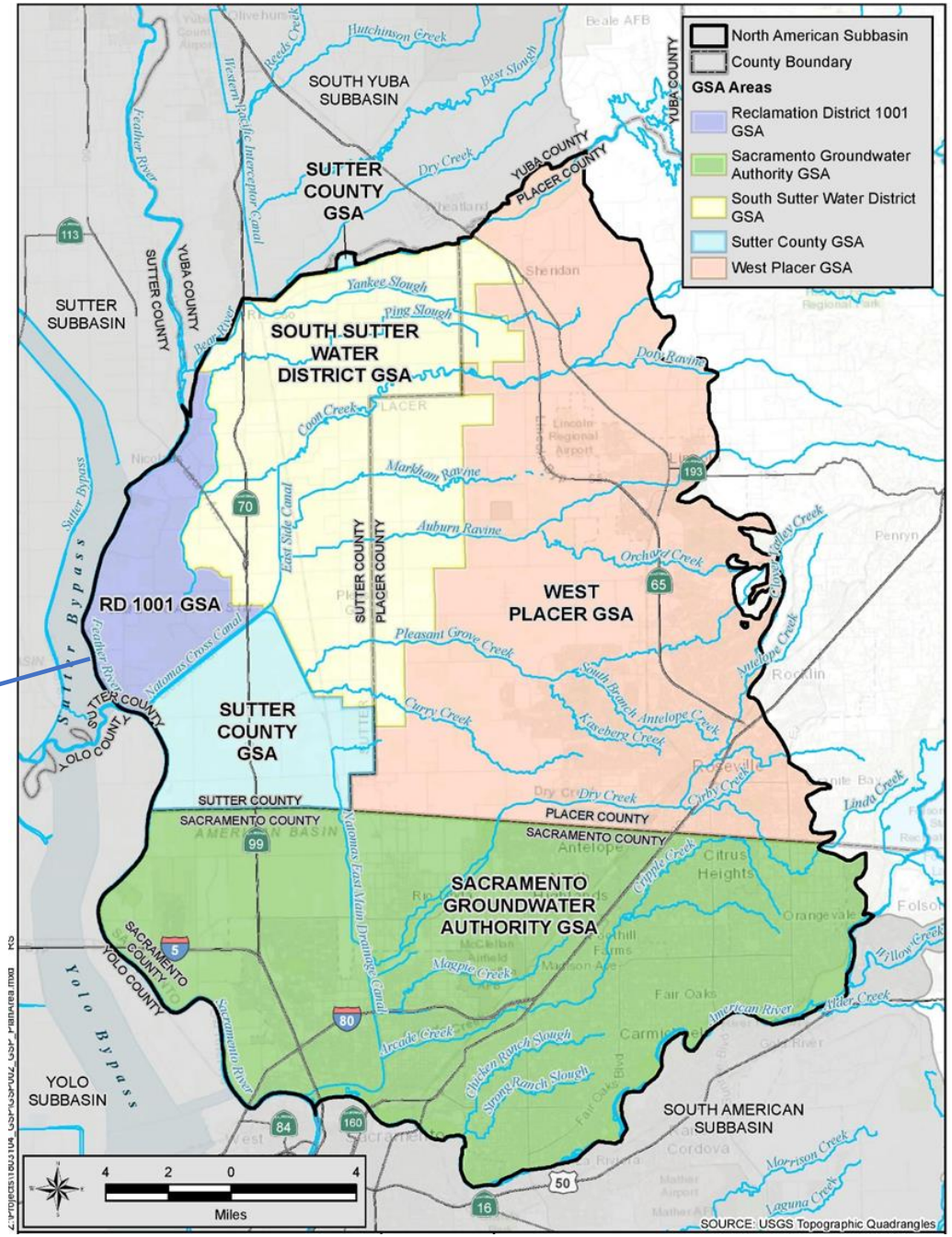
Groundwater Sustainability Agencies (GSAs)



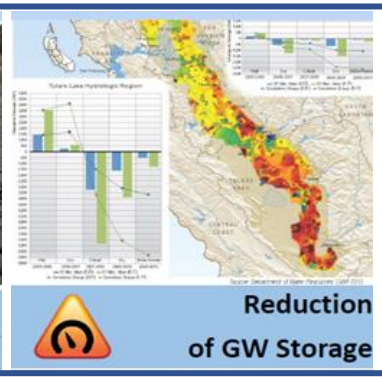


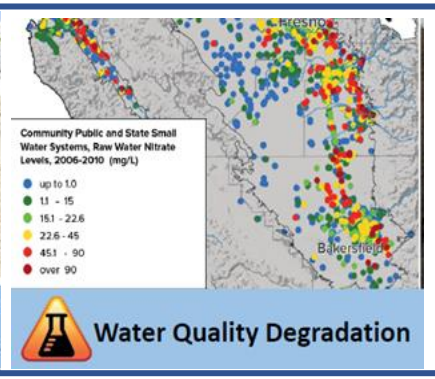
Sustainability Indicators

"effects caused by groundwater conditions throughout the basin that, when significant and unreasonable, cause undesirable results…"

Undesirable Results

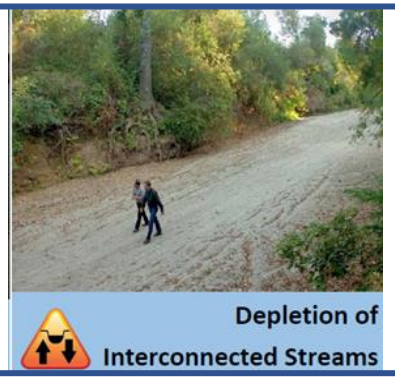

Lowering of GW Levels

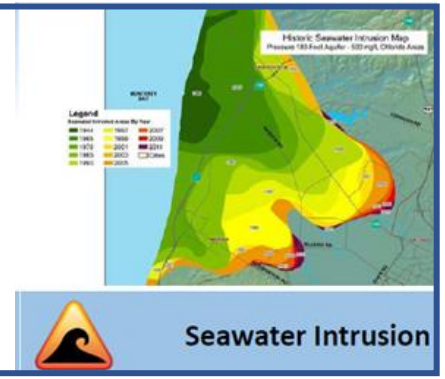

Reduction of GW Storage



Water Quality Degradation


Land Subsidence


Depletion of Interconnected Streams



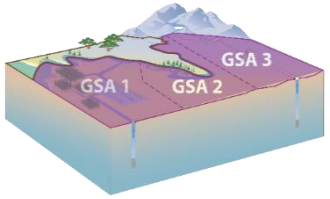
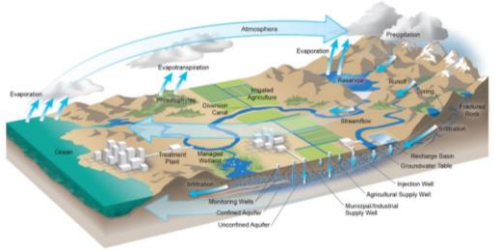
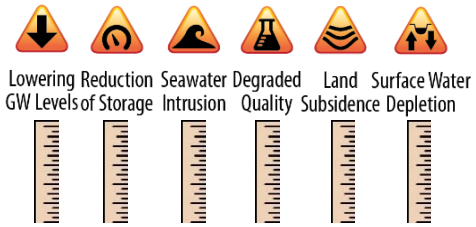
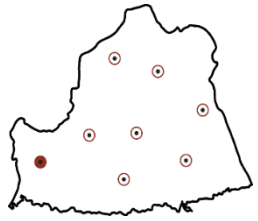
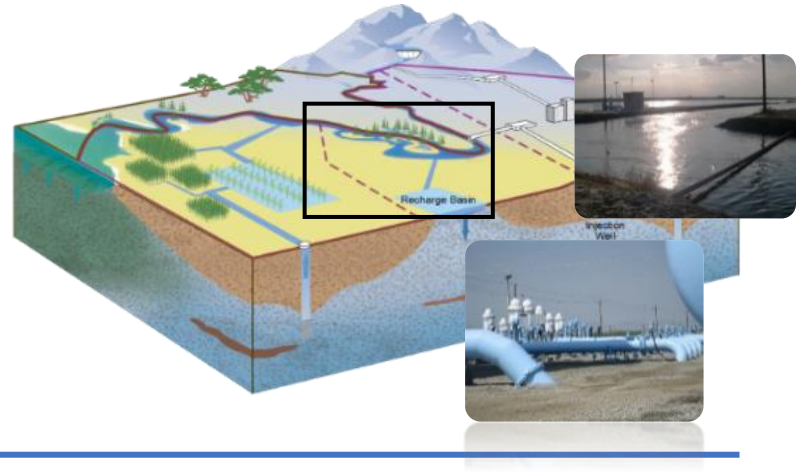
Seawater Intrusion

NASb Applicable Sustainability Indicators

Lowering GW Levels	Reduction of Storage	Degraded Quality	Land Subsidence	Surface Water Depletion	Seawater Intrusion
Applicable NASb Sustainability Indicators					Not applicable in the NASb

NORTH AMERICAN Subbasin

Groundwater Sustainability Plan (GSP) Regulations & NASb Sections

GSP Development Phases	1. Understand existing basin conditions	2. Develop water levels that consider beneficial uses and users	3. Develop management actions and/or projects to ensure basin is sustainable
GSP Regulation Requirements	**Who** *- Administrative Information -*  **What** *- Basin Setting -* 	**Where** *- Sustainable Management Criteria -*  *- Monitoring Network -* 	**How** *- Projects & Management Actions -* 
NASb GSP Sections	○ Section 1 Introduction ○ Section 2 Agency Information ○ Section 3 Plan Area ○ Section 4 Hydrogeologic Setting ○ Section 5 Groundwater Conditions	○ Section 6 Water Budgets ○ Section 7 Monitoring Networks ○ Section 8 Sustainable Management Criteria	○ Section 9 Projects and Management Actions ○ Section 10 Plan Implementation ○ Section 11 Notice and Communications

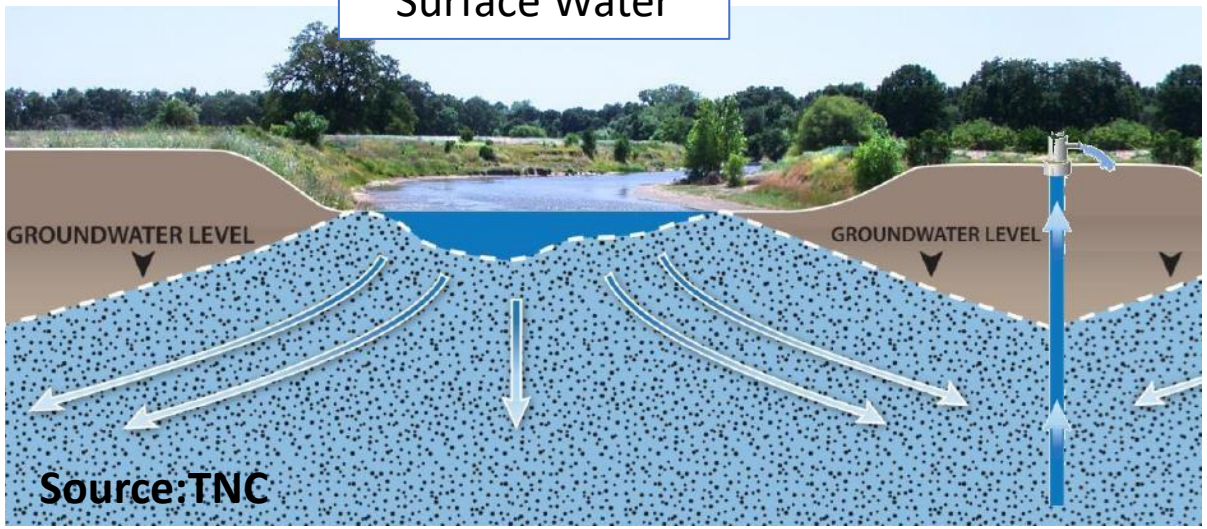
Beneficial Uses and Users

Agriculture

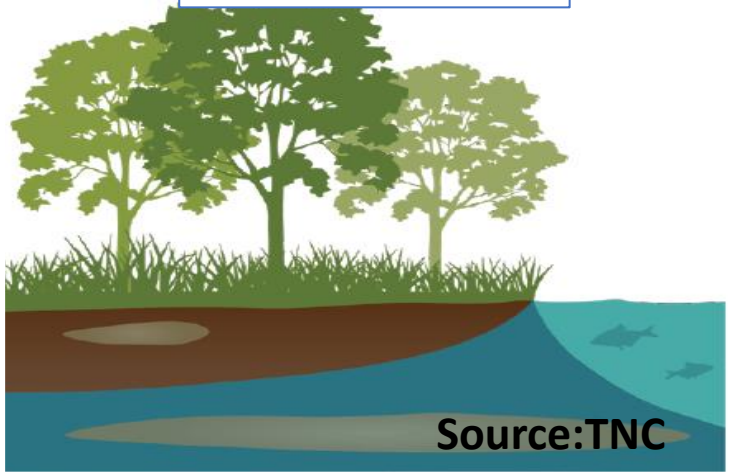
Municipal

Domestic

Surface Water



Environment



SGMA GSP vs Annual Reports

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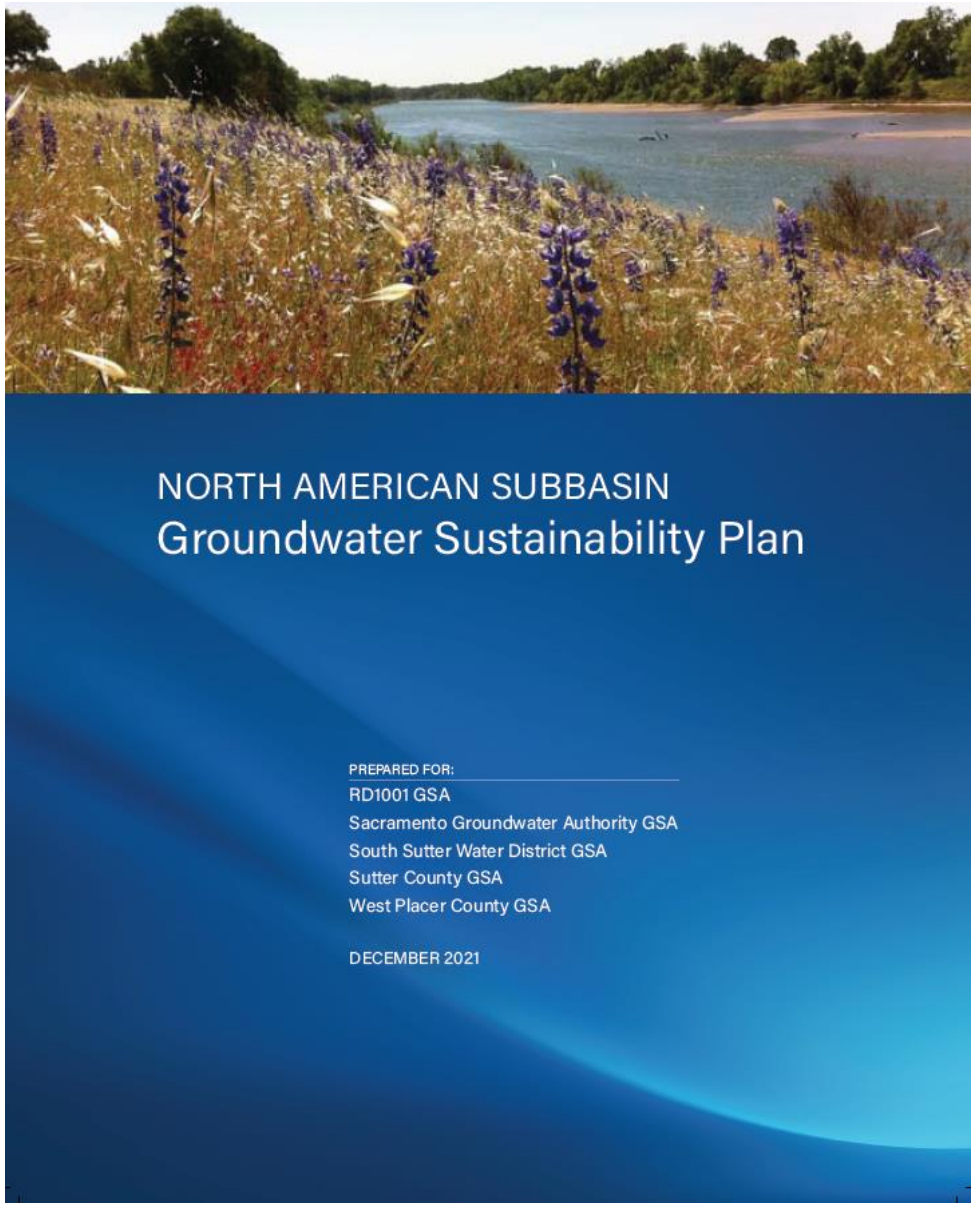

GSP vs Annual Report

- Current Status: Submitted in December 2021 - Department of Water Resources (DWR) review in progress
  - Anticipated determination from DWR by January 2024
- Timing: Periodic evaluation every 5-years (or whenever plan is amended)
- Goal: Ensuring sustainability through projects and programs that will assist in meeting goal

- Water Year: October 1 to September 30
- Current Status: The second annual report for Water Year 2022 was submitted to DWR in March
- Timing: Each year submitted to DWR by April 1
- Goal: Non-interpreted data transmittal to DWR, that provides information on groundwater conditions and implementation of GSP for the prior water year

GSP and Annual Report(s) available at: nasbgroundwater.org

A Break for Questions/ Discussion

- **On Zoom**:
  - “Raise hand” function to speak or
  - Type question in comment box
- **Via telephone**:
  - *9 to “Raise Hand”
  - *6 to unmute when called on

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2022 Annual Report Overview

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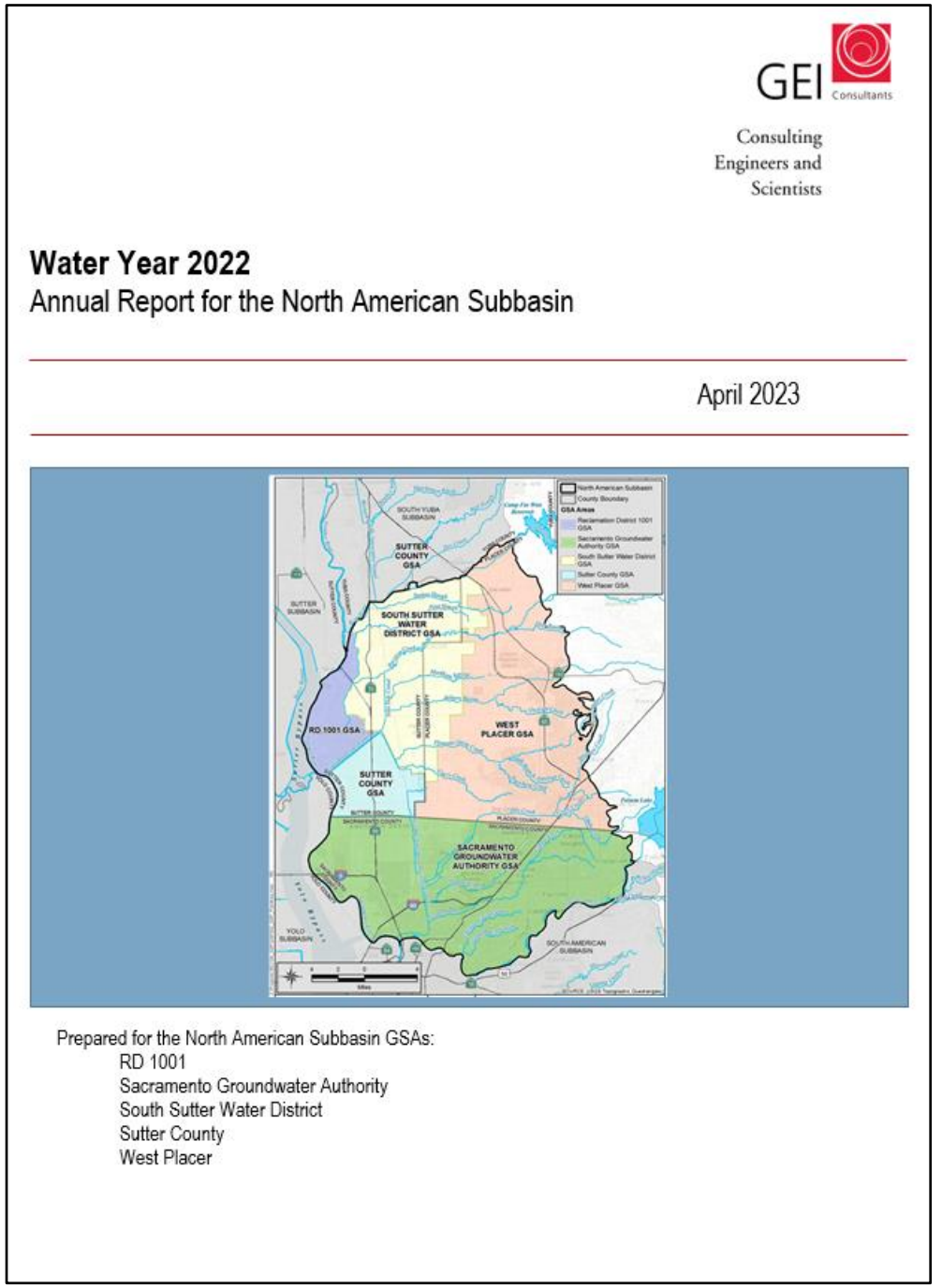
Annual Report

- Hydrologic Conditions
- Water Supply
- Groundwater Levels
- Change in Groundwater Storage
- GSP Implementation (e.g., Project and Management Actions/Supplemental Projects)
- Sustainability Indicators



GEI Consultants

Consulting Engineers and Scientists

Water Year 2022

Annual Report for the North American Subbasin

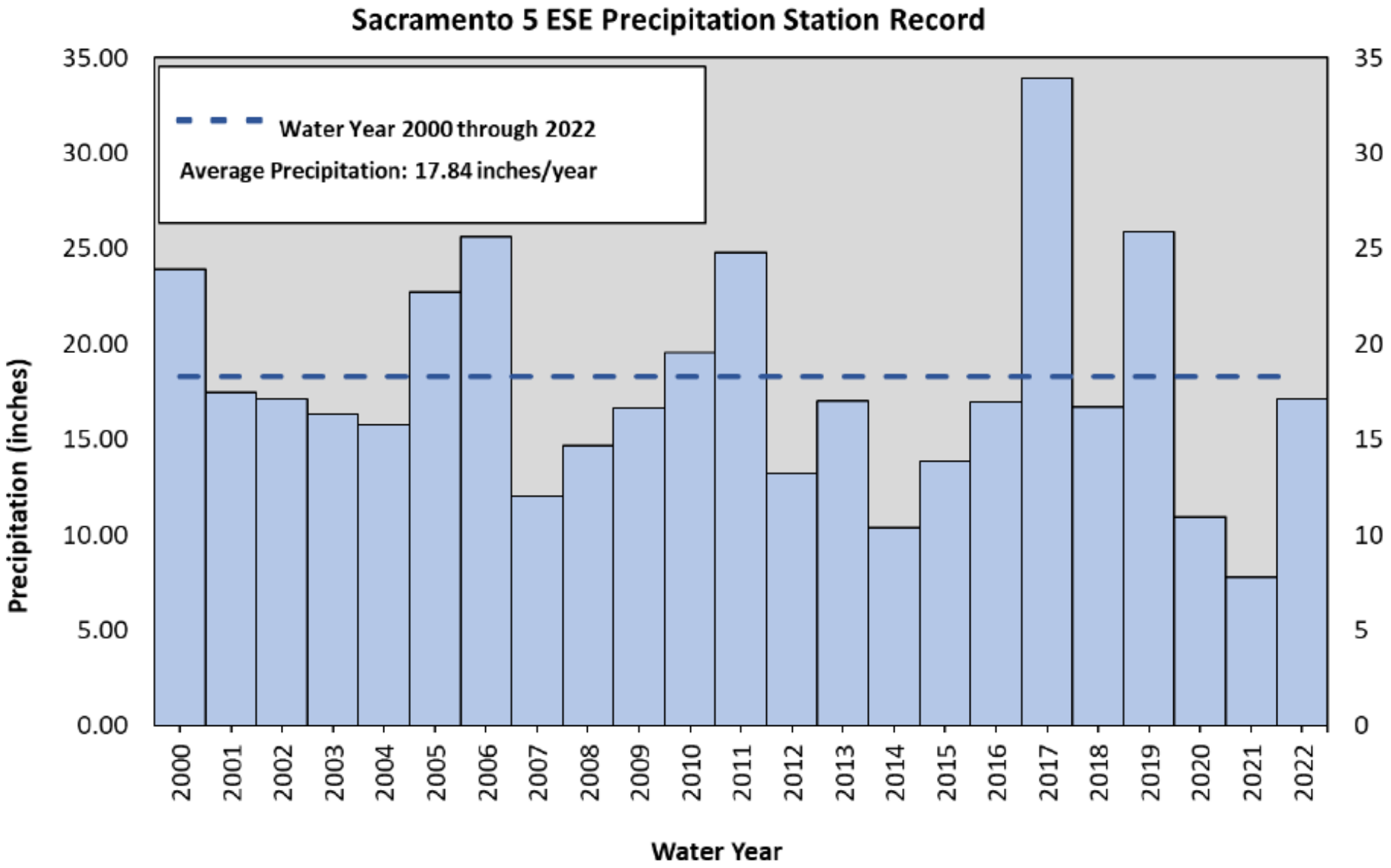
April 2023

Prepared for the North American Subbasin GSAs:

RD 1001
Sacramento Groundwater Authority
South Sutter Water District
Sutter County
West Placer

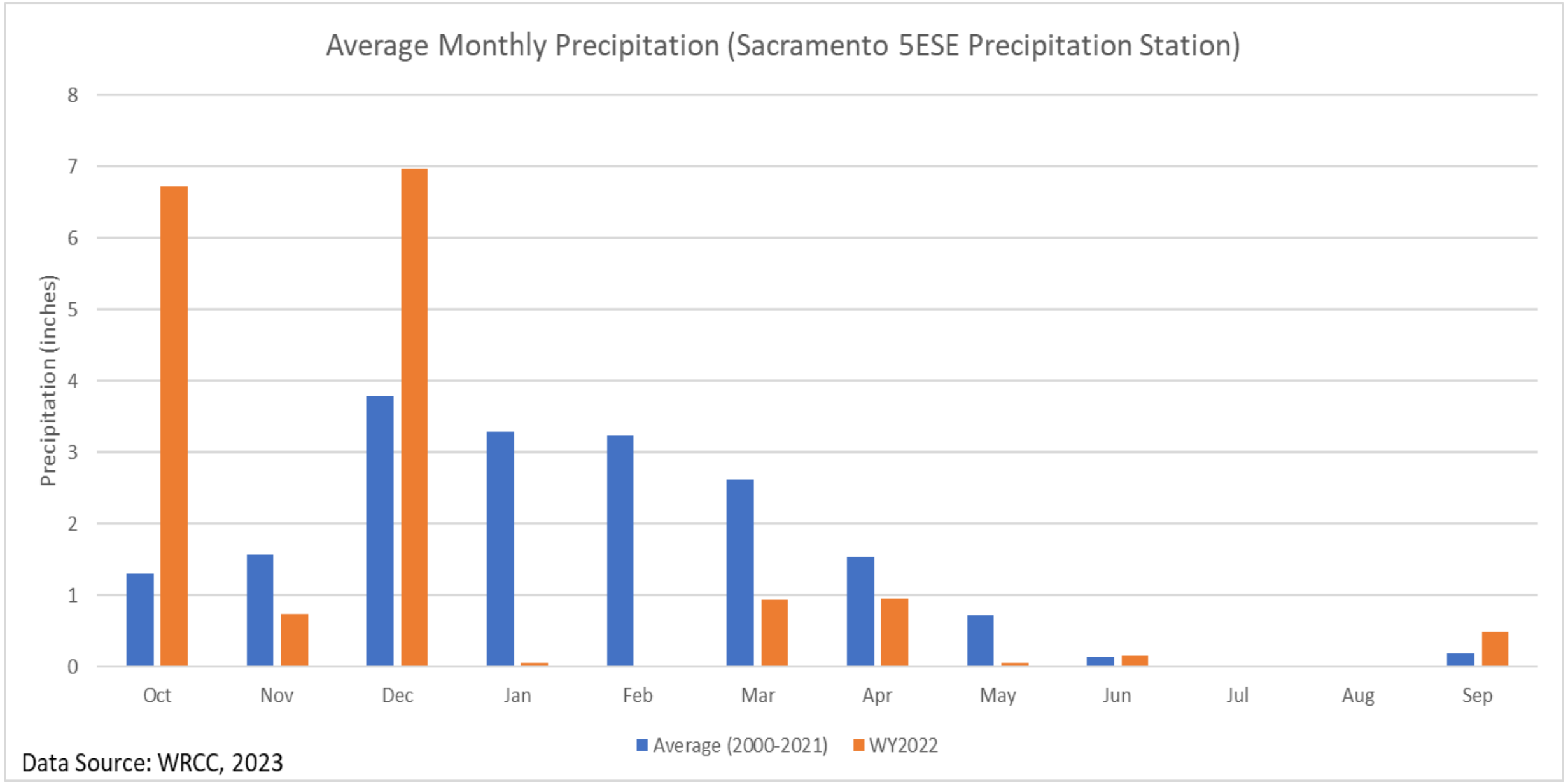
Hydrologic Conditions

WY 2022 annual precipitation was 17.10 inches



Source: WRCC, 2023

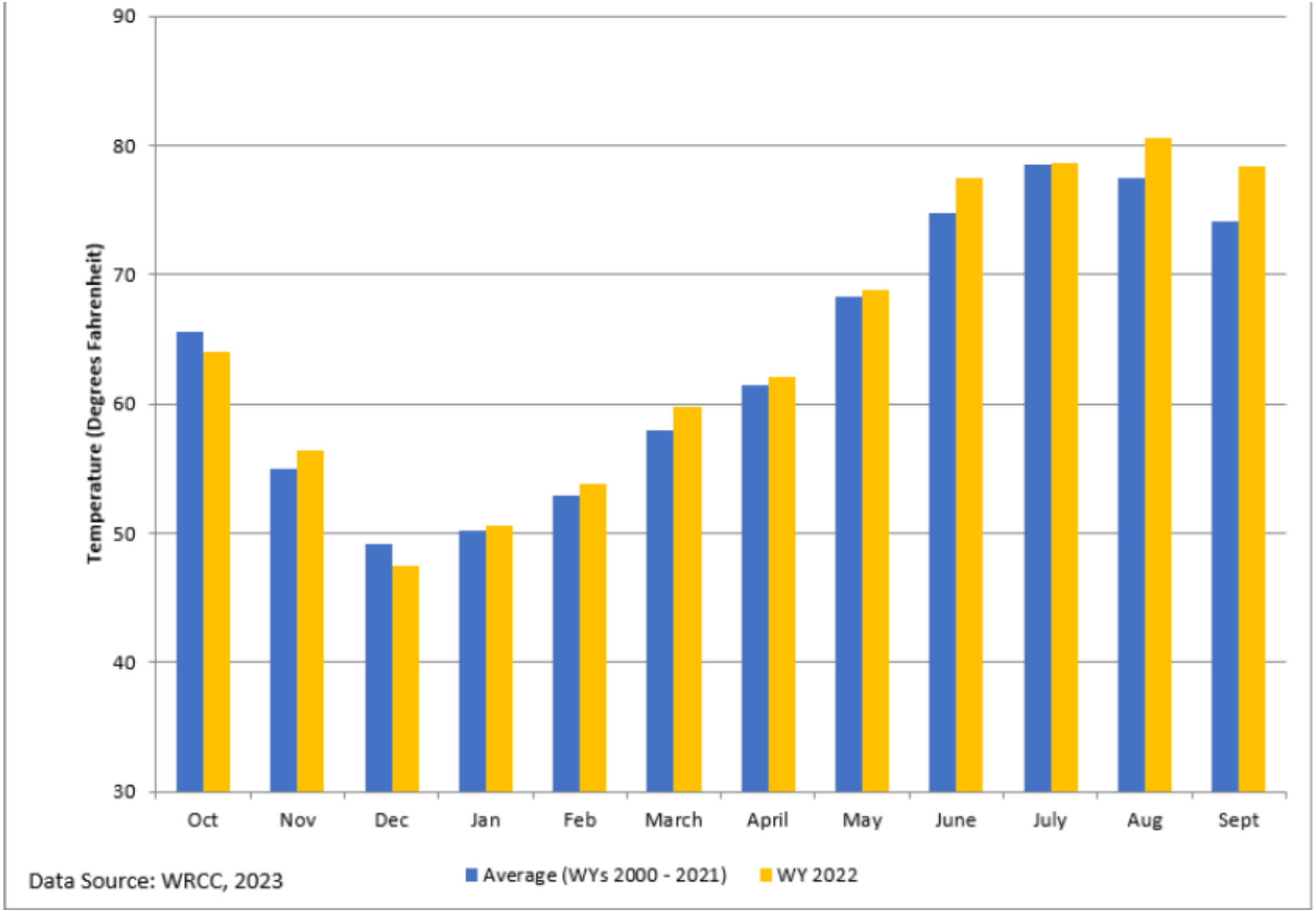
Average Monthly Precipitation



Data Source: WRCC, 2023

Average Air Temperature

The average annual air temperature at the Sacramento 5 ESE station in WY 2022 was approximately 0.05 degrees Fahrenheit (°F) warmer than the 2000 through 2021 average (63.83 compared to 63.88 °F, respectively)

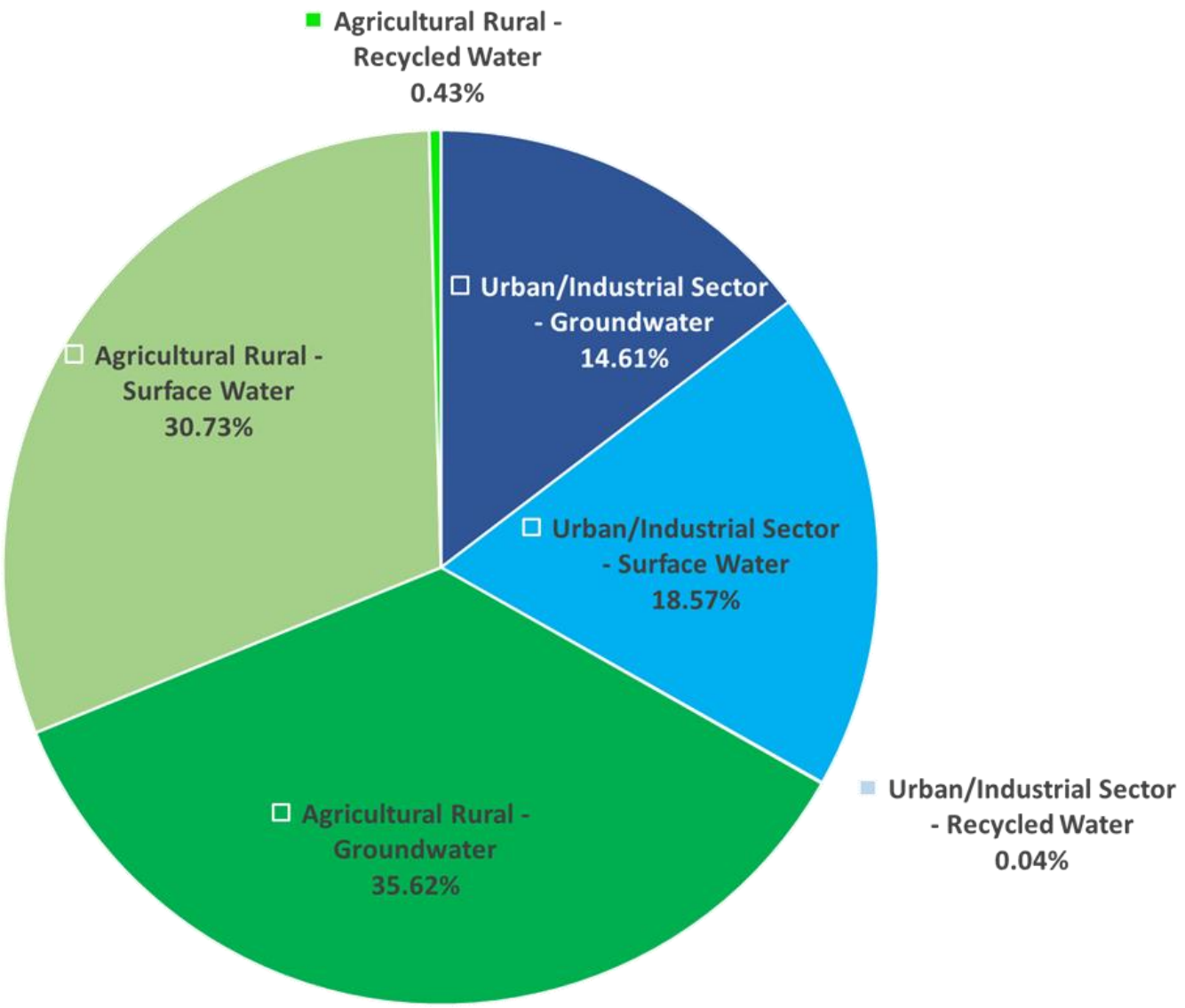


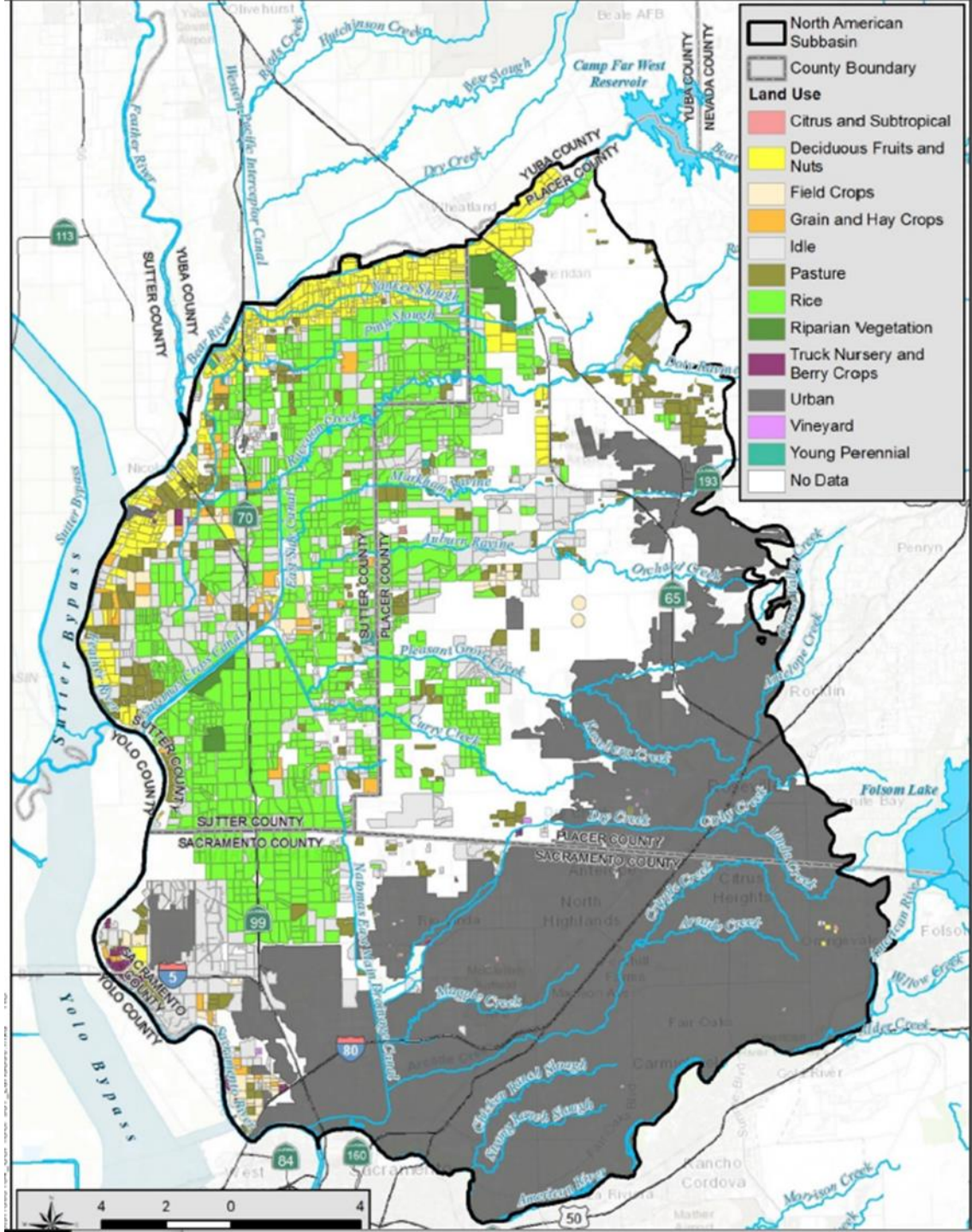
WY 2022 Water Use by Source

Month	Groundwater (AF)	Surface Water (AF)	Remediation (AF)	Recycled Water (AF)	Total (AF)
Oct-21	14,800	12,200	600	225	27,830
Nov-21	22,100	10,400	600	12	33,110
Dec-21	10,100	6,800	700	13	17,610
Jan-22	6,500	5,900	600	13	13,010
Feb-22	9,700	6,400	600	15	16,710
Mar-22	11,000	7,900	600	169	19,670
Apr-22	20,200	17,200	600	119	38,120
May-22	49,900	51,000	600	421	101,920
Jun-22	46,500	45,800	600	543	93,450
Jul-22	43,100	53,400	600	497	97,600
Aug-22	40,400	48,900	600	398	90,300
Sep-22	18,600	21,600	600	304	41,100
Total WY 2022	**292,900**	**287,500**	**7,300**	**2,730**	**590,430**

AF = acre-feet

WY 2022 Water Use by Sector





WY 2022

Groundwater Contour Maps

Figure 4-1. Spring 2022 Groundwater Elevation Contour Map

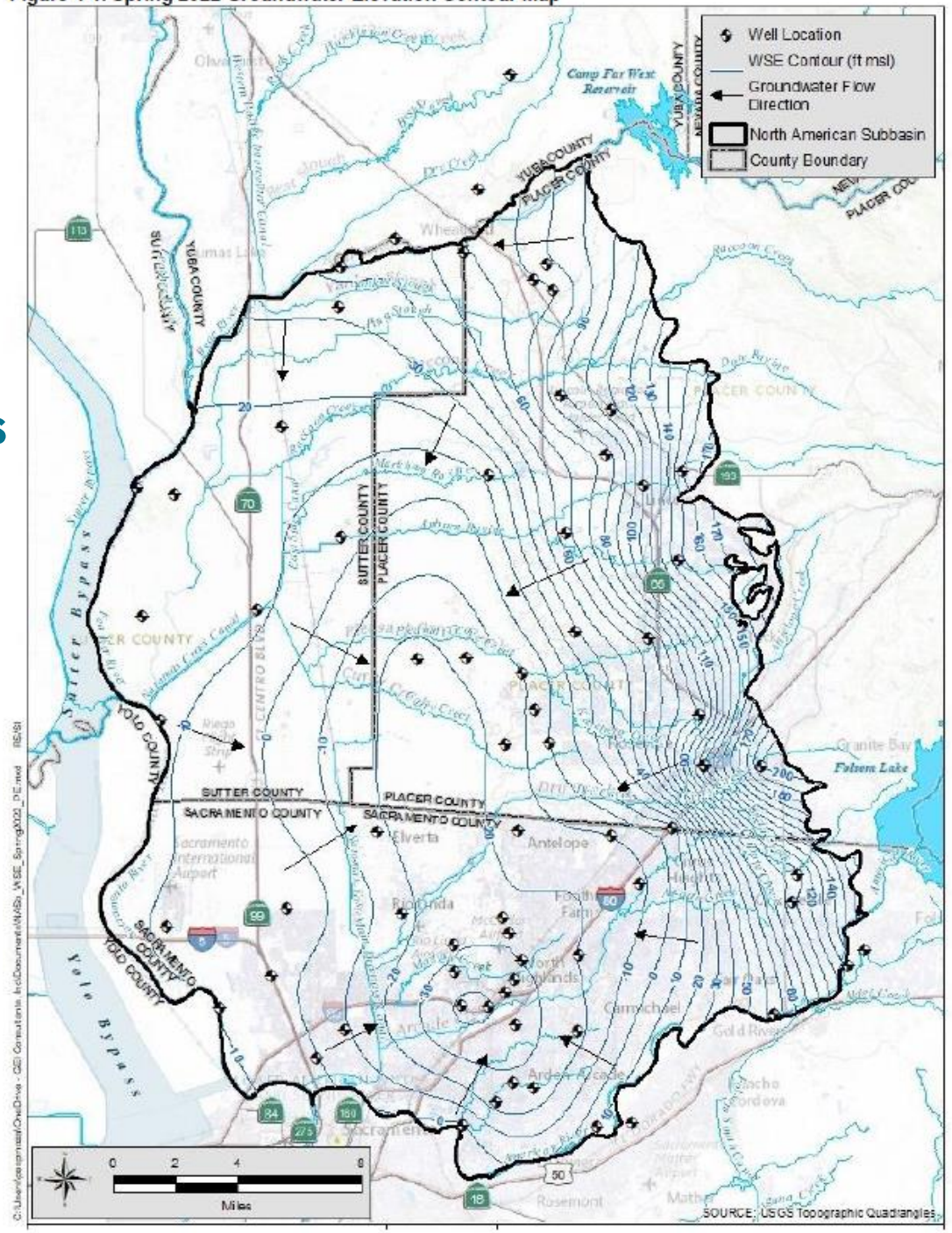
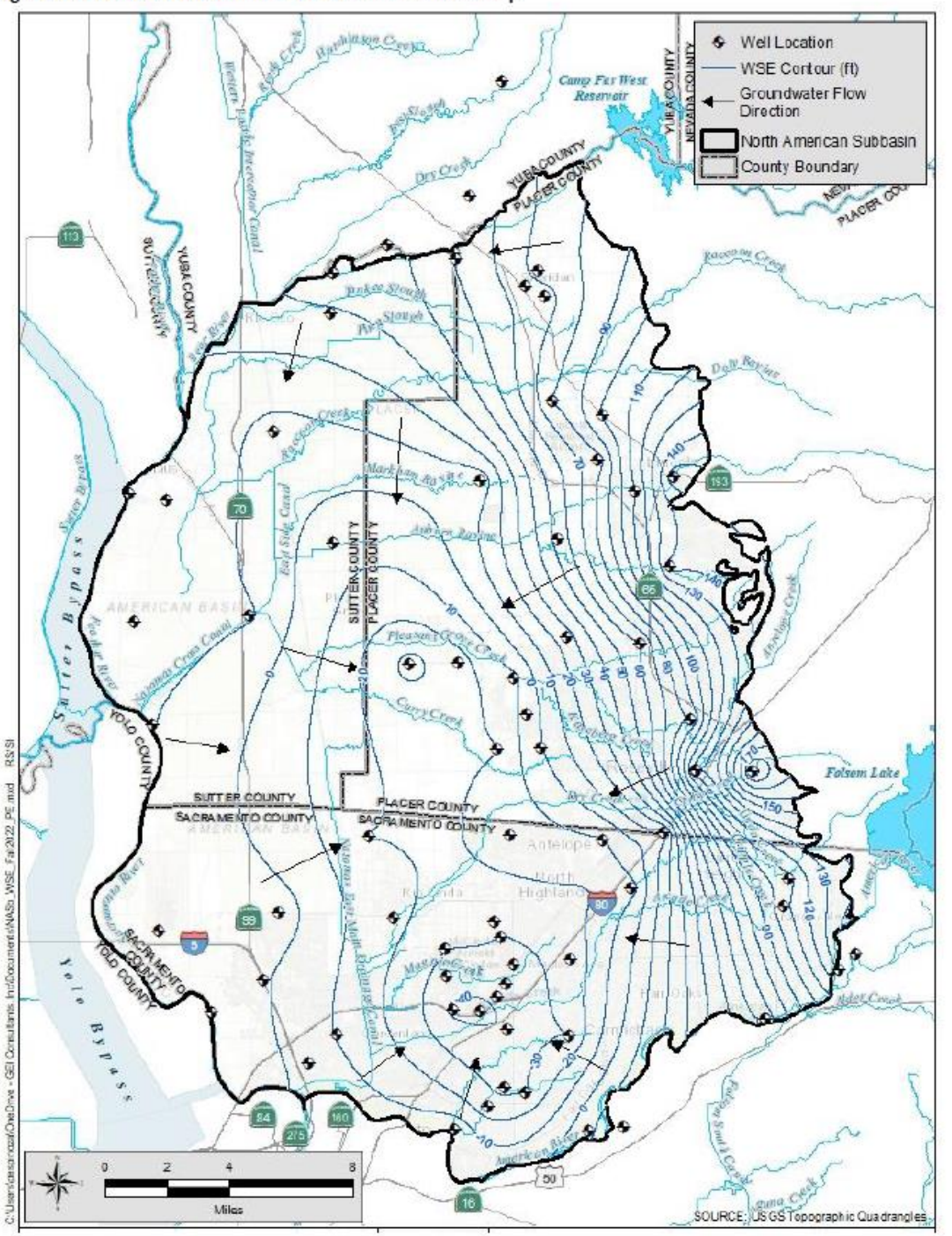
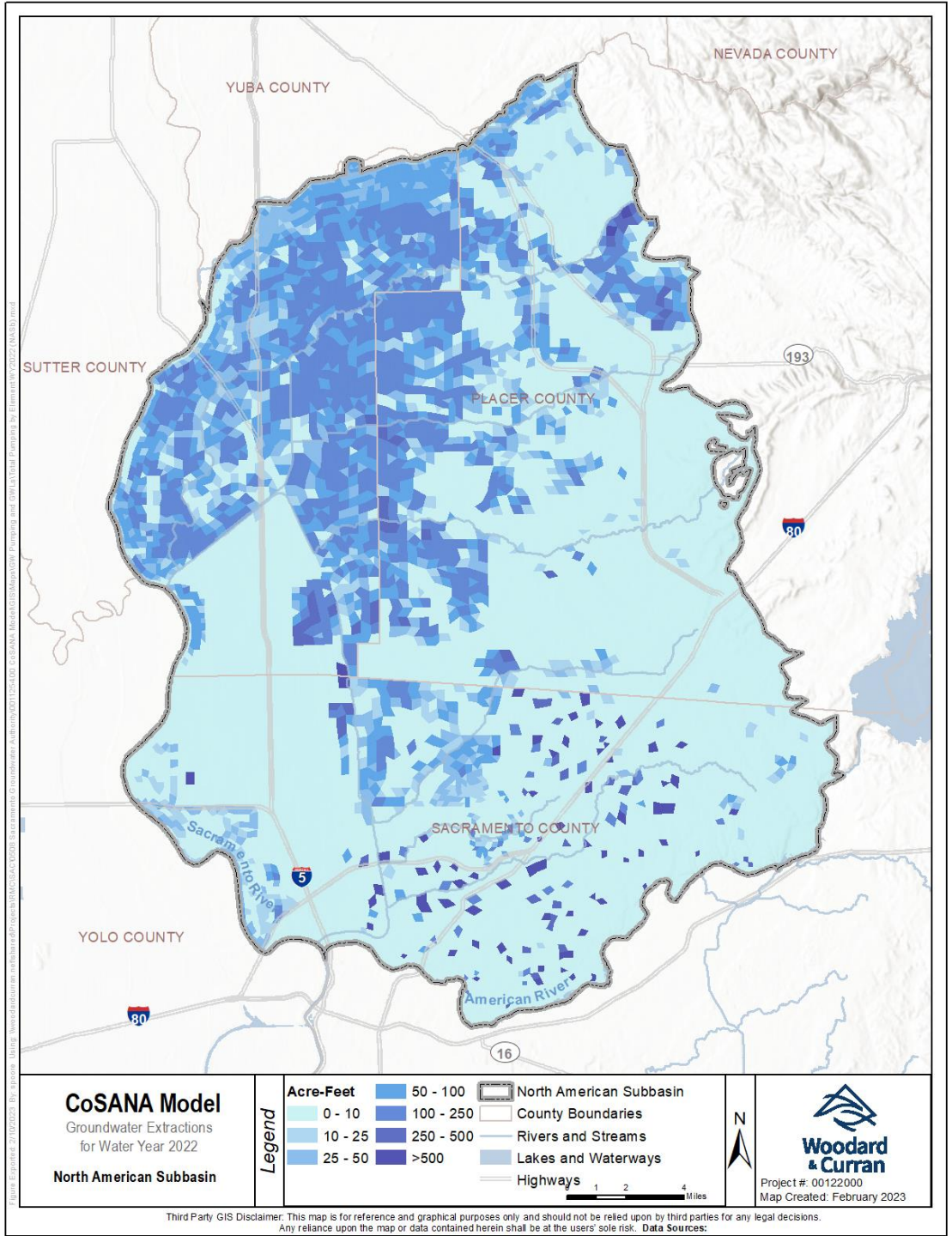


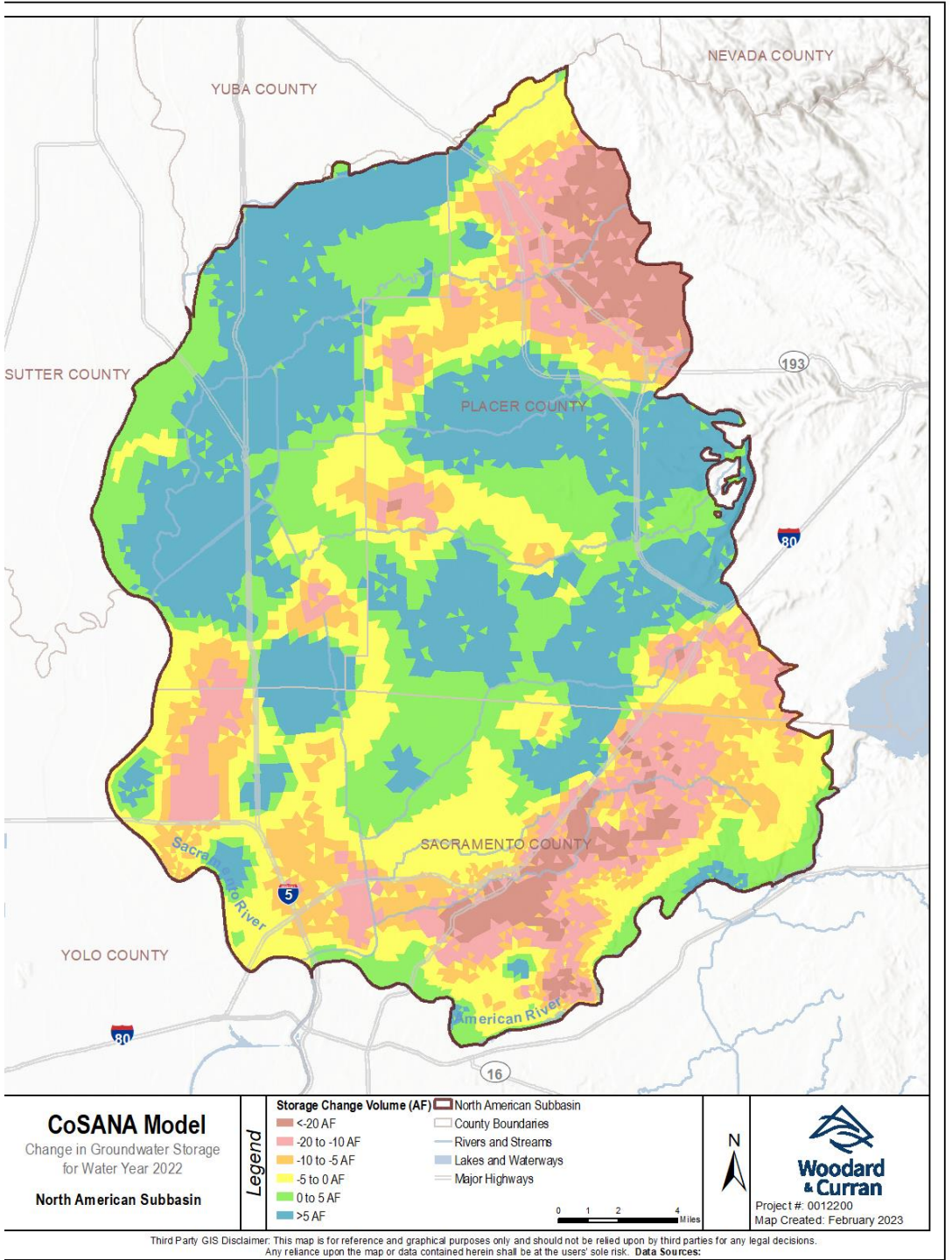
Figure 4-2. Fall 2022 Groundwater Elevation Contour Map



WY 2022

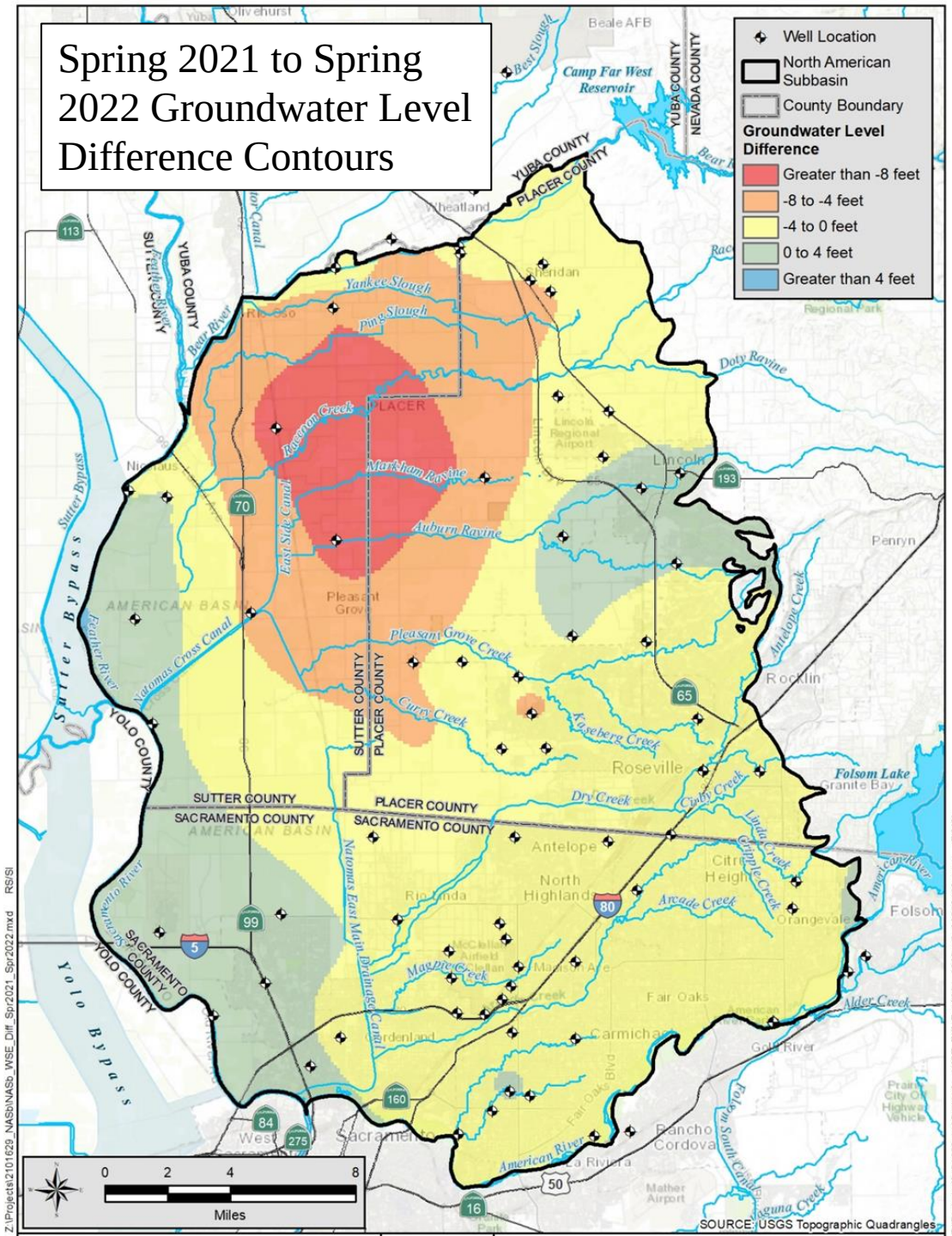
Groundwater Conditions

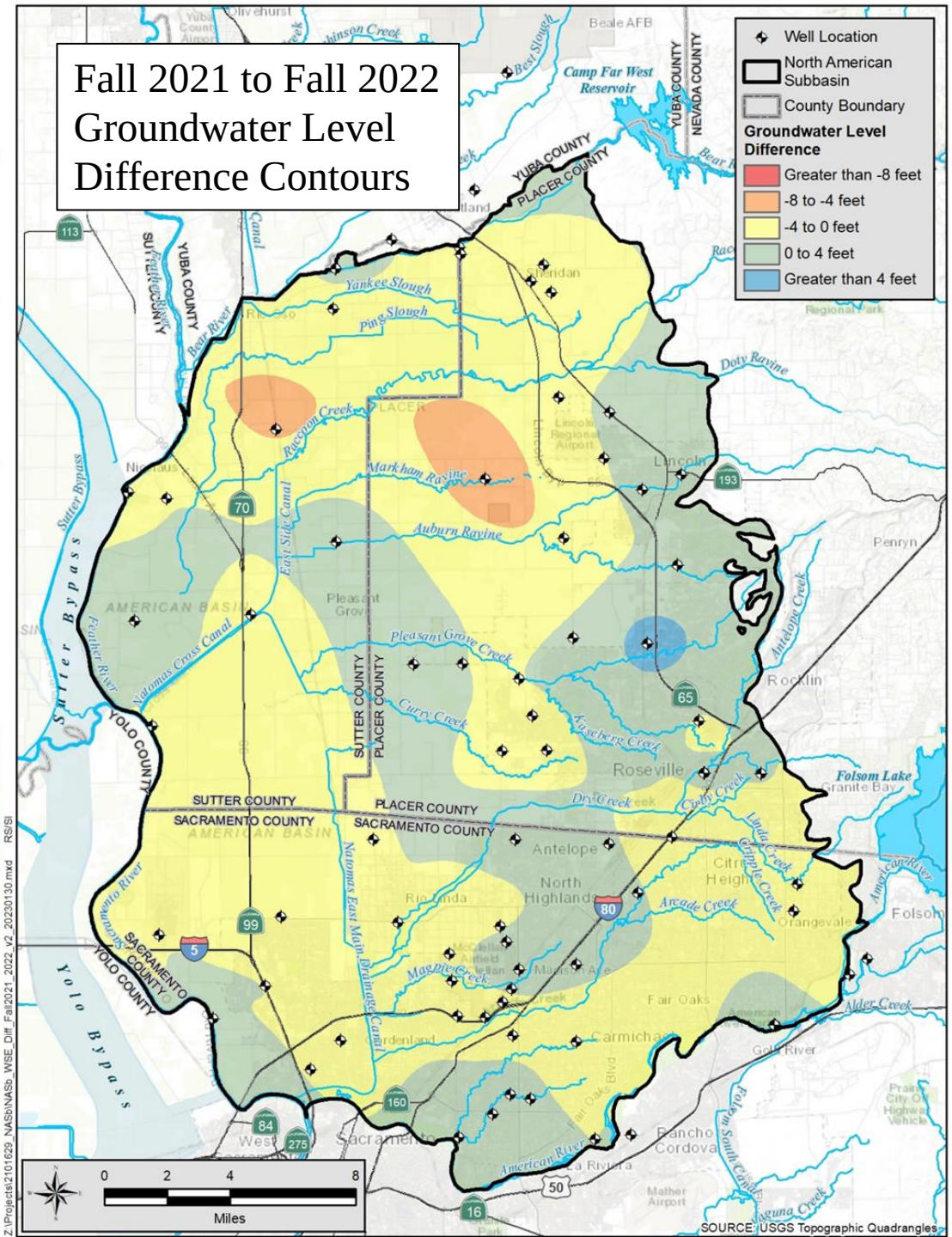




WY 2022

Groundwater Level Differences





Annual and Cumulative Changing in Groundwater Storage

WY 2021

Change in Storage Using Water Level Difference Contour Surfaces

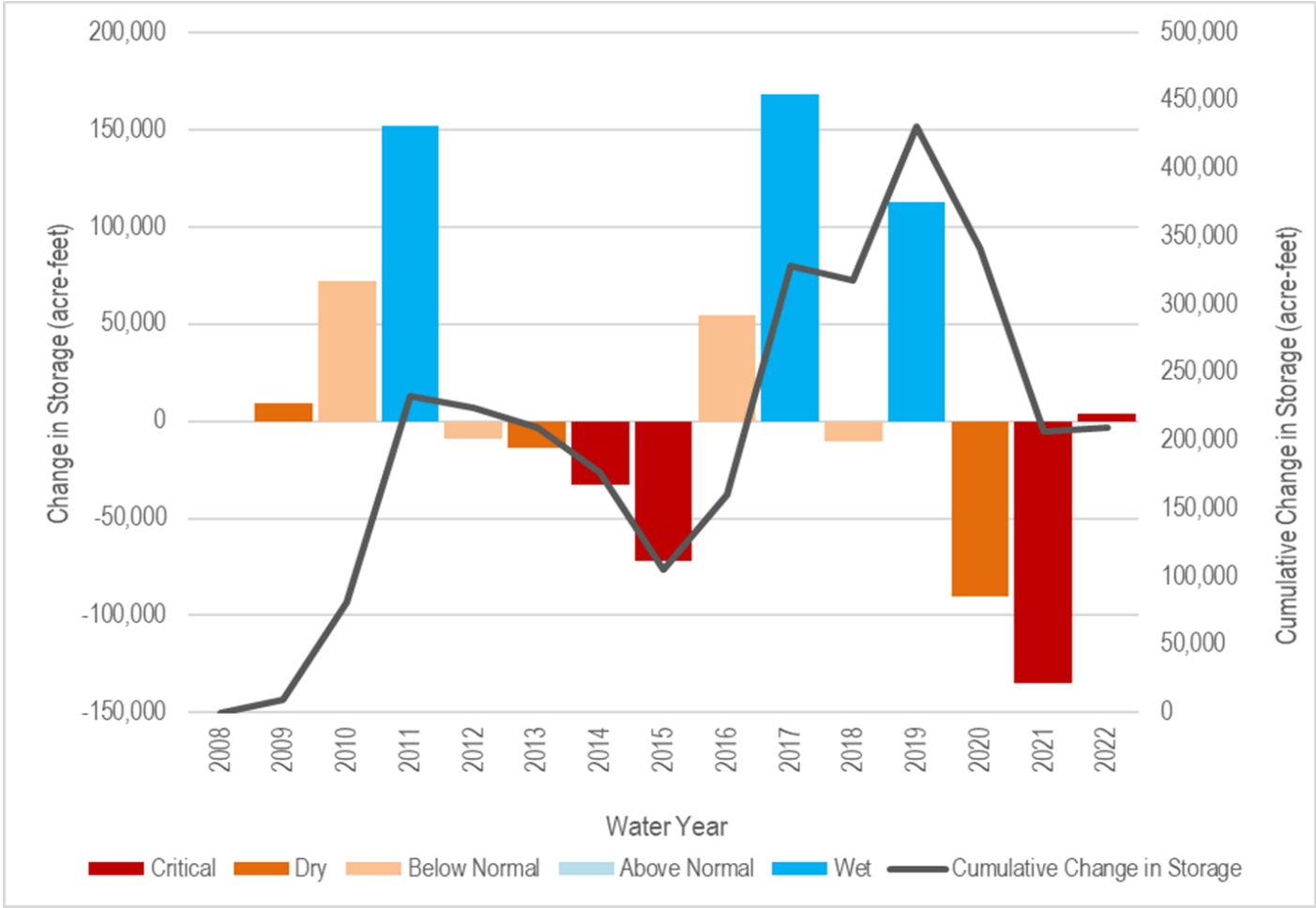
	Basin Area (acres)	Average Water level change (ft)	Average Specific Yield [1] (unitless)	Change in Storage (AF)[2,3]
Spring 2020 - Spring 2021				
	342,516	-2.98	0.084	-85,700
Fall 2020 - Fall 2021				
	342,516	-3.84	0.084	-110,500

WY 2022

Change in Storage Using Water Level Difference Contour Surfaces

Basin Area (acres)	Average Water level change (ft)	Average Specific Yield [1] (unitless)	Change in Storage (AF)[2,3]
Spring 2021 – Spring 2022			
342,516	-2.34	0.084	-67,300
Fall 2021 – Fall 2022			
342,516	-0.30	0.084	-8,600

Notes: AF = acre feet; ft = feet
[1] Calculated average Specific Yield from DWR SVSim Model
[2] Calculated as Area x Water level change x Specific Yield
[3] The total change in groundwater storage is rounded to the nearest 100 AF



Current Groundwater Management Activities

- Continued conjunctive use in urban and agricultural areas
- Continued demand management through:
  - ✓Temporary conservation measures (e.g., water shortage contingency plans in Urban Water Management Plans during periods of constrained supply)
  - ✓Urban water use efficiency program
  - ✓Agricultural specific Efficient Water Management Practices
- Continued agricultural water reuse
- Continued recycled water use

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Projects and Management Actions

Project or Management Action	Comments
Project #1: Regional Conjunctive Use Expansion – Phase 1	Urban water supplies largely in the SGA area continue to advance conjunctive use efforts by reoperating existing and new water treatment and distribution facilities resulting in additional water supply for the region.
Project #2: Natomas Cross Canal Stability Berm and Channel Habitat Enhancements Project	Project is currently in progress, waiting on permits and approvals before starting work. Construction anticipated to begin in 2024.
Management Action #1: Complete Planning for Sacramento Regional Water Bank	Planning and outreach activities started in early 2022 and will continue until the project is completed in early 2025. The Water Bank environmental documentation will begin later this year and ultimately result in a federal acknowledgement bank that can make approximately 60,000 acre-feet of additional water supply available annually.
Management Action #2: Explore Improvements with NASb Well Permitting Programs	Coordination meetings were held with Placer, Sacramento, and Sutter counties well permitting agencies. GSAs are developing approaches to Executive Order N-7-22, Action 9.a and 9.b, which implemented temporary improvements to well permitting programs. Technical analysis and coordination with respective well permitting programs are anticipated to take approximately 2 years to complete.
Management Action #3: Proactive Coordination with Land Use Agencies	In coordination with Placer County Land Use staff, a SGMA draft guide for land use agencies is in development.
Management Action #4: Domestic/Shallow Well – Data Collection and Communication Program	West Placer and SGA staff have initiated a study that will identify public water suppliers contact information to strengthen the GSAs ability to inform landowners of current and projected groundwater conditions.
Management Action #5: Groundwater Dependent Ecosystem Assessment Program	SGA staff is researching options for assessing Groundwater Dependent Ecosystems health.

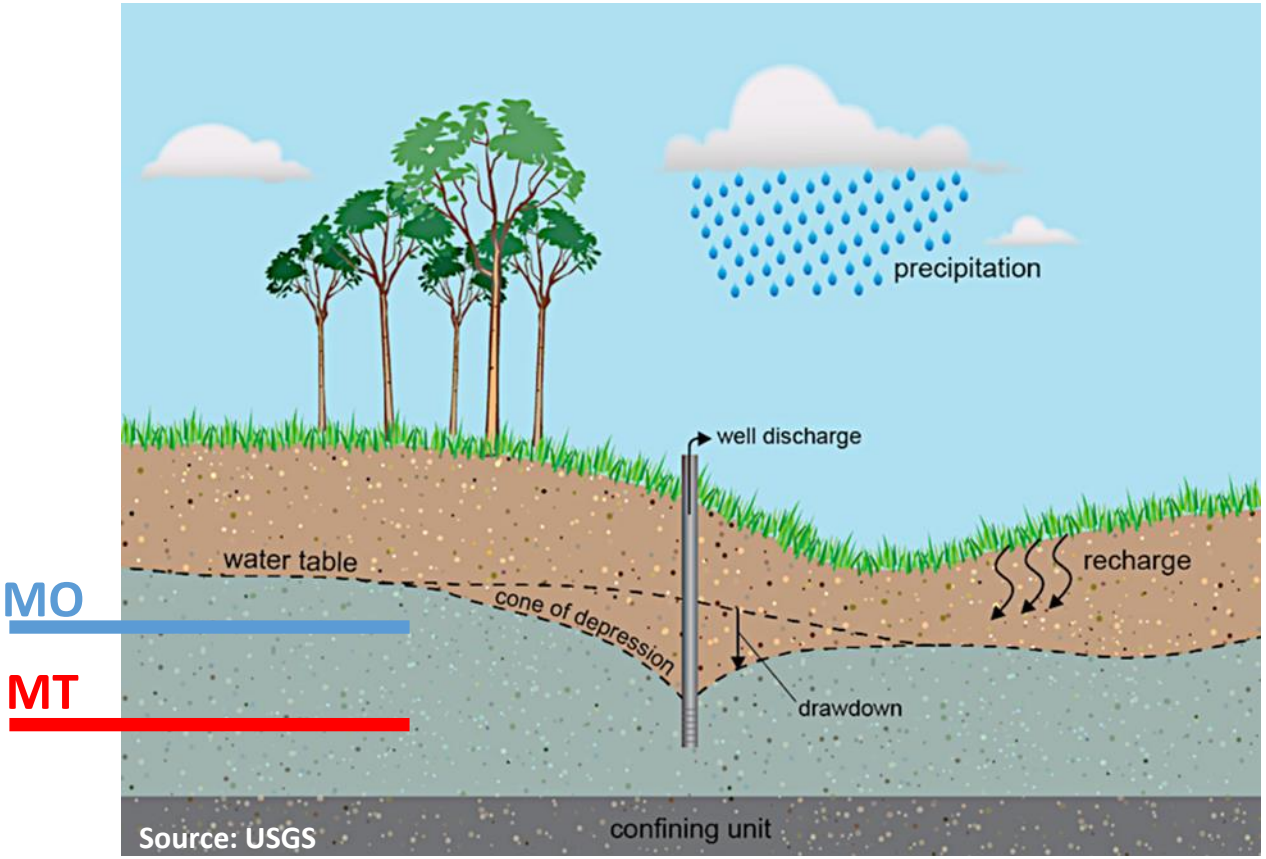
Supplemental Projects

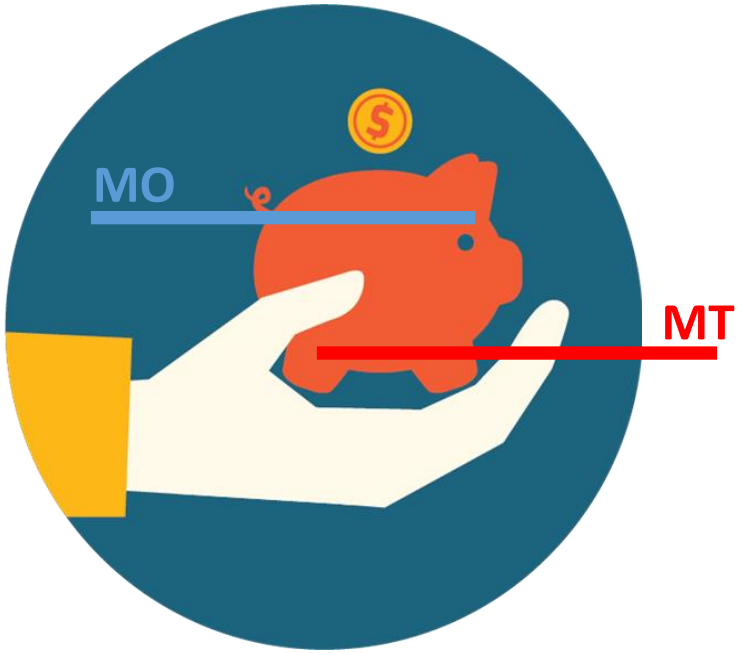
NORTH AMERICAN Subbasin

Supplemental Project	Comments
Regional Water Authority - Expansion of the Sacramento Regional Water Bank (Phase 2)	Planning and outreach activities started in early 2022 and will continue until the project is completed in early 2025. The Water Bank environmental documentation will begin later this year and ultimately result in a federal acknowledgement bank that can make approximately 60,000-acre feet of additional water supply available annually.
Placer County Water Agency - RiverArc	A new treatment plant and pipeline would be constructed to bring Sacramento River water for municipal and industrial water supplies. Improves water supply security by having a water source from a different watershed and expands in-lieu conjunctive use by offsetting existing groundwater demands.
South Sutter Water District - Water System Conveyance System Improvements	Enlarging of district laterals to allow greater surface water deliveries during wet years and a reduction of groundwater pumping to achieve in-lieu recharge.
Natomas Mutual Water Company - Service Area Expansion	Annexation of about 2,300 acres and supplying the area with surface water reducing groundwater pumping. This area has previously been solely dependent on groundwater.
Expansion City of Lincoln – Recycled Water Conjunctive Use	Lincoln is proposing to utilize recycled water into several of the proposed GW recharge projects.
Placer County - Sustainable Agricultural Groundwater Recharge Program	Placer County with the WPGSA has completed a recharge project assessment and is now looking at developing and implementing those projects for the area. WPGSA recently completed a Groundwater Recharge Site Investigation and applied for grant funds to make further progress on a site in rural Lincoln.

Measurable Objectives and Minimum Thresholds

- ***Measurable Objective (MO)*** = target water levels/water quality that represent optimal water level/quality conditions
- ***Minimum Threshold (MT)*** = water levels/water quality values set that if exceeded, could result in negative effects





Sustainability Indicators

Table 7-1. Sustainability Indicators and Undesirable Results

Sustainability Indicator	Undesirable Result Definition
Chronic lowering of groundwater levels	*20% or more of all NASb RMS have MT exceedances for 2 consecutive Fall measurements (8 out of 41 wells)*
Reduction of storage	*20% or more of all NASb RMS have MT exceedances for 2 consecutive Fall measurements (8 out of 41 wells)*
Depletion of surface water	*20% or more of the NASb interconnected surface water RMSs have MT exceedances for 2 consecutive Fall measurements (5 out of 21 wells)*
Land Subsidence	*The rate of inelastic subsidence exceeds 0.5 feet over a 5-year period over an area covering approximately 5 or more square miles*
Degraded groundwater quality	For public water system wells • *The basin-wide average TDS concentrations of all public water system wells exceeds 400 mg/L* *OR* • *The basin wide average nitrate (as N) concentration of all public water system wells exceeds 8 mg/L* For the shallow aquifer (i.e., domestic and self-supplied) wells *25% of the RMSs, TDS and nitrate (as N) concentrations exceed state maximum contaminant levels*

Notes: mg/L= milligrams per liter; MT = minimum threshold; NASb = North American Subbasin; RMS = representative monitoring site;
TDS = total dissolved solids

Chronic Lowering of Groundwater Levels & Reduction of Storage

Lowering GW Levels

Reduction of Storage

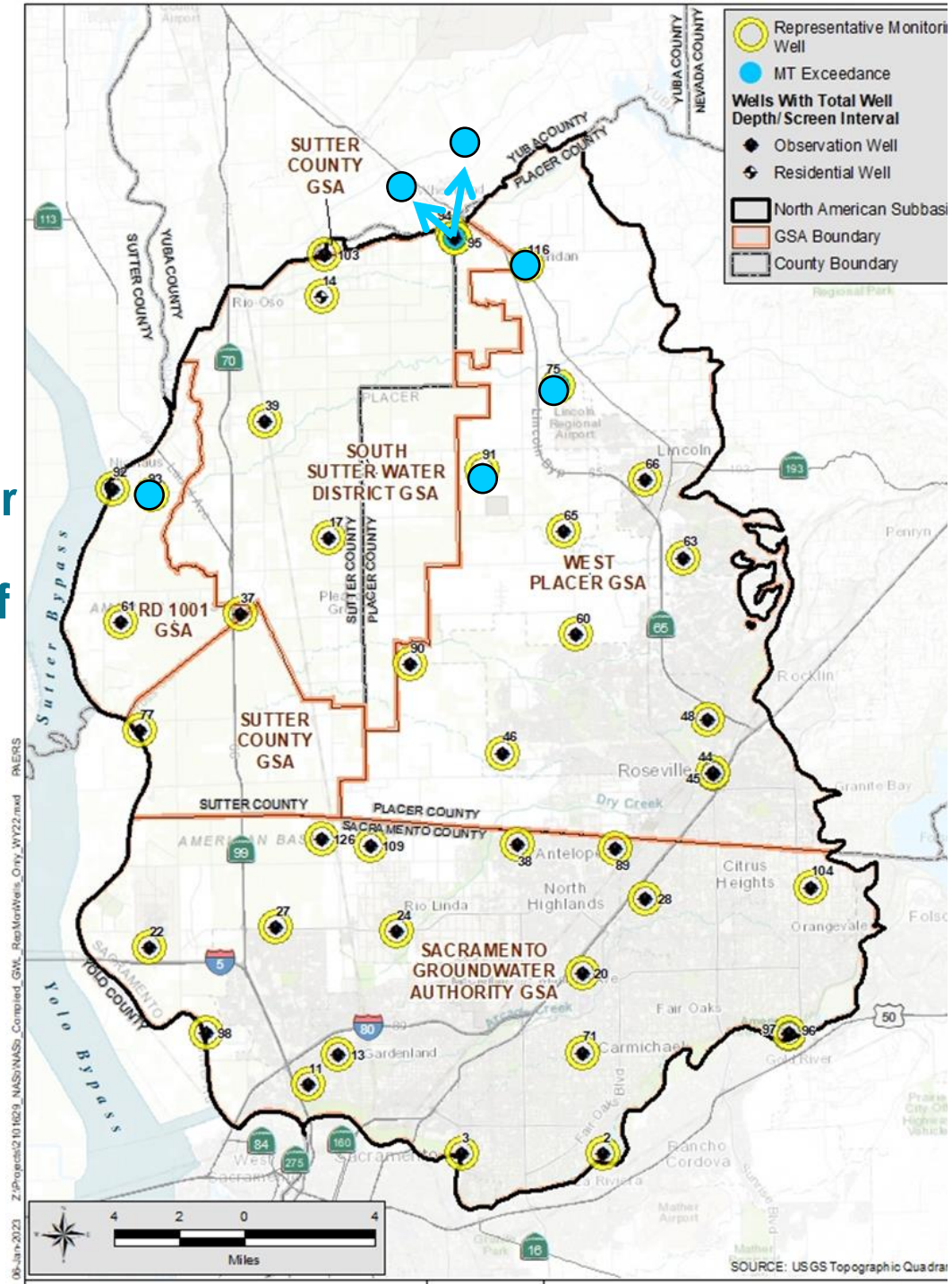


Table 7-2. Chronic Lowering of Groundwater Levels and Minimum Thresholds

Representative Monitoring Sites (i.e. Wells)			WY 2022		2021 Fall Exceeded	2022 Fall Exceeded	Fall 2022 - MT = Difference (ft)
Map No.	Local Name	MT (ft msl)	Spring (ft msl)	Fall (ft msl)			
2	SGA_MW06	1	9.44	7.78	No	No	6.8
3	SGA_MW04	-5	0.34	-0.42	No	No	4.6
11	Bannon Creek Park	-5	0.26	-1.74	No	No	3.3
13	Chuckwagon Park	-15	-9.39	-11.34	No	No	3.7
14	13N04E23A002M	26	32.18	27.88	No	No	1.9
17	AB-2 shallow	-17	3.07	-7.69	No	No	9.3
20	SGA_MW05	-37	-19.63	-27.43	No	No	9.6
22	AB-4 shallow	-1	9.03	3.46	No	No	4.5
24	SGA_MW02	-27	-15.46	-16.91	No	No	10.1
27	AB-3 shallow	-4	8.75	5.70	No	No	9.7
28	Twin Creeks Park	-28	-12.30	-16.00	No	No	12.0
37	SUT-P1	10	16.51	12.21	No	No	2.2
38	Lone Oak Park	-27	-15.23	-16.91	No	No	10.1
39	AB-1 shallow	3	17.66	5.39	No	No	2.4
44	WPMW-10A	133	135.51	134.37	No	No	1.4
45	WPMW-9A	135	138.53	137.46	No	No	2.5
46	SVMW West - 1A	-32	-16.55	-21.25	No	No	10.8
48	WPMW-4A	75	79.19	79.07	No	No	4.1
60	WPMW-2A	22	26.10	24.70	No	No	2.7
61	Sutter County MW-5A	10	17.46	14.40	No	No	4.4
63	WPMW-3A	145	147.51	146.90	No	No	1.9
65	MW 1-3	49	57.03	54.74	No	No	5.7
66	MW 5-2	108	110.96	108.93	No	No	0.9
71	WCMS5	-40	-22.41	-29.39	No	No	10.6
75	MW 2-3	89	88.58	83.04	Yes	Yes	-6.0
77	SREL-1-27-F1	9	11.84	10.38	No	No	1.4
89	Roseview Park - 315	-22	-9.46	-11.76	No	No	10.2
90	WPMW-12A	-45	-23.08	-35.53	No	No	9.5
91	WPMW-11A	3	12.58	0.52	No	Yes	-2.5
92	RDMW-101	15	19.49	16.46	No	No	1.5
93	RDMW-102	12	15.33	11.03	Yes	Yes	-1.0
94	RDMW-103	58	60.44	50.68	Yes	Yes	-7.3
95	RDMW-104	57	58.52	51.08	Yes	Yes	-5.9
96	1516	67	69.76	69.72	No	No	2.7
97	1518	57	60.42	60.48	No	No	3.5
98	URS71000-700+00C	7	10.38	8.00	Yes	No	1.0
103	BR-1B	36	40.99	36.97	No	No	1.0
104	SGA_MW08	97	106.21	105.76	No	No	8.8
109	SGA_MW01	-33	-18.26	-20.61	No	No	12.4
116	Old Well #2	68	69.10	65.30	Yes	Yes	-2.7
126	DeWit	-25	5.30	-3.80	No	No	21.2

Note: ft msl = feet above or below mean sea level; MT = minimum threshold
Yellow highlight indicates MT exceedance.

Depletion of Surface Water

Surface Water Depletion

Table 7-3. Depletion of Surface Water and Minimum Thresholds

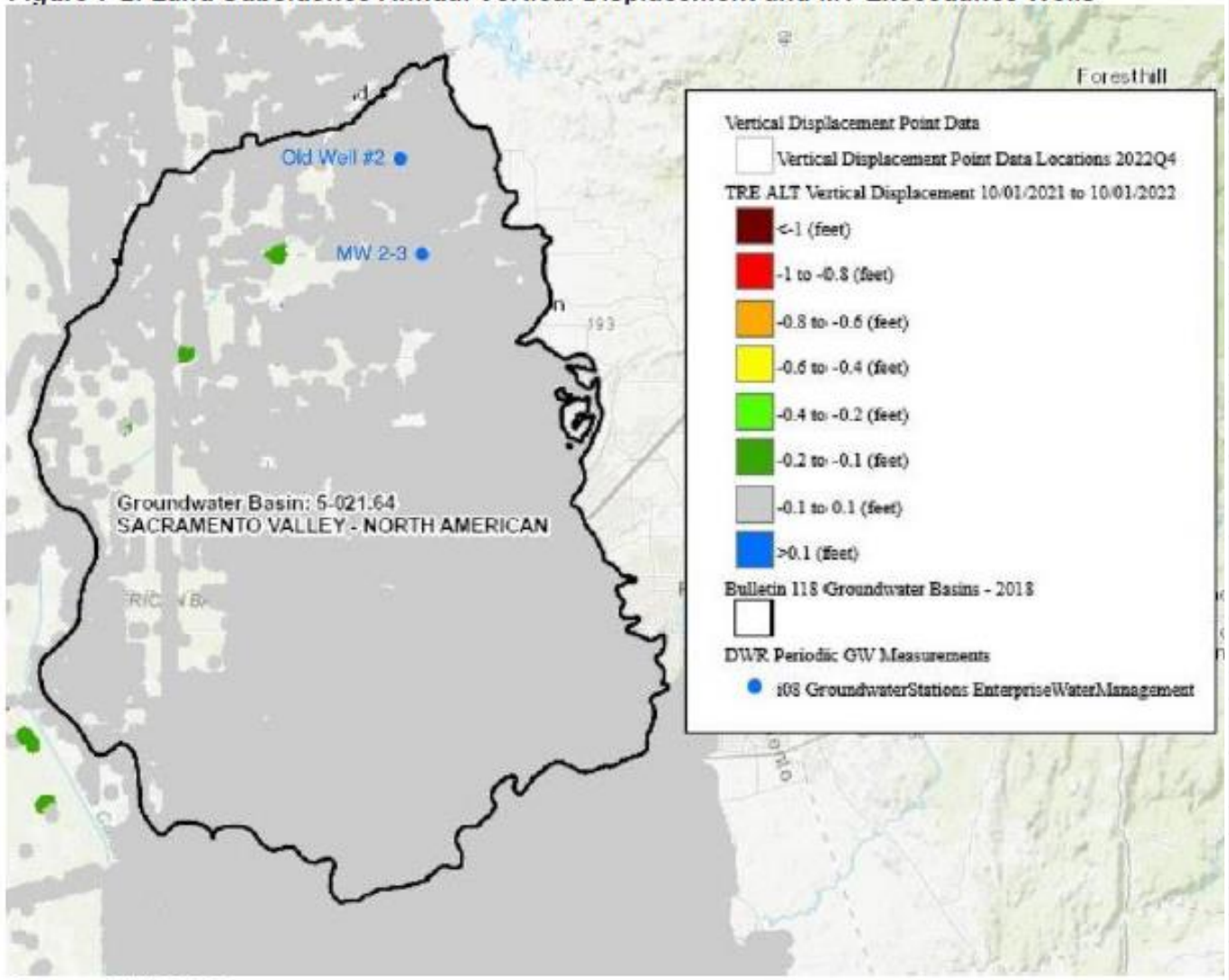
Representative Monitoring Sites (i.e. Wells)			WY 2022		2021 Fall Exceeded	2022 Fall Exceeded	Fall 2022 - MT = Difference (ft)
Map No.	Local Name	MT (ft msl)	Spring (ft msl)	Fall (ft msl)			
2	SGA_MW06	1	9.44	7.78	No	No	6.8
3	SGA_MW04	-5	0.34	-0.42	No	No	4.6
11	Bannon Creek Park	-5	0.26	-1.74	No	No	3.3
13	Chuckwagon Park	-15	-9.39	-11.34	No	No	3.7
14	13N04E23A002M	26	32.18	27.88	No	No	1.9
22	AB-4 shallow	-1	9.03	3.46	No	No	4.5
27	AB-3 shallow	-4	8.75	5.70	No	No	9.7
28	Twin Creeks Park	-28	-12.30	-16.00	No	No	12.0
37	SUT-P1	10	16.51	12.21	No	No	2.2
44	WPMW-10A	133	135.51	134.37	No	No	1.4
45	WPMW-9A	135	138.53	137.46	No	No	2.5
61	Sutter County MW-5A	10	17.46	14.40	No	No	4.4
63	WPMW-3A	145	147.51	146.90	No	No	1.9
66	MW 5-2	108	110.96	108.93	No	No	0.9
75	MW 2-3	89	88.58	83.04	Yes	Yes	-6.0
77	SREL-1-27-F1	9	11.84	10.38	No	No	1.4
92	RDMW-101	15	19.49	16.46	No	No	1.5
93	RDMW-102	12	15.33	11.03	Yes	Yes	-1.0
94	RDMW-103	58	60.44	50.68	Yes	Yes	-7.3
95	RDMW-104	57	58.52	51.08	Yes	Yes	-5.9
96	1516	67	69.76	69.72	No	No	2.7
97	1518	57	60.42	60.48	No	No	3.5
98	URS71000-700+00C	7	10.38	8.00	Yes	No	1.0
103	BR-1B	36	40.99	36.97	No	No	1.0

Note: ft msl = feet above or below mean sea level; MT = minimum threshold

NORTH AMERICAN Subbasin

Land Subsidence

Figure 7-2. Land Subsidence Annual Vertical Displacement and MT Exceedance Wells



Source: DWR, 2023

Table 7-4. Land Subsidence Groundwater Levels and Minimum Thresholds

Representative Monitoring Sites (i.e. Wells)			WY 2022		2021 Fall Exceeded	2022 Fall Exceeded	Fall 2022 - MT = Difference (ft)
Map No.	Local Name	MT (ft msl)	Spring (ft msl)	Fall (ft msl)			
2	SGA_MW06	1	9.44	7.78	No	No	6.8
3	SGA_MW04	-5	0.34	-0.42	No	No	4.6
11	Bannon Creek Park	-5	0.26	-1.74	No	No	3.3
13	Chuckwagon Park	-15	-9.39	-11.34	No	No	3.7
14	13N04E23A002M	15	32.18	27.88	No	No	12.9
17	AB-2 shallow	-21	3.07	-7.69	No	No	13.3
20	SGA_MW05	-37	-19.63	-27.43	No	No	9.6
22	AB-4 shallow	-1	9.03	3.46	No	No	4.5
24	SGA_MW02	-27	-15.46	-16.91	No	No	10.1
27	AB-3 shallow	-4	8.75	5.70	No	No	9.7
28	Twin Creeks Park	-28	-12.30	-16.00	No	No	12.0
37	SUT-P1	8	16.51	12.21	No	No	4.2
38	Lone Oak Park	-27	-15.23	-16.91	No	No	10.1
39	AB-1 shallow	-5	17.66	5.39	No	No	10.4
44	WPMW-10A	133	135.51	134.37	No	No	1.4
45	WPMW-9A	131	138.53	137.46	No	No	6.5
46	SVMW West - 1A	-32	-16.55	-21.25	No	No	10.8
48	WPMW-4A	72	79.19	79.07	No	No	7.1
60	WPMW-2A	21	26.10	24.70	No	No	3.7
61	Sutter County MW-5A	-1	17.46	14.40	No	No	15.4
63	WPMW-3A	145	147.51	146.90	No	No	1.9
65	MW 1-3	38	57.03	54.74	No	No	16.7
66	MW 5-2	104	110.96	108.93	No	No	4.9
71	WCMSS	-40	-22.41	-29.39	No	No	10.6
75	MW 2-3	86	88.58	83.04	Yes	Yes	-3.0
77	SREL-1-27-F1	9	11.84	10.38	No	No	1.4
89	Roseview Park - 315	-22	-9.46	-11.76	No	No	10.2
90	WPMW-12A	-65	-23.08	-35.53	No	No	29.5
91	WPMW-11A	-18	12.58	0.52	No	No	18.5
92	RDMW-101	14	19.49	16.46	No	No	2.5
93	RDMW-102	8	15.33	11.03	No	No	3.0
94	RDMW-103	36	60.44	50.68	No	No	14.7
95	RDMW-104	36	58.52	51.08	No	No	15.1
96	1516	67	69.76	69.72	No	No	2.7
97	1518	57	60.42	60.48	No	No	3.5
98	URS71000-700+00C	6	10.38	8.00	No	No	2.0
103	BR-1B	36	40.99	36.97	No	No	1.0
104	SGA_MW08	97	106.21	105.76	No	No	8.8
109	SGA_MW01	-33	-18.26	-20.61	No	No	12.4
116	Old Well #2	68	69.10	65.30	Yes	Yes	-2.7
126	DeWit	-25	5.30	-3.80	No	No	21.2

Note: ft msl = feet above mean sea level; MT = minimum threshold

Degraded Water Quality

Degraded Quality

NORTH AMERICAN Subbasin

Table 7-5. Public Supply Wells Water Quality Summary

	TDS	Nitrate (as Nitrogen)
Number of Wells Sampled	224	267
Date Range of Samples	02/20/2013-10/06/2022	08/21/2014-11/02/2022
Units	mg/L	mg/L
Minimum Concentration	5	<0.05
Maximum Concentration	650	9.10
Average Concentration (1)	256.47	1.71
Minimum Threshold (average of all wells)	400	8

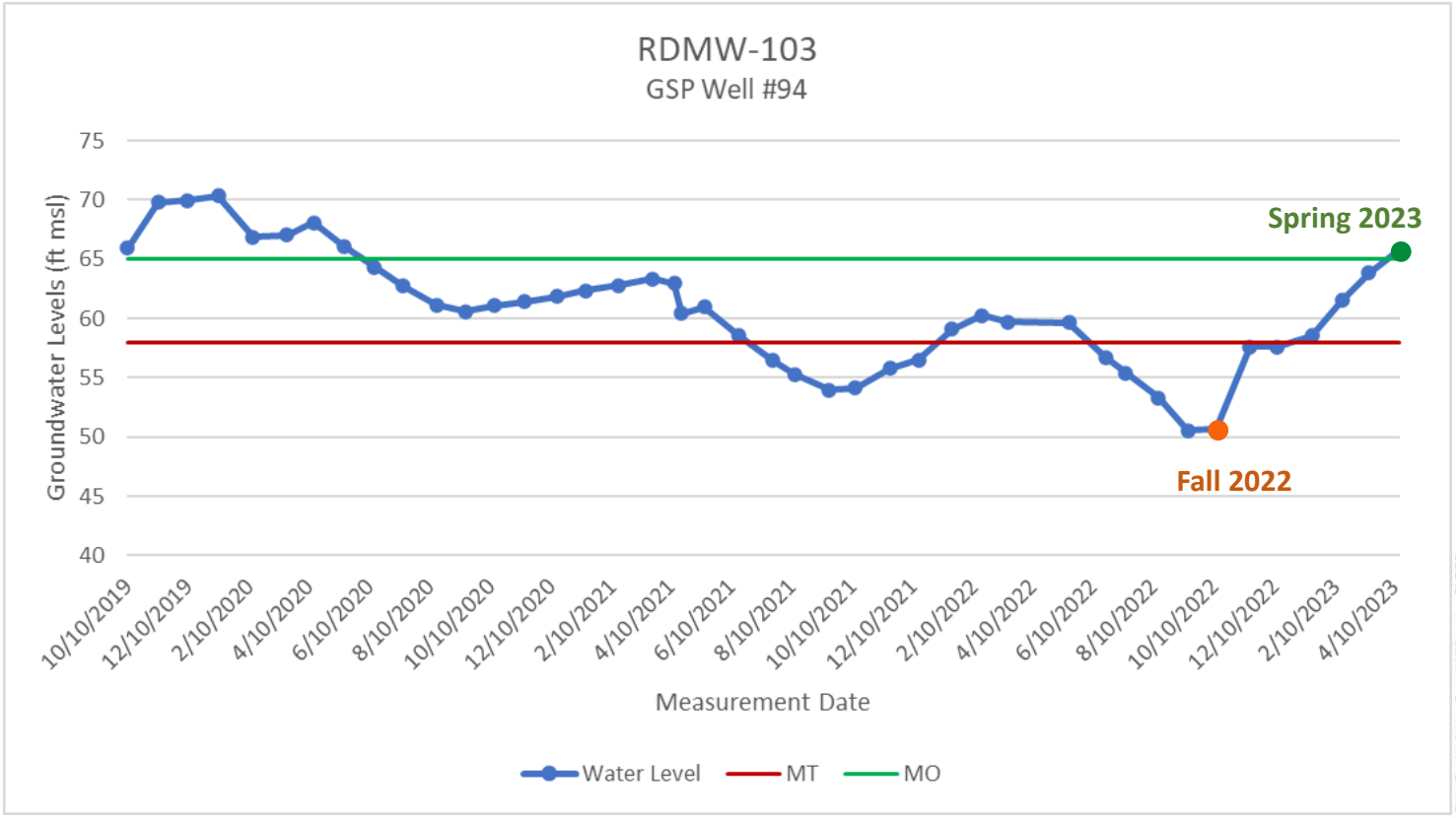
Notes: mg/L= milligrams per liter; TDS = total dissolved solids
(1) For average Nitrate concentrations, values below laboratory detection levels were calculated as one-half the reporting limit.
Source: SWRCB, 2023

Table 7-6. Shallow Aquifer Water Quality Summary

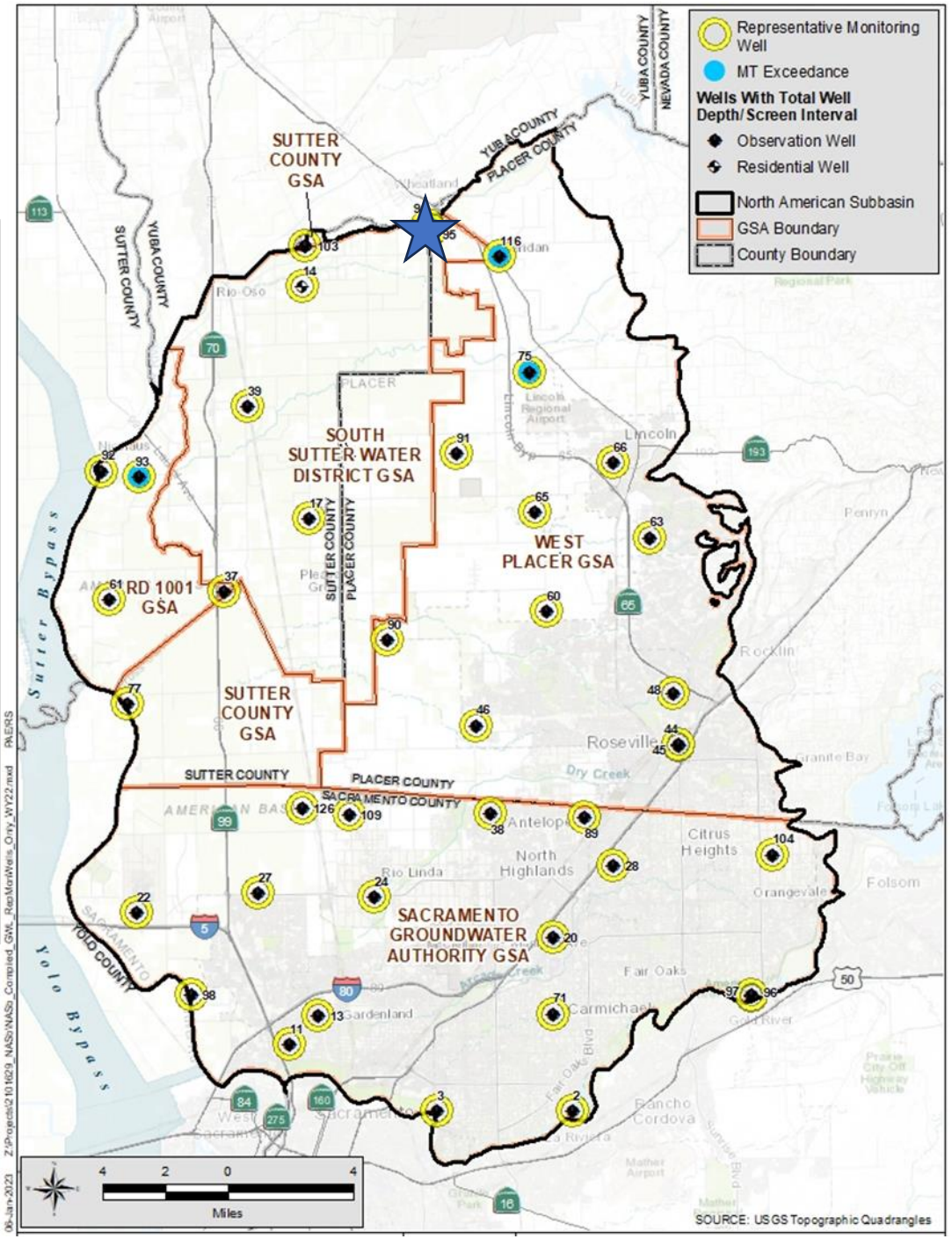
Map No.	Local Name	WY 2022 TDS Reported Concentration (mg/L)	WY 2022 Nitrate as N Reported Concentration (mg/L)	TDS (Secondary MCL = 500 mg/L)	Nitrate (Primary MCL = 10 mg/L)
				Selected MTs (mg/L)	Selected MTs (mg/L)
17	AB-2 shallow	--	--	500	10
20	SGA_MW05	--	--	500	10
24	SGA_MW02	--	--	500	10
27	AB-3 shallow	--	--	500	10
37	SUT-P1	--	--	500	10
39	AB-1 shallow	--	--	500	10
46	SVMWWest1A	--	--	500	10
80	Cemetery (IRLP)	240	1.5	500	10
89	Roseview Park - 315	--	--	500	10
90	WPMW-12A	210	0.73	500	10
91	WPMW-11A	210	3.6	500	10
99	Main Well	--	--	500	10
109	SGA_MW01	--	--	500	10
133	LW-1	--	--	500	10
177	Well 22 - Northrop	--	--	500	10
298	Tinker Road Well	--	--	500	10

Note: --- = sample not acquired; mg/L = milligrams per liter

Hydrograph (RDMW-103) – Recovering Groundwater Levels



"Undesirable result" as defined by **Water Code §10721** – "Overdraft during a period of drought is not sufficient to establish a chronic lowering of groundwater levels if extractions and recharge are managed as necessary to ensure that reductions in groundwater levels or storage during a period of drought are offset by increases in groundwater levels or storage during other periods"



A Break for Questions/ Discussion

- **On Zoom**:
  - “Raise hand” function to speak or
  - Type question in comment box
- **Via telephone**:
  - *9 to “Raise Hand”
  - *6 to unmute when called on

NORTH AMERICAN Subbasin

California Department of Water Resources (DWR) SGM Grant Round 2

NORTH AMERICAN Subbasin

Department of Water Resources (DWR) SGM Grant Overview

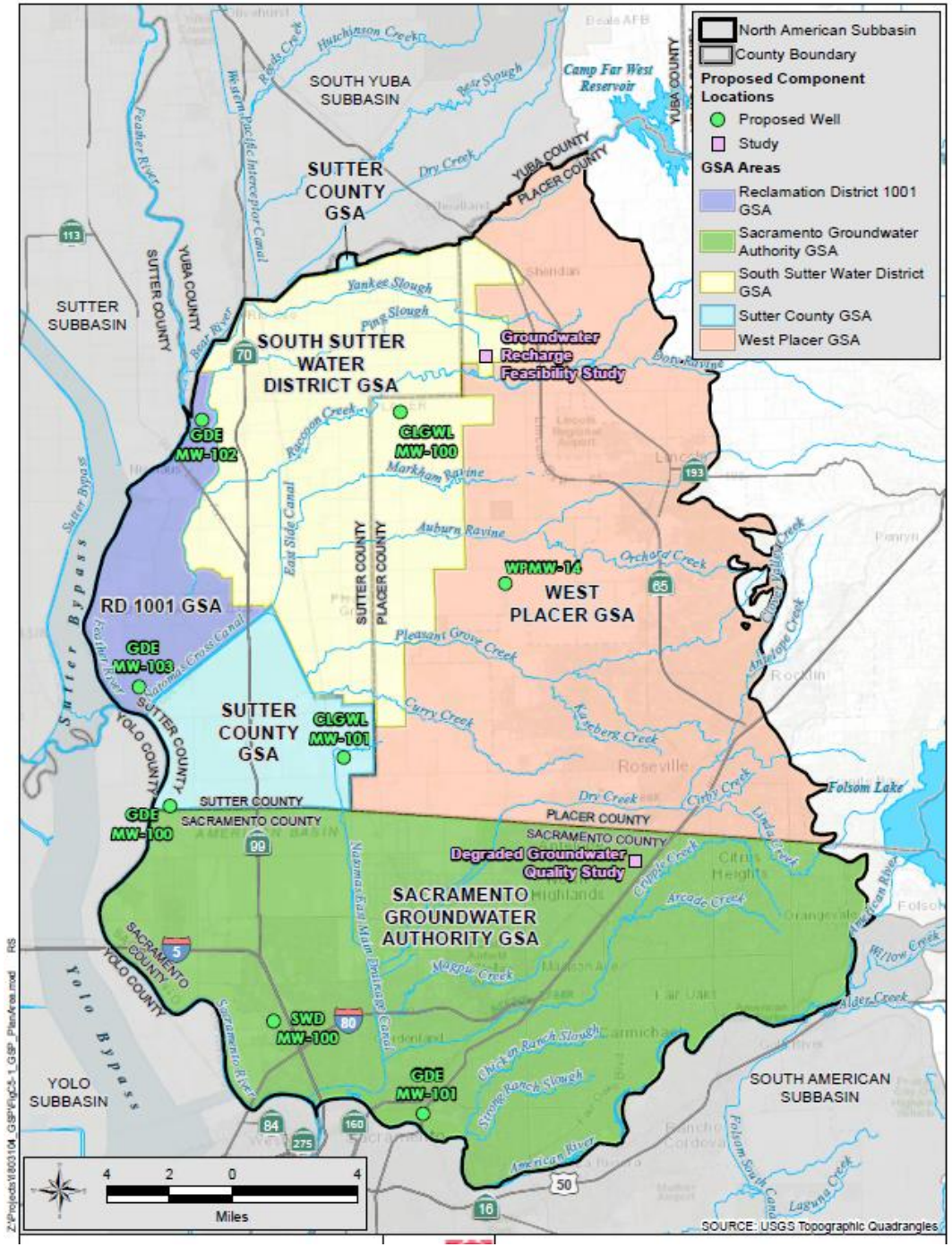
- DWR administered the Sustainable Groundwater Management (SGM) Grant Program
- Round 1 Awards ($150 million for Critically Overdrafted Basins, ~$7.6 million per basin
  Round 2 Solicitation Opened: October 4, 2022 Deadline: December 16, 2022
  - High, Medium, & Critically Overdrafted basins eligible, approx. $231 million avail.
  - Grant awards: Minimum – $1 million per basin; Maximum– $20 million per basin
  - Only one application per basin/subbasin
- **Round 2 Draft Funding Recommendations Announced May 19, 2023**
  - DWR received 82 applications requestion over $780 million
  - Recommended 31 applications receive a total award of $187.3M
  - Public comment period ended June 9, 2023
  - Final award to be announced in October 2023

- **DWR recommended NASb receive the full requested grant amount of $3,560,500 for Advancing NASb Sustainable Groundwater Management**

NASb Grant *Proposed* Components

Advancing NASb SGM (Proposed) Components

1. Grant Administration
2. Groundwater Recharge Feasibility Study
3. Groundwater Quality Degradation Study
4. Groundwater Monitoring Wells Construction
   - GDE (4)
   - Lowering of Levels (1)
   - SW Depletion (1)
5. Groundwater Monitoring Well/Emergency Supply Well
   - Domestic and Emergency Supply (1)
6. GSP Update and Annual Reporting
7. CoSANA Model Upgrade and Enhancements



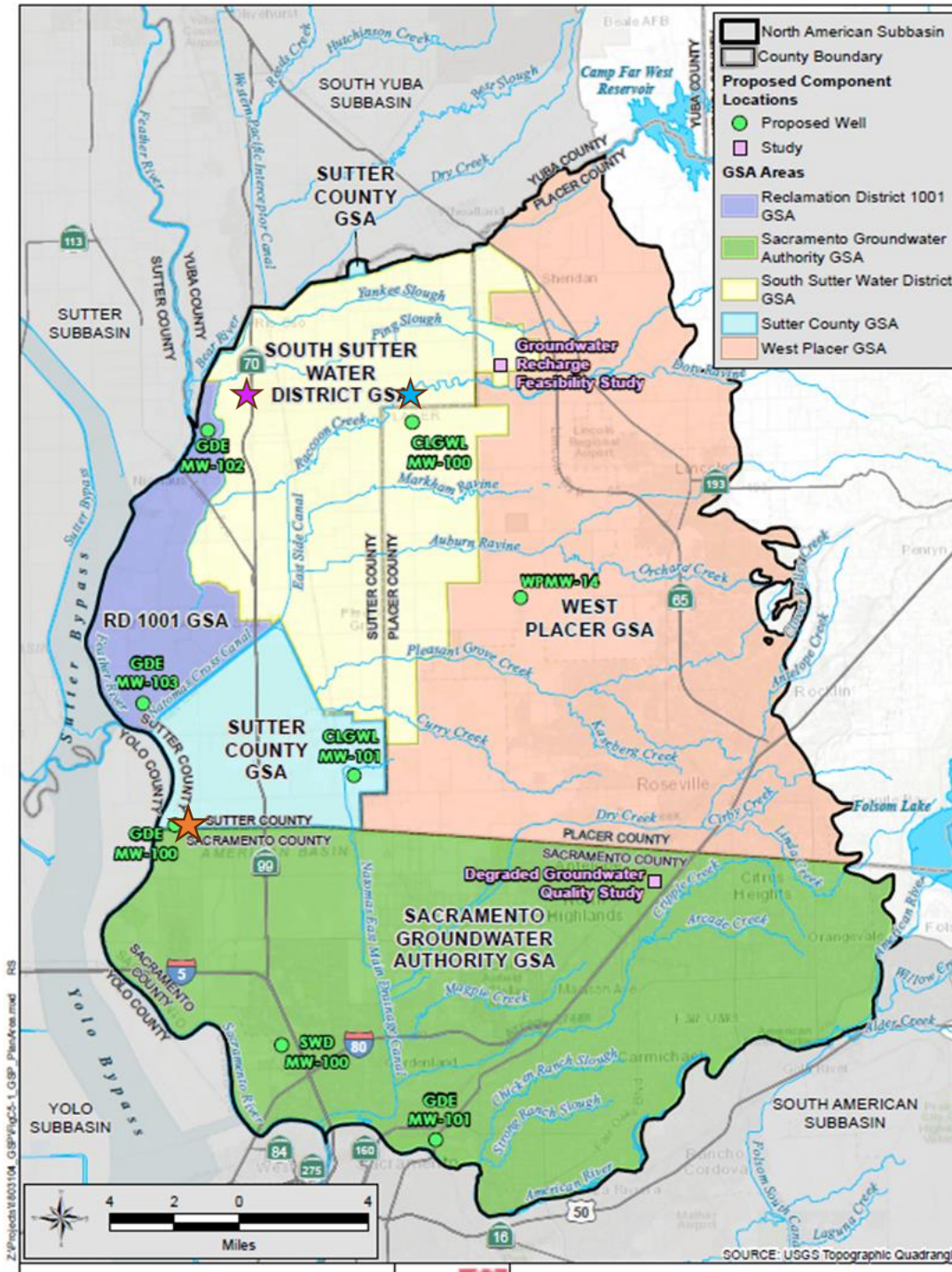
Exact locations of proposed components may vary

Data Gaps

NASb Grant *Proposed* Component #4 – Groundwater Monitoring Wells Construction addresses data gaps:

- Groundwater Dependent Ecosystems (GDEs)
  - ★➢ Proposed GDE MW-100 location - near existing well 128
  - ★➢ Proposed GDE MW-102 location – near existing well 78

- Chronic Lowering of Groundwater Levels (CLGWL)
  - ★➢ Proposed CLGWL MW-100 location - near existing well 112



NORTH AMERICAN Subbasin

NASb GSAs WY 2022 SGM Report

- **Basin wide Sustainability** – No Undesirable Results have been observed in the NASb as defined in the NASb GSP.
- **Site Specific Sustainability Indicators** – Less than 20 percent of the representative monitoring sites (RMS) in the NASb observed minimum threshold (MT) exceedances after 3 years of drought conditions.
  - For the 6 RMS with Fall 2022 MT exceedances, an average increase in groundwater levels of 10.17 feet mean sea level was observed during Spring (April) 2023.
  - Currently, two RMS have minimum threshold exceedances based on June 2023 data.
- **Projects & Management Actions** – NASb GSAs continue to make progress on all PMAs and with the implementation of the DWR grant will be able to accelerate the schedule addressing data gaps and NASb GSP implementation activities.

NASb - Timeline

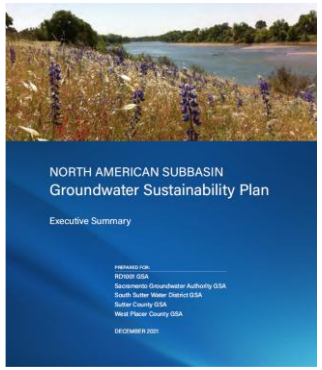
NORTH AMERICAN Subbasin

NASb – Timeline of Activities

GSP development and adoption

GSP Implementation Begins and continues…

5-year Evaluation (2026, 2031, 2036, 2041)



Annual Reporting

Projects and Management Actions

Groundwater Sustainability Agency (GSA) Coordination

Outreach and Engagement

Monitoring and Data Management

Budgeting and Funding

2016 to 2021

2022

Dec

2023

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

NORTH AMERICAN Subbasin

Questions/Comments?

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