

Napa County Groundwater Sustainability Agency

Napa County Groundwater Sustainability Annual Report: Water Year 2025

May 19, 2026





Outline

Napa Valley Subbasin Water Budget

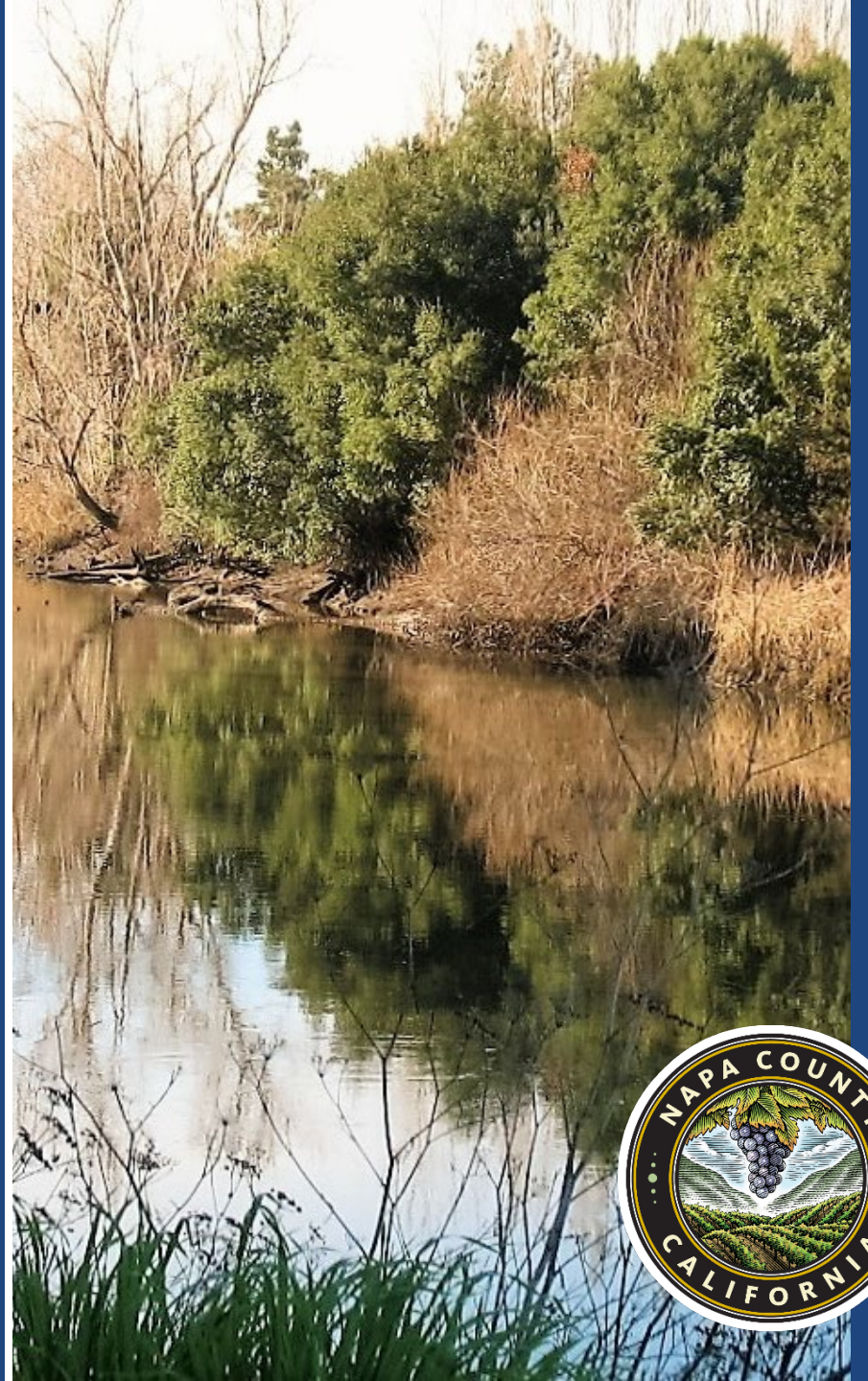
Sustainability Indicators

Projects and Management Actions

Next Steps

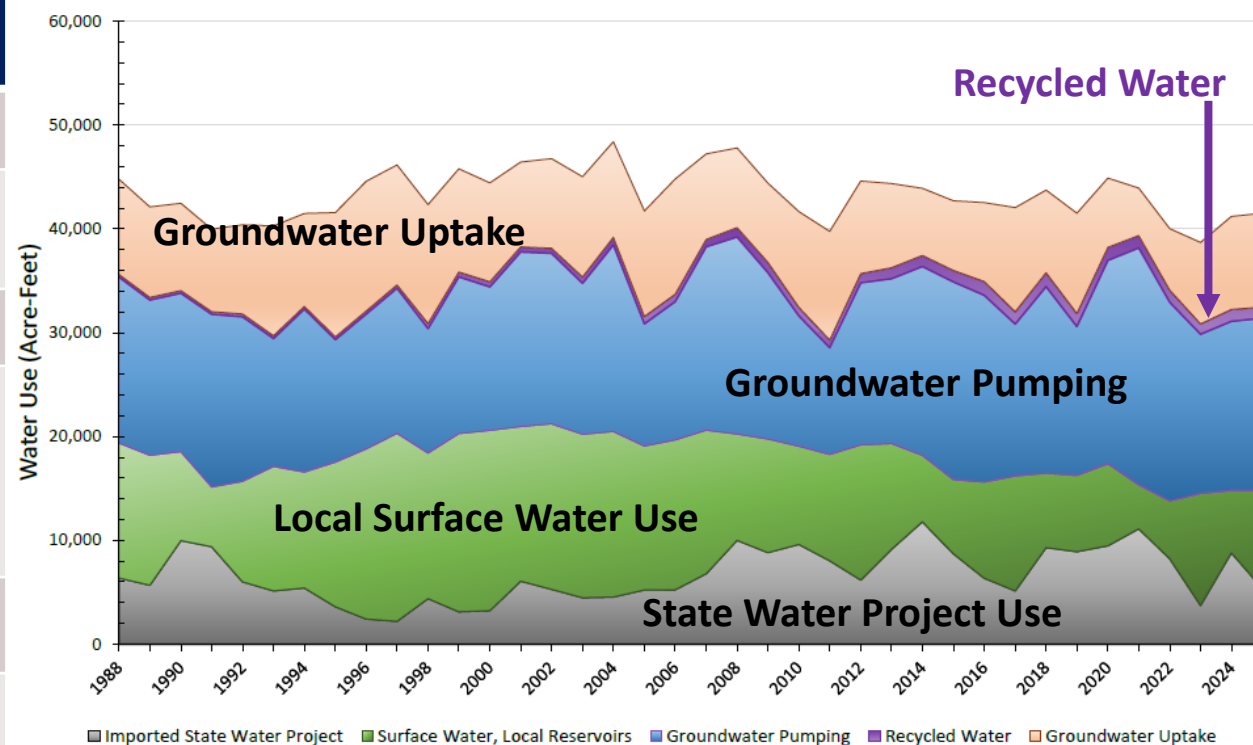
Request for Direction

Napa Valley Subbasin Water Budget WY 2025



Total Water Use: WY 2025 (acre-feet)

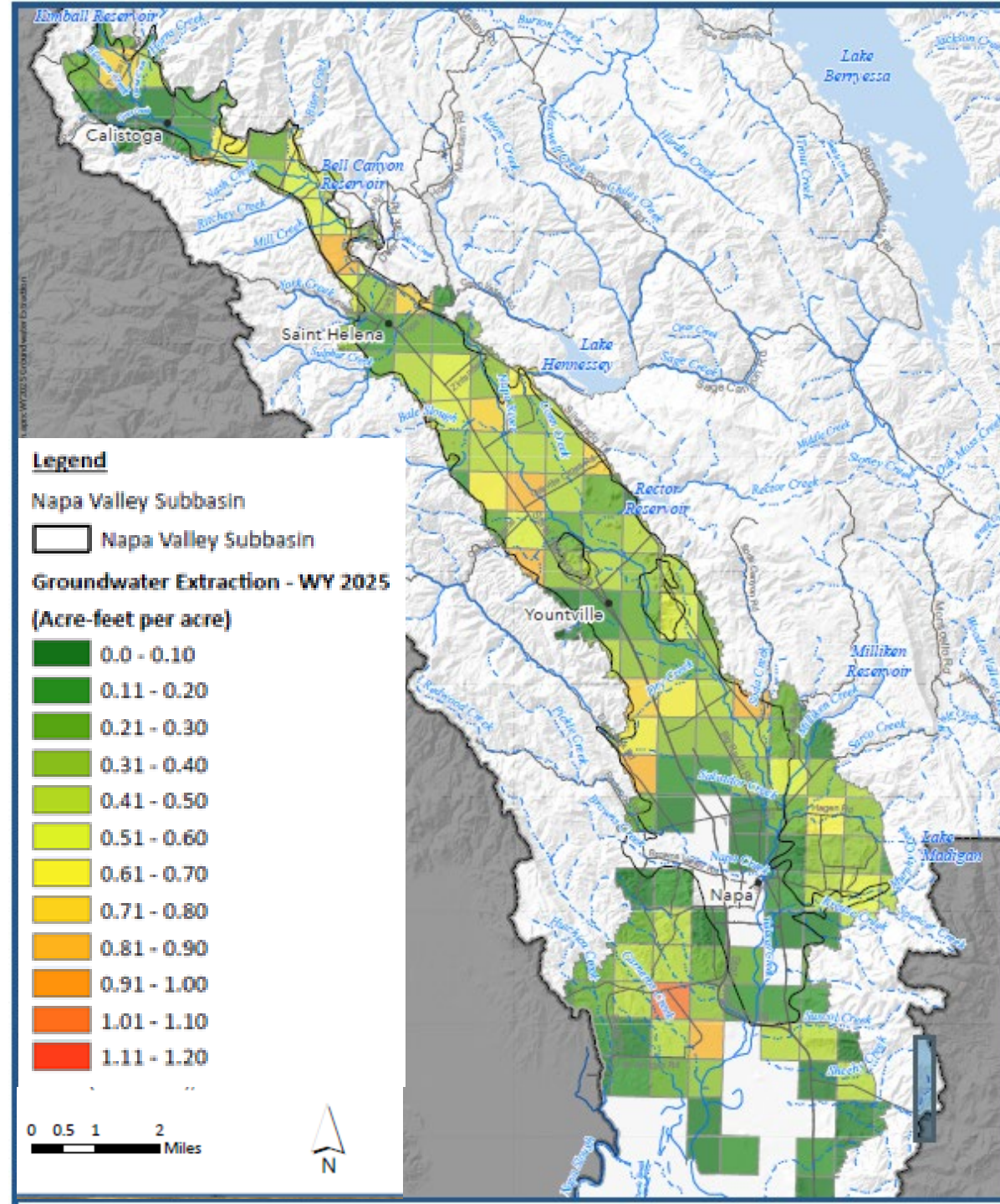
Water Use	2023 (W)	2024 (BN)	2025 (BN)
Groundwater Pumping	15,300	16,290	16,580
Native Veg, GDEs & Managed Wetlands	7,830	8,950	9,030
Recycled Water Use	1,020	1,140	1,080
Local Surface Water Use (including reservoirs, diversions, etc.)	10,781	6,001	9,434
State Water Project Use	3,750	8,803	5,368
TOTAL	38,681	41,184	41,493



Groundwater Pumping, WY 2025 (Acre-Feet)

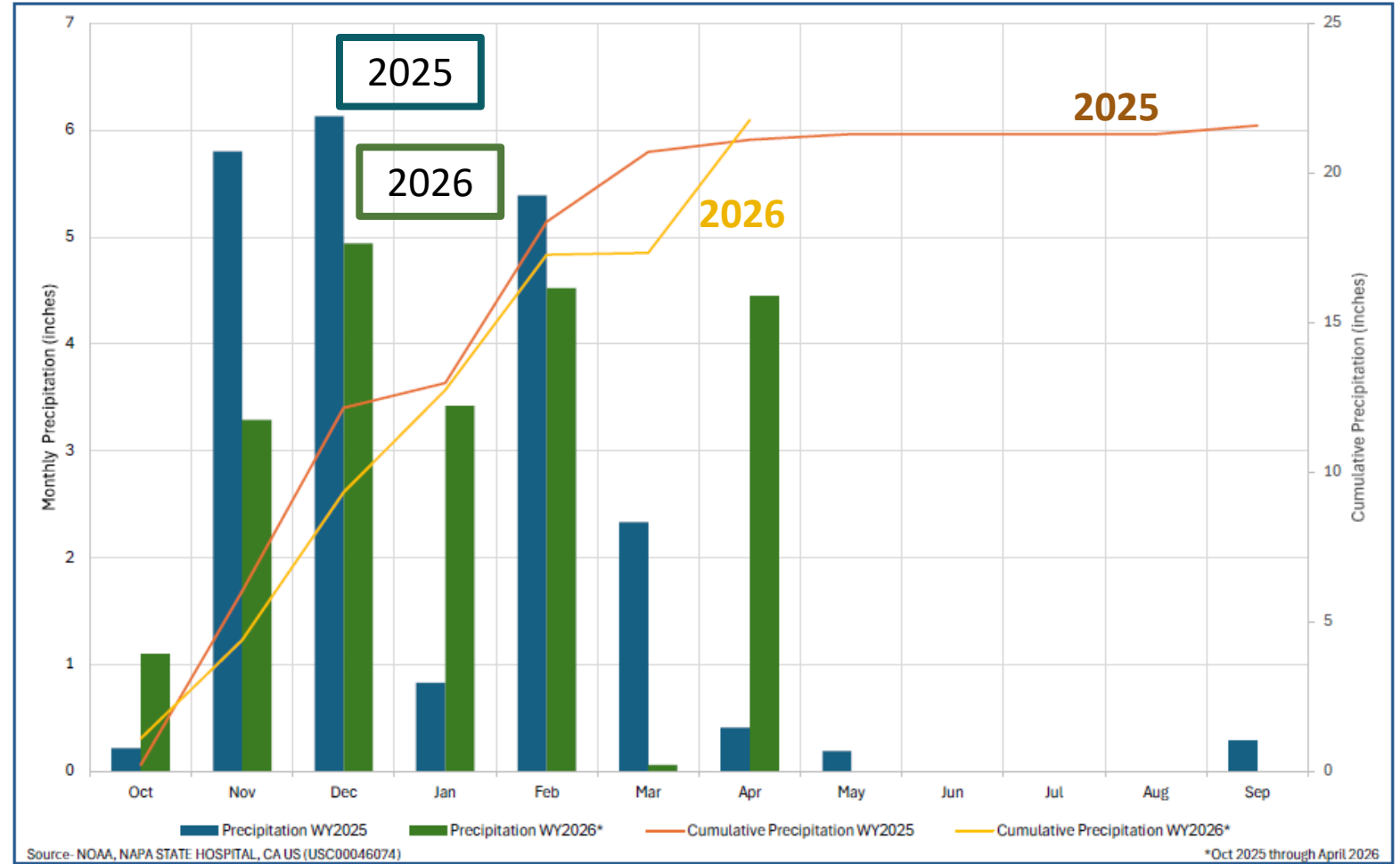
Groundwater Pumping	Acre-Feet	Percent Use
Ag (vines and other)	12,290	74%
Municipal	280	2%
Self-Supplied Users Domestic (2,870 AF for outdoor use)	2,940	18%
Small Public Water Systems	1,070	6%

TOTAL = 16,580 Acre-Feet



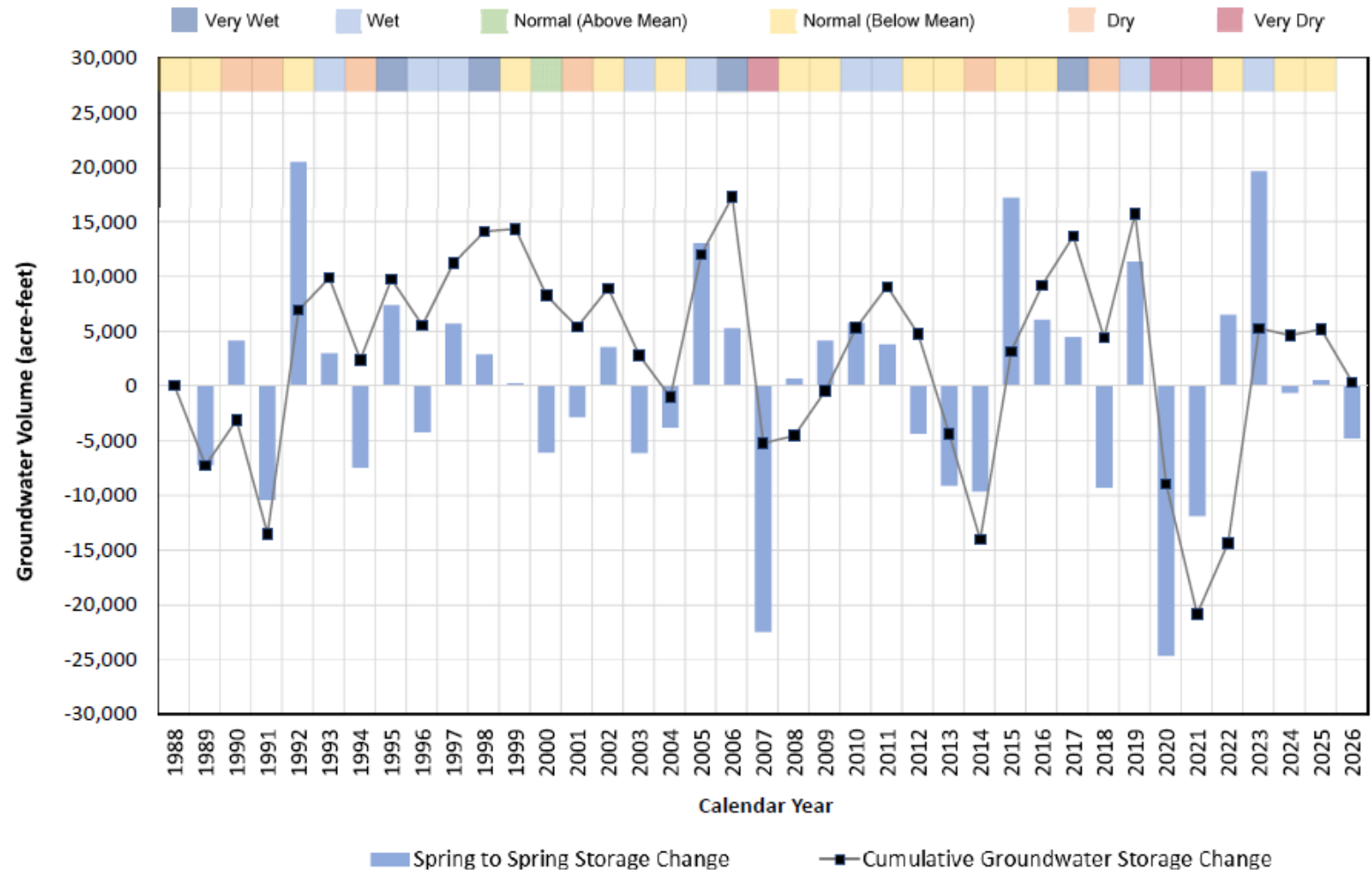
Precipitation Patterns: Spring 2025 and Spring 2026

- Far less precipitation in March 2026 compared to March 2025
- Unusually warm temperatures also occurred in March 2026; all but 2 days had highs above the daily average high
- Spring groundwater levels in 2026 were lower than in 2025; average groundwater elevation change -1.7 feet



Change in Groundwater Storage: WY 2025 and Preview for WY 2026

- Spring 2024 to 2025 showed a slight increase in storage in WY 2025 (+580 AF)
- Spring 2025 to 2026 shows a -4,807 AF decrease in average annual groundwater storage
- Cumulative storage shows a decrease compared to the past 3 water years
- Subbasin is sensitive to climate-related changes



Sustainability Indicators & Metrics

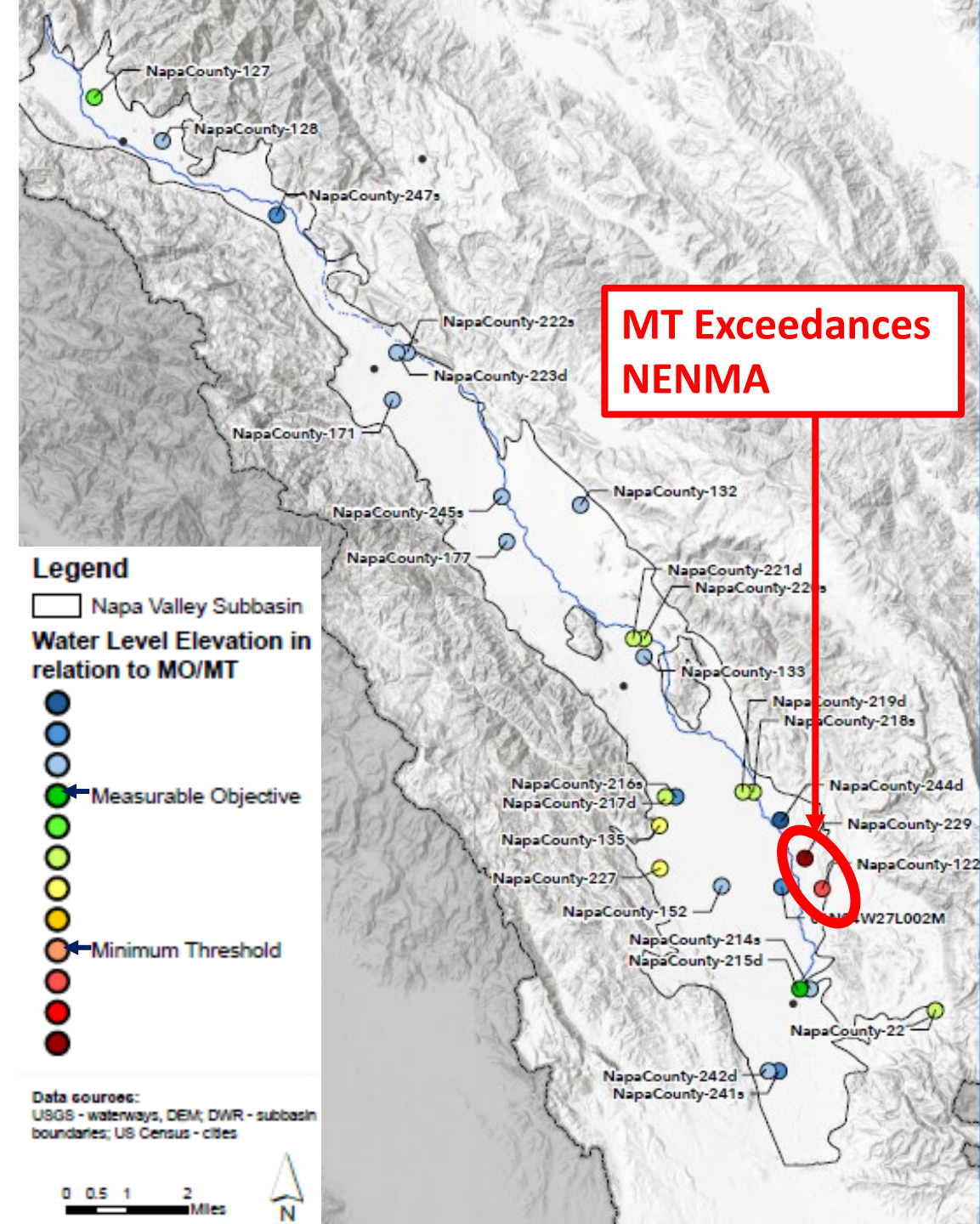


Sustainability Indicator Description and Summary

Sustainability Indicator	Description of Monitoring			Simplified Summary of Minimum Threshold and Undesirable Result
	Parameter	Observed	Modeled	
Chronic GWL Lowering (CGWL)	GW elevations in representative wells.	✓		Based on observed low GW elevation prior to 2015.
Depletion of Interconnected Surface Water (ISW)	GW elevations and model results that equate pumping to streamflow depletion.	✓	✓	Minimum GW elevation from 2005-2014 and second highest seasonal depletion that occurred from 2005-2014.
GW Quality Degradation	Measurements of total dissolved solids (TDS), arsenic, and nitrate.	✓		Based on drinking water standards as well as historical range.
Reduction of GW Storage	Modeled GW extraction.		✓	GW extraction in exceedance of the Sustainable Yield for a single year and the 7-year average.
Land Subsidence	Based on remotely sensed changes in ground surface elevation.	✓		Inelastic subsidence of 0.2 feet per year.
Seawater Intrusion	Measurements of TDS and/or chloride near tidally influenced areas.	✓		Historical maximum chloride concentrations.

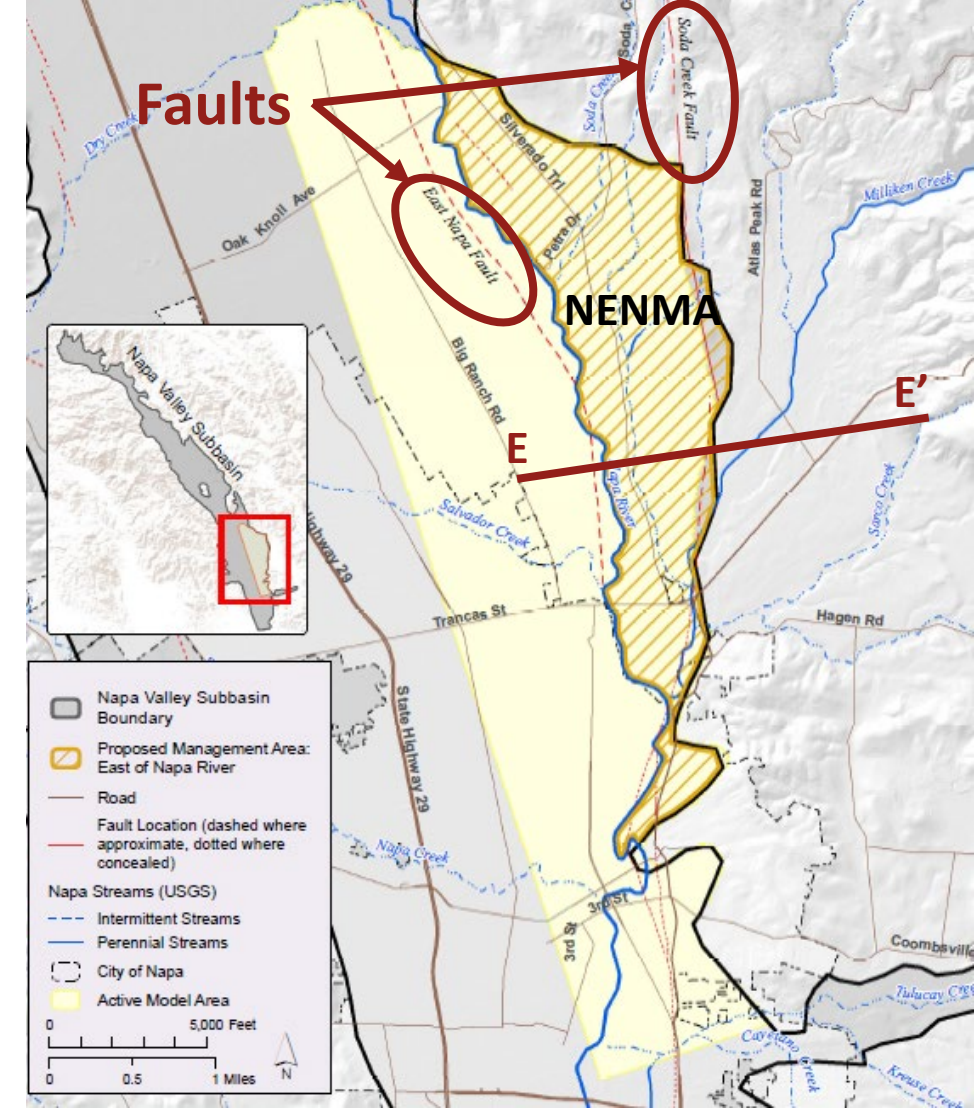
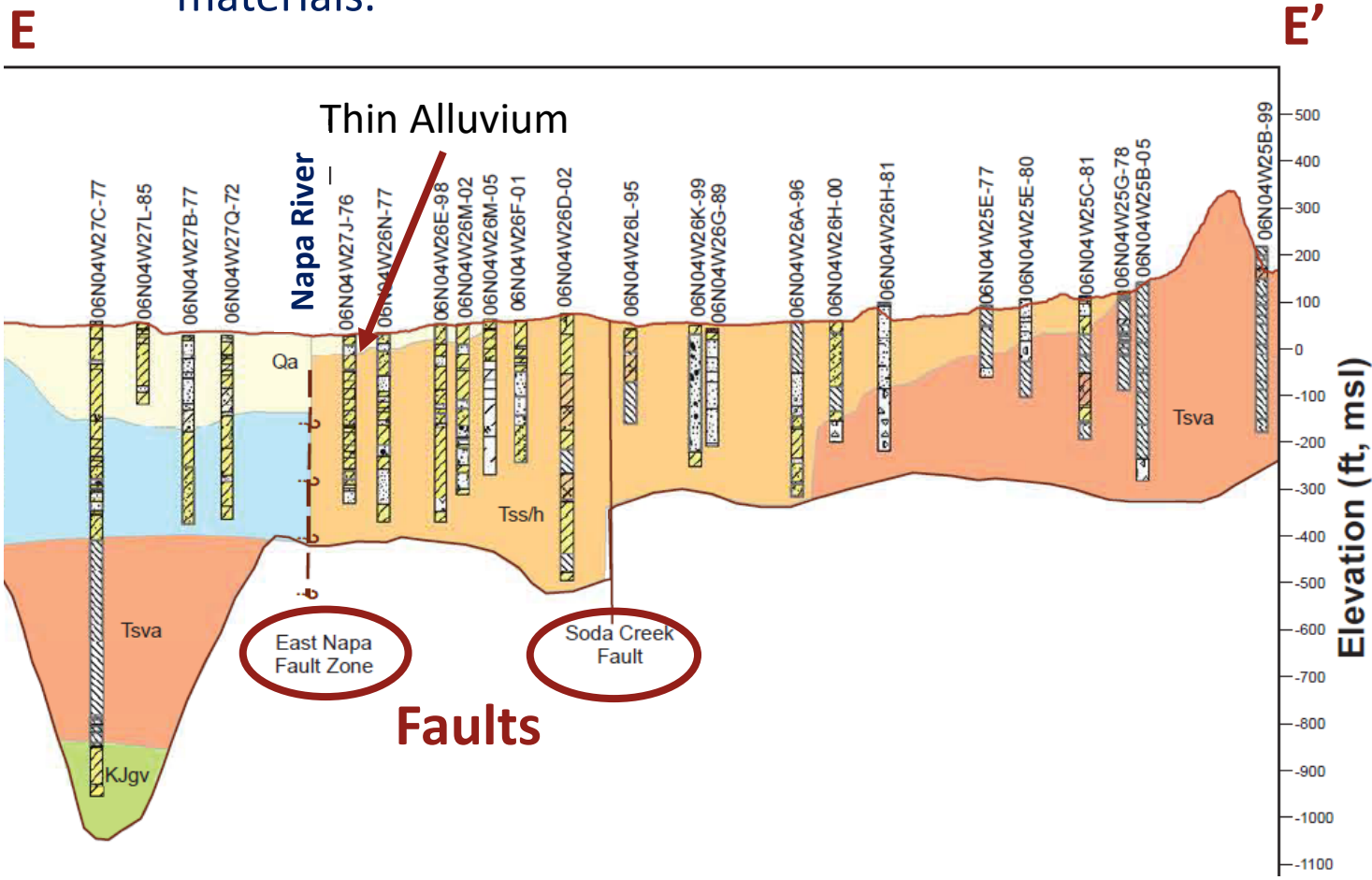
Water Levels Measurable Objective and Minimum Threshold – Fall 2025

- Many Representative Monitoring Site (RMS) wells were between the Measurable Objective (MO) and Minimum Threshold (MT).
 - Fall 2025 groundwater level measurements at many wells show progress towards achieving the MO for the Groundwater Level Sustainability Indicator.
- 2 MT exceedances in the Northeast Napa Management Area (wells NapaCounty-122 and -229).

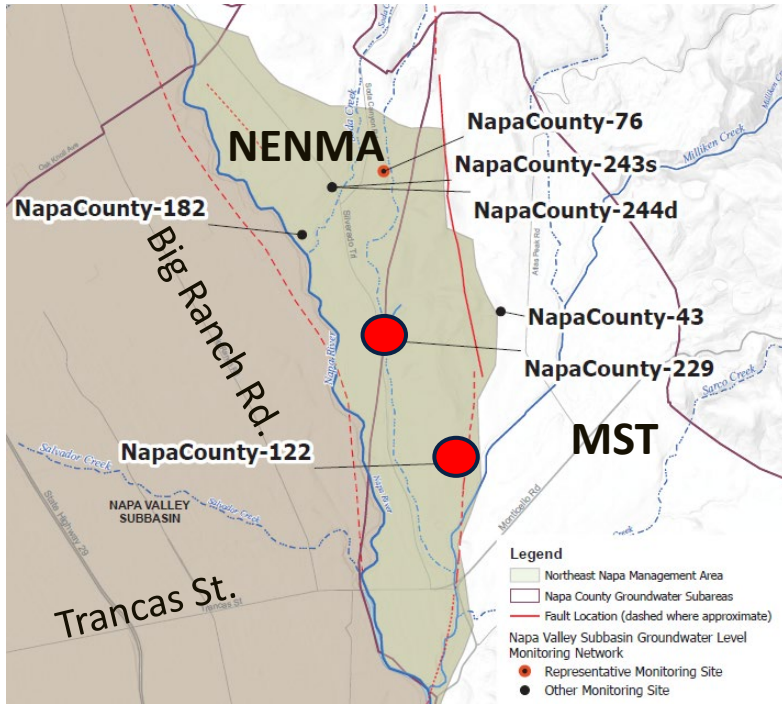


NENMA: Geologic Setting

- NENMA characterized by very thin alluvium bounded by the East Napa and Soda Creek Faults.
- Groundwater production from low-permeability volcanic materials.



NENMA: Groundwater Levels

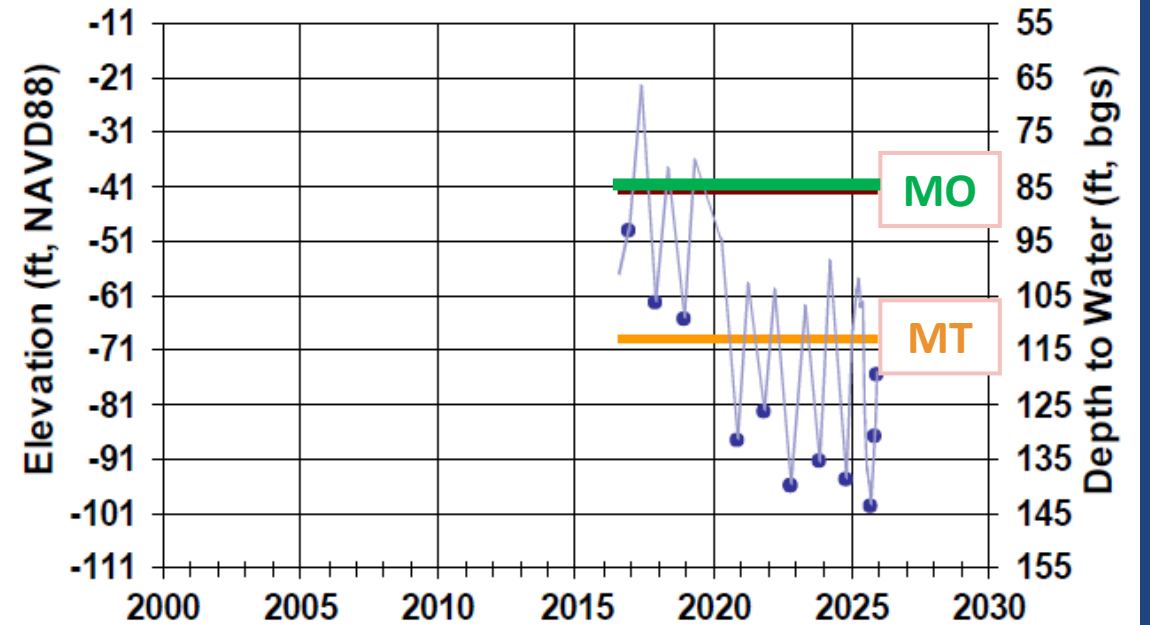


- Groundwater levels in older formation beneath Alluvium shows some recovery in Spring.
- Fall groundwater levels remain below Minimum Threshold.

NapaCounty-229

GSE: 43.8 ft

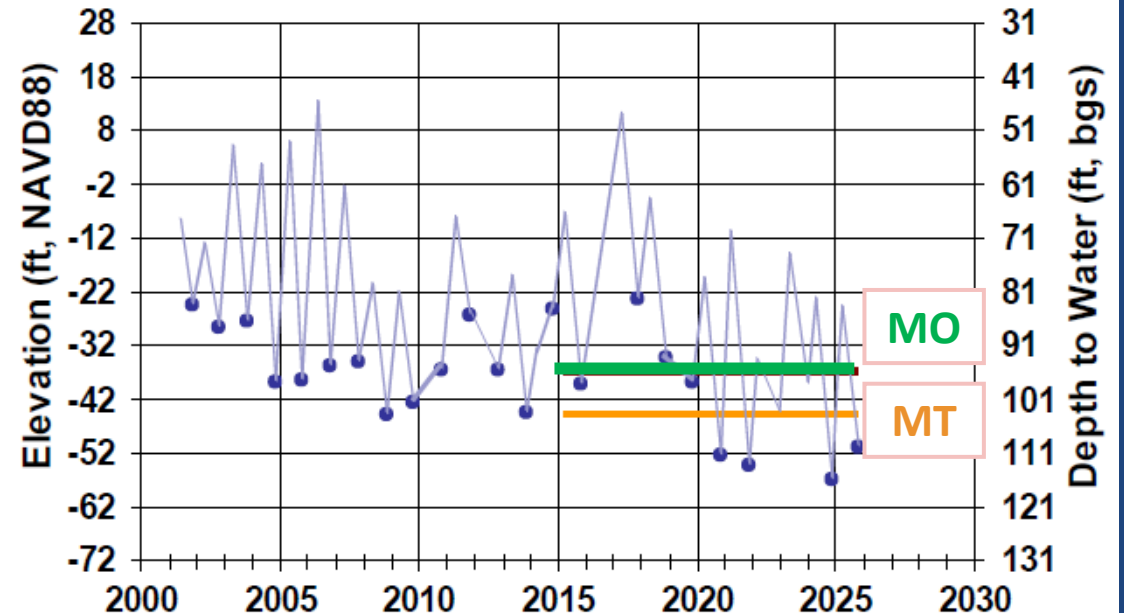
Well Depth: 350 ft



NapaCounty-122

GSE: 58.6 ft

Well Depth: 210 ft



Sustainable Management Criteria for Depletion of Interconnected Surface Water

Either metric over 3 consecutive years is an
Undesirable Result

Water Levels

8 shallow RMS wells
Fall static water level

Minimum Threshold
= minimum static WL
2005-2014

**In WY 2025, None
of the 8 Wells
Exceeded their MT**

Greater than
20% RMS
below MT

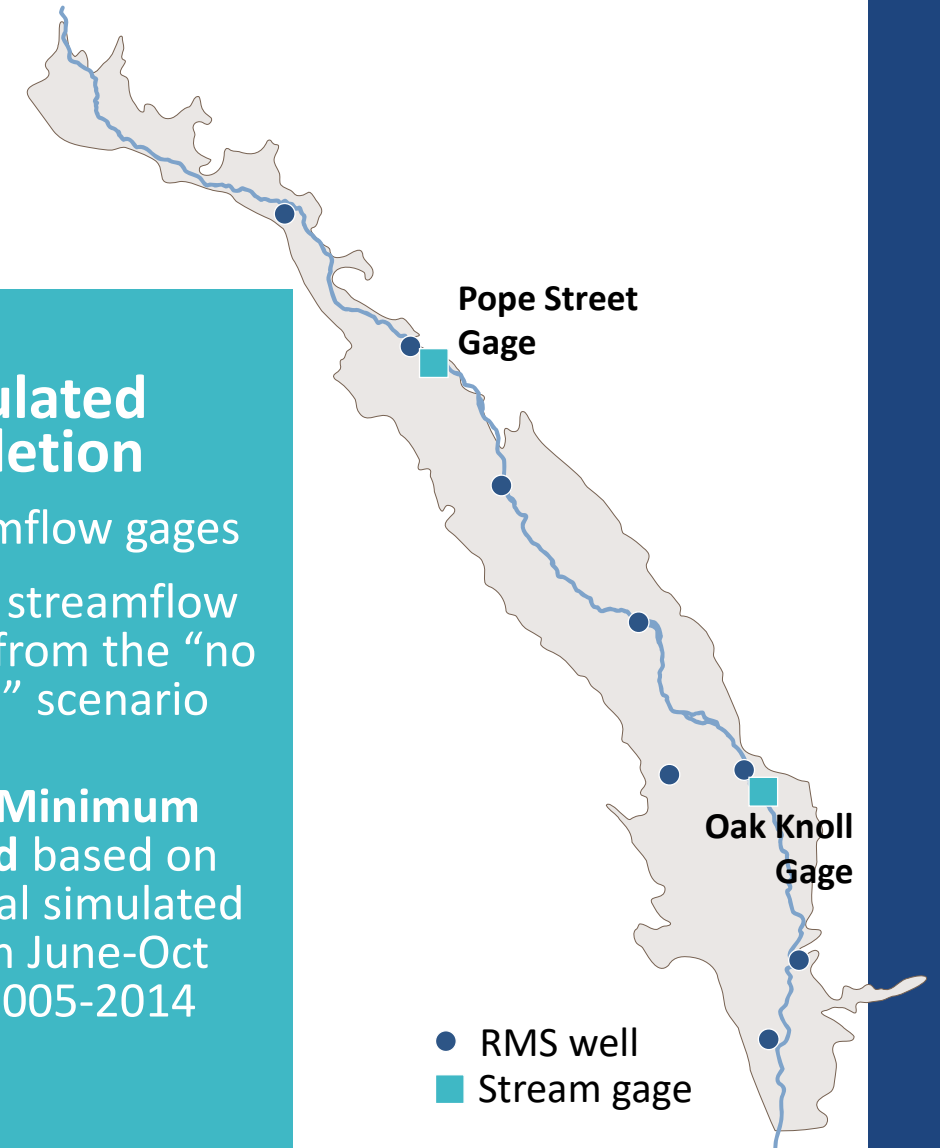
OR

Simulated
depletion
exceeded at
either gage

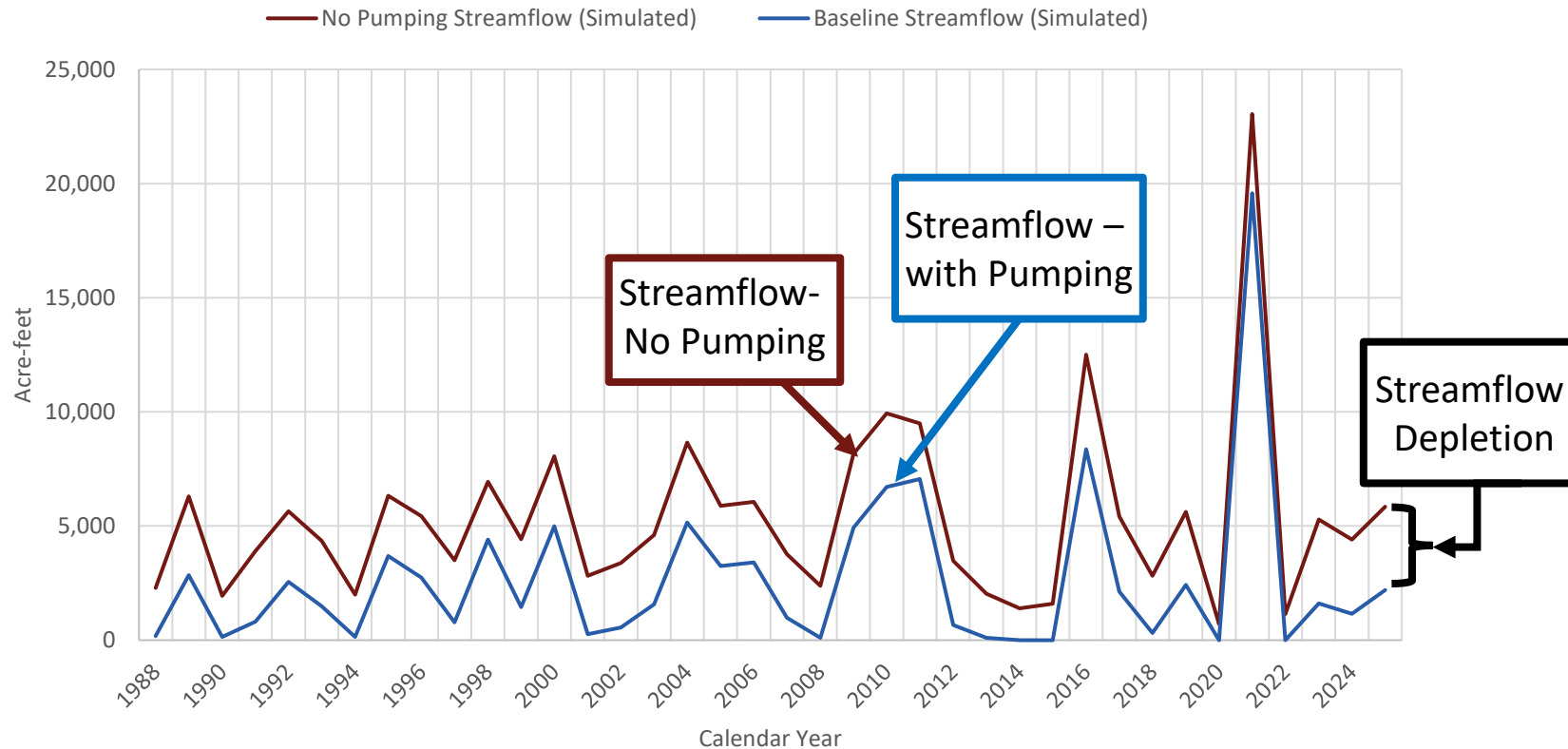
Simulated Depletion

At 2 streamflow gages
Simulated streamflow
difference from the “no
pumping” scenario

**Interim Minimum
Threshold** based on
total annual simulated
depletion June-Oct
during 2005-2014



Simulated Streamflow Depletion Napa River at Oak Knoll



- **Oak Knoll**
 - 3 MT Exceedances
 - Undesirable Result
 - 2025: More depletion but also more streamflow to deplete
- **Pope Street**
 - 2 MT Exceedances (2024 and 2025)
 - No Undesirable Result

Site	Minimum Threshold (AF)	Jun-Oct 2023	Jun-Oct 2024	Jun-Oct 2025	Undesirable Result
Napa River at Oak Knoll Avenue, Napa	3,220	3,680	3,240	3,650	Yes

Reduction of Groundwater Storage

Minimum Threshold

Net GW extraction by pumping exceeding the SY for the Subbasin, where net GW extraction is the volume extracted less any volume of augmented recharge achieved by implemented projects.

Undesirable Result

Seven (7) year average annual net GW extraction in the Subbasin exceeds the sustainable yield.

UR occurred since the 7-year average exceeds the sustainable yield for the Subbasin.

Six of seven years exceeded the SY (exceedances are **bolded**). To achieve the Sustainability Goal by 2042, of protecting and enhancing, as well as preparing for a more extreme climate, requires augmented recharge and less pumping.

Sustainable Yield (Est.) =
~15,000 AFY

Year	Total Groundwater Extraction (AF)
2019	14,340
2020	19,570
2021	22,750
2022	19,120
2023	15,300
2024	16,260
2025	16,580
7-Year Avg.	17,700

Water Quality, Seawater Intrusion, and Subsidence

Water Quality:

- One RMS well exceeded the MT for Arsenic; this was in an area where Arsenic has been historically detected in the Napa Valley Subbasin. The exceedance was not attributable to groundwater conditions affected by groundwater management.
- One RMS well exceeded the MT for TDS. The exceedance was not attributable to groundwater conditions affected by groundwater management.

Seawater Intrusion:

- High TDS in the tidally influenced area of the Napa Valley Subbasin; no MT exceeded.

Subsidence:

- No notable subsidence occurred; no MT exceedances and little concern of potential for subsidence.

All monitoring networks are being continually reviewed and updated as needed.

Sustainability Indicator Summary of Undesirable Results

- Average GW pumping over a 7-year period exceeds Sustainable Yield
 - UR occurred for the reduction of GW Storage
- Seasonal streamflow depletion volume exceeds interim MT 3 times at the Oak Knoll gage and meets the definition for an Undesirable Result

Sustainability Indicator	WY 2022	WY 2023	WY 2024	WY 2025
	UR: Yes or No	UR: Yes or No	UR: Yes or No	UR: Yes or No
Chronic GW Lowering (CGWL)	No	No	No	No
Depletion of Interconnected Surface Water (ISW)	Yes	No	No	Yes
GW Quality Degradation	No	No	No	No
Reduction of GW Storage	Yes	Yes	Yes	Yes
Land Subsidence	No	No	No	No
Seawater Intrusion	No	No	No	No

Interconnected Surface Water: Undesirable Result and Response Actions

- ✓ Monitoring aquatic and terrestrial GDEs at 6 sites along Napa River since 2024
- ✓ Expanded monitoring network to 28 ISW MWs
- ✓ Expanded wet/dry reach mapping with Napa County RCD; expanded stream DO and temperature monitoring
- Reactivating 5 historical USGS Stream Gages to improve streamflow monitoring (DWR CalSIP grant)
- Implementing California Environmental Flows Framework approach to refine ISW sustainable management criteria





Projects and Management Actions



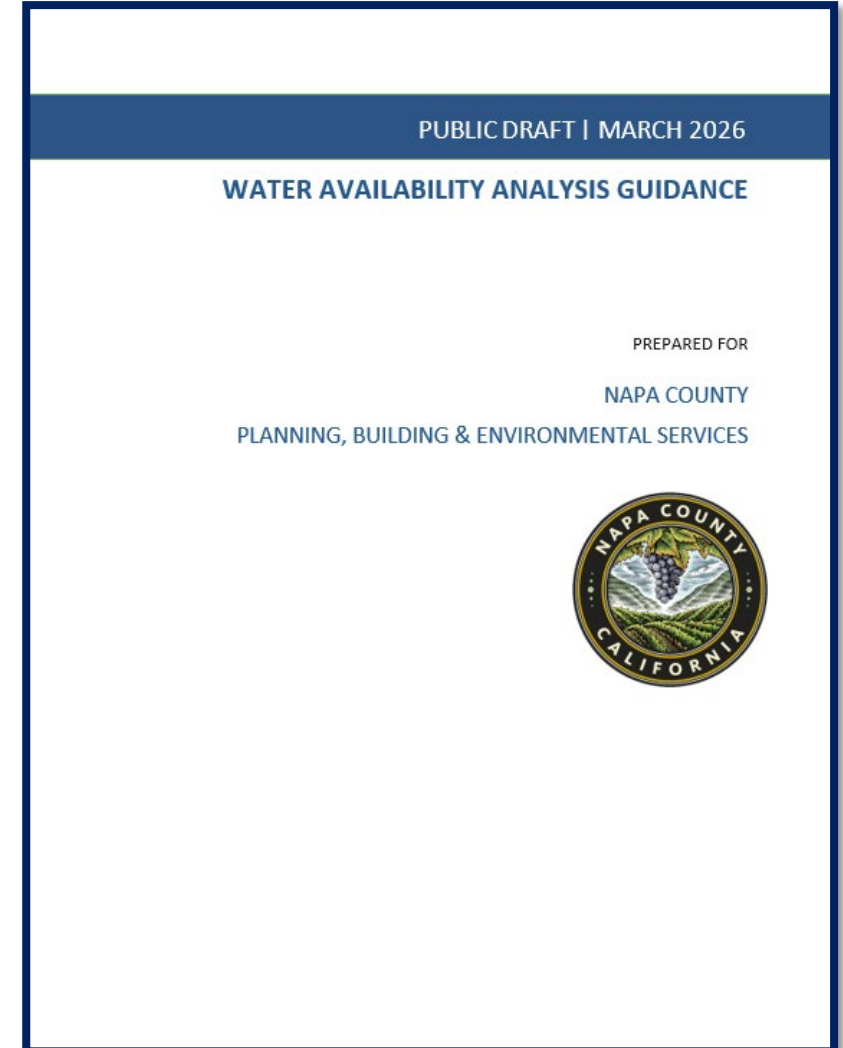
GSP PMAs

- At least annually, must describe **progress** towards GSP implementation
- Annually, DWR reviews the **status of all PMAs** to determine if GSP implementation will achieve the sustainability goal

 Department of Water Resources SGMA PROJECTS AND MANAGEMENT ACTIONS MODULE					
Home GSA GSP Alternatives Adjudicated Basins Basin Modification PMA State Intervention					
Show 5 entries Show Columns PMA Export (Excel) PMA Export (PDF) PMA Updates Export (Excel)					
☐	PMA Name / Description ⓘ	Lead GSA(s) ⓘ	GSP(s)	Status	Last Updated
☐	Management Action #1 (MA1): Water Conservation (Vineyards, Wineries and Other Water Users) Encourage vineyard and winery water conservation management technologies throughout the Subbasin. The GSA adopts or modifies existing well metering and reporting standards and policy and provides direction to groundwater users on aggregate targets for groundwater use. An expanded grower educati...	County of Napa GSA	2-002.01 NAPA VALLEY	Ongoing	03/27/2026 14:12:05
☐	Project #2 (P2): Expansion of Recycled Water Use Municipality-led, GSA-supported efforts to expand the production, distribution, and use of recycled water to offset use of groundwater in the Subbasin.	County of Napa GSA	2-002.01 NAPA VALLEY	Planning	03/27/2026 14:11:25
☐	Project #1 (P1): Managed Aquifer Recharge This project would involve diverting high flow in tributaries during wet years and spreading over vacant parcels and agricultural fields. Managed aquifer recharge is intended to increase groundwater storage and increase streamflow and groundwater uptake from plants during wet years. This project als...	County of Napa GSA	2-002.01 NAPA VALLEY	Ongoing	03/27/2026 14:10:25
☐	Management Action #2 (MA2): Groundwater Pumping Reductions GSA adopts or modifies existing well metering and reporting standards and policy. Groundwater pumping reductions would be applied to all wells within the Subbasin that are not de minimis groundwater users. In coordination with MA1, MA2 includes an expanded grower education and outreach program wo...	County of Napa GSA	2-002.01 NAPA VALLEY	Ongoing	03/27/2026 14:09:27
☐	Management Action #3 (MA3): Groundwater Ordinance and New Well Permit Conditions Includes adoption by GSA and/or County of groundwater use restrictions supported by the County Board of Supervisors in 2018 for the Northeast Napa management Area as part of Basin Analysis Report Addendum. Other revisions to the County groundwater ordinance and Water Availability	County of Napa GSA	2-002.01 NAPA VALLEY	Ongoing	03/27/2026 14:09:27

Project and Management Action: WAA and GW Ordinance

- Comprehensive 2026 WAA update; Public Draft WAA available for comment through 5/26
- Supports groundwater policies in General Plan (update starting summer 2026)
- Integrates water conservation and natural resources stewardship
- Public Draft 2026 WAA includes significant updates for the protection of interconnected surface water and groundwater resources (Tier 3)
- Water conservation Best Management Practices are linked only to WAA Tier 3.



Water Conservation Practices

- Water Conservation Practices are based on the *Napa County Water Conservation Workplan: A Guide for Vineyards, Wineries, and Other Water Users (March 2024)*
- Public Draft WAA includes these Water Conservation Practices for Tier 3 (Surface Water & Groundwater Interaction)

Summary of Water Conservation Practices			
Practice	Domestic (WC-1)	Commercial/Industrial /Agricultural (WC-2)	Public Water System (WC-3)
<i>Water Practices for All Water Users</i>			
Water Measurement ¹	X	X	X
Recycled Water ²	X	X	X
Benchmarking ³	X	X	X
<i>Vineyard-Specific and Other Landscaping Water Practices (Established)</i>			
Irrigation System Efficiency	X	X	X
Distribution Uniformity		X	
Plant Water and Soil Moisture Monitoring	X	X	X
Soil Management (Cover Crop)		X	
Canopy Management		X	
<i>Vineyard-Specific Water Practices (New Plantings)</i>			
Row Orientation		X	
Rootstock Selection		X	
<i>Winery-Specific Water Practices</i>			
Waterless Sanitation		X	
Processing Water Treatment and Reuse		X	
<i>Municipal, Industrial, and Residential Water Practices</i>			
WaterSense Devices (USEPA Program)	X	X	X
Low Water Use Fixtures	X	X	X
Irrigation Controllers	X	X	X
Water Efficient Landscaping	X	X	X
Other Water Conservation	X	X	X

Water Conservation Incentives: Initial Concepts

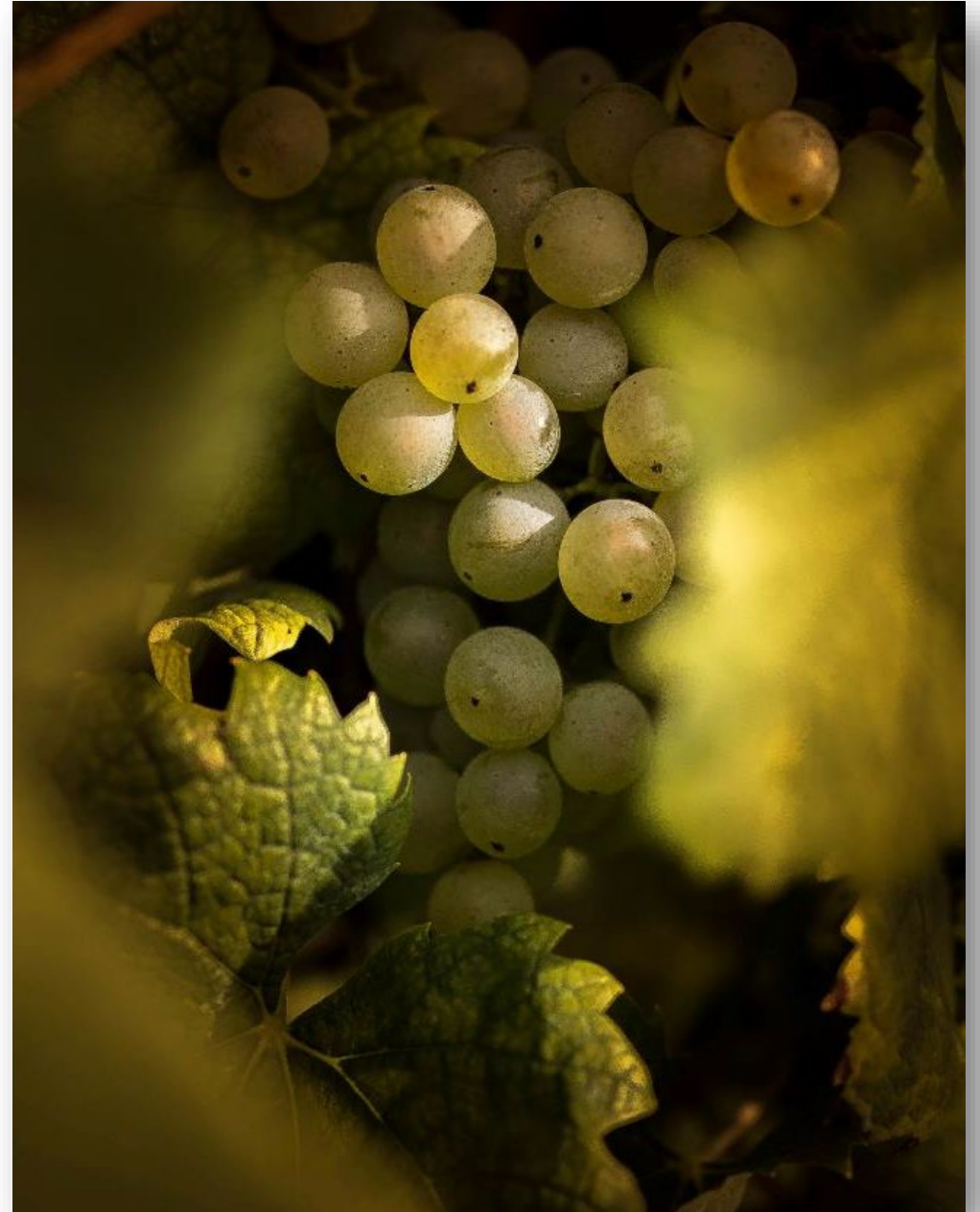
- **Certification Program Fees – Participation in Water Partnership Pilot Program**
- **Distribution Uniformity Testing**
 - Follow up actions
 - Meter and report
- **Extended Vineyard Replant Strategy**
- **Multi-benefit Land Repurposing**
 - Provide land for riparian benefits and/or recharge efforts
- **Metering (groundwater use)**
 - Reporting (anonymized reporting through existing Certification program or an alternative third party)
- **Recharge**
 - Measured application (captured stormwater, permitted wintertime surface water diversion, etc.)



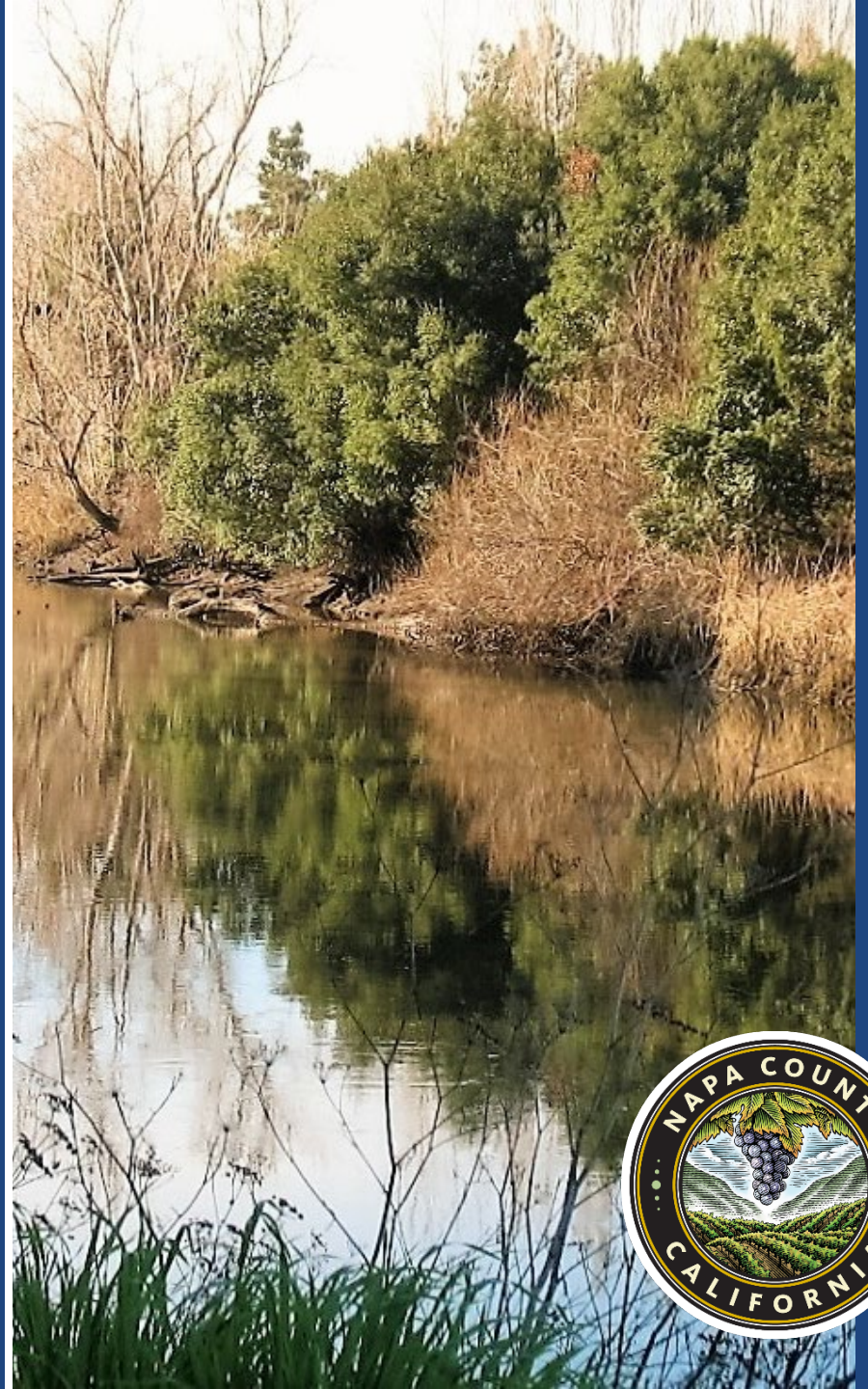
Prepare Menu of Incentives

Water Conservation Menu and Incentives

- **Develop Menu of incentives**
 - Include incentive values (\$)
 - Coordinate with Water Certification Partnership Pilot entities
- **Collaborate with Growers' Organizations**
 - Receive input on desirable incentives
 - Promote incentives
 - Implement educational workshops, brief service organizations and others, and deliver simple messages for effective actions



Next Steps



Ongoing GSP Implementation

- **Annual Report – WY 2025**
(645 pages; 11 Appendices)
 - Public-Friendly Executive Summary
 - ISW and GDEs Monitoring (Spring 2025)
- **Refining Water Use Data, NVIHM Model Updates (June 2026)**
- **Periodic Evaluation of GSP**
 - Draft for TAG and Public review September 2026
 - Final Draft to NCGSA Board: December 8, 2026
 - Due to DWR January 31, 2027

*DWR Approved Napa
Valley Subbasin GSP
January 26, 2023*



*Periodic Evaluation of
GSP to DWR January
31, 2027*

Water Conservation: A Napa Way of Life



Everyone should
embrace Water
Conservation to help
achieve sustainability

Water Conservation and Community Stewardship

Request for Direction:

Should additional measures be initiated to increase Water Conservation?

- **Example Initiative:**

- ❖ Initiate outreach to all groundwater users in the Subbasin
- ❖ Request completion of Water Conservation Declaration Form
- ❖ Recognize conservation and stewardship efforts occurring and planned
- ❖ Provide tangible demonstration to DWR of voluntary actions occurring and planned by groundwater users

- **Other suggestions from NCGSA?**





Thank You!

Napa County Groundwater Sustainability Agency

Jamison Crosby,
Natural Resources Conservation Manager
Planning, Building, and Environmental
Services Department
1195 Third Street, Suite 210
Napa, CA 94559
jamison.crosby@countyofnapa.org



Ryan Alsop, Executive Officer
Napa County Groundwater
Sustainability Agency
1195 Third Street
Napa, CA 94559

Brian Bordona, Director
Planning, Building, and
Environmental Services Department
1195 Third Street
Napa, CA 94559