

NAPA COUNTY GROUNDWATER SUSTAINABILITY Annual Report – Water Year 2025

EXECUTIVE SUMMARY

MARCH 2026

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This document summarizes the Napa County Groundwater Sustainability Annual Report – Water Year 2025 (WY 2025 Annual Report). For more information, the full report is available at <https://www.countyofnapa.org/3219/County-of-Napa-Plans-Reports-Documents>.

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Introduction

Groundwater and surface water are highly important natural resources in Napa County. Together, the County, Napa County Groundwater Sustainability Agency (NCGSA or GSA), municipalities, water districts, public water system operators, commercial and industrial operations, the agricultural community, and the public are stewards of available water resources. Everyone living and working in Napa County has a stake in protecting the county's groundwater resources, including groundwater supplies, quality, and associated watersheds (LSCE et al., 2022). Without sustainable groundwater and interconnected surface water resources, the character and quality of the county would be significantly different in terms of its economy, communities, rural character, ecology, and lifestyles.

The Napa County Groundwater Sustainability: Annual Report–Water Year 2025 (Annual Report) presents an update on groundwater conditions, water use, and Groundwater Sustainability Plan (GSP) implementation in the Napa Valley Subbasin (Subbasin), as required by §356.2 of the GSP Regulations.^{1,2}

As in the past 11 consecutive annual reports, this Report includes an update on groundwater conditions elsewhere in the county. This is the fifth Annual Report prepared to support implementation of the Napa Valley Subbasin GSP, adopted by the NCGSA in January 2022 and approved by the California Department of Water Resources (DWR) in January 2023.

The Napa Valley Subbasin (DWR Subbasin No. 2-002.01) generally aligns with the locally defined Napa Valley floor. The Subbasin boundary was updated in 2025; it covers 73 square miles (46,600 acres) and spans approximately 3 miles in width and 30 miles in length, trending southeast-northwest (**Figure 1**). The Subbasin is bordered by the Mayacamas Mountains to the west and the northern Coast Range to the east, an area characterized by low northwest-trending mountain ridges separated by intervening stream valleys (CAGS, 2002).

DWR has identified four other groundwater basins and subbasins in and around Napa

¹ Consistent with the GSP Regulations, the term "water year" is used in this report to refer to the period from October 1 through the following September 30, with the year designated according to the calendar year in which it ends (i.e., water year 2025 spanned from October 1, 2024 through September 30, 2025).

² References to GSP Regulations in this report refer to Title 23 of the California Code of Regulations (CCR) originally developed and adopted by the California Department of Water Resources in 2016, as required by the 2014 Sustainable Groundwater Management Act (SGMA). SGMA is published in California Water Code Section 10733.2.

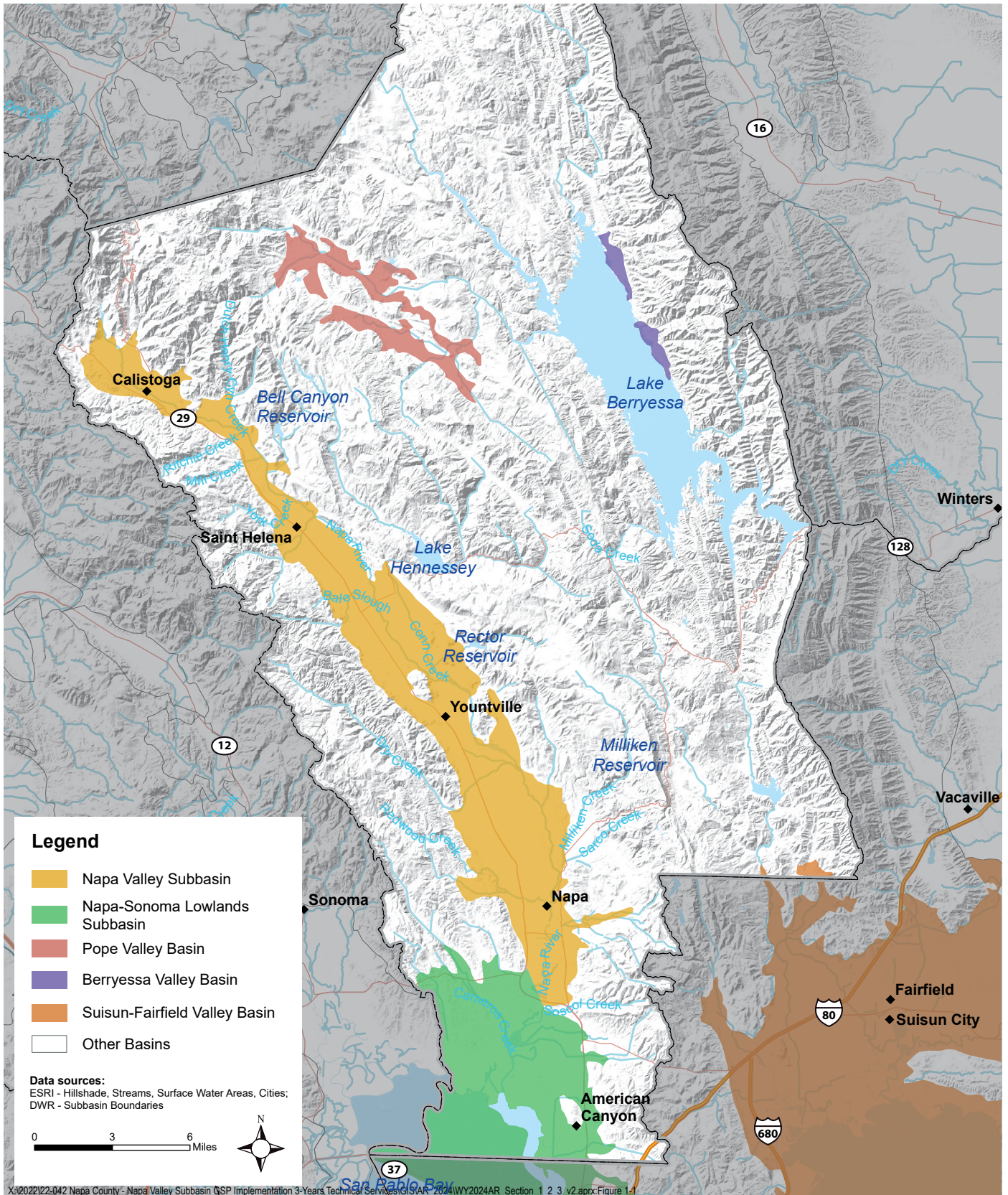




Figure 1. DWR Basins and Subbasins






County (DWR, 2016).³ These basins and subbasins include the Napa-Sonoma Lowlands Subbasin (DWR Subbasin No. 2-002.03), Berryessa Valley Basin (DWR Basin No. 5-020), Pope Valley Basin (DWR Basin No. 5-068), and a small part of the Suisun-Fairfield Valley Basin (DWR Basin No. 2-003) (**Figure 1**). The Napa-Sonoma Lowlands Subbasin, designated as a very low priority subbasin by DWR, is the only subbasin adjacent to the Napa Valley Subbasin and is not required to develop a GSP.

Napa County has advanced groundwater monitoring efforts in the county since 2009, with the creation of the Comprehensive Groundwater Monitoring Program, which formalized the groundwater monitoring efforts in the Napa County Groundwater Monitoring Plan 2013 (see Section 6 of the WY 2025 Annual Report). Since the adoption of the GSP in January 2022, the monitoring program expanded to include nine monitoring networks managed by the NCGSA (**Table 1**). These nine monitoring networks provide the necessary data to evaluate the sustainable management criteria for each of the six sustainability indicators. While the monitoring networks provide information critical for groundwater management within the Subbasin, they also provide some coverage throughout Napa County. In addition to the GSP-specific monitoring networks, the NCGSA is working in coordination with other local, state, and federal agencies to collect and integrate data for the sustainable management of groundwater and interconnected surface water. Further description of each of the nine monitoring networks is provided in Section 6 of the WY 2025 Annual Report. Efforts to refine or upgrade the monitoring networks and address data gaps are ongoing.

³ <https://water.ca.gov/Programs/Groundwater-Management/Bulletin-118>

Table 1. Monitoring Networks and Measurement Types in Napa County and the Napa Valley Subbasin

Monitoring Network	Measurement Type	Total		GSP-Specific		
		County	Napa Valley Subbasin	RMS	Supplemental	Planned
 Groundwater Level	Groundwater Level	127	76	32	62	--
 Groundwater Storage	Groundwater Levels	--	34	--	35	--
	NVIHM Model Results	--	1	1	--	--

Monitoring Network	Measurement Type	Total		GSP-Specific		
		County	Napa Valley Subbasin	RMS	Supplemental	Planned
 Land Subsidence	Groundwater Levels	--	15	15	--	--
	Benchmark Monitoring	--	8	5	3	--
	InSAR	--	1	--	--	--
 Stream Stage and Stream Discharge	Stream Stage and Stream Discharge	--	15	--	15	5
	Stream Watch	43	37	--	--	Yes
	Flood Control	28	17	--	17	--
 Interconnected Surface Water/ Groundwater	Groundwater Level	--	28	8	18	--
	NVIHM Model Results	--	2	2	--	--
 GDE Monitoring	Groundwater Level	--	31	--	31	--
	Stream Habitat	--	1	--	4	2
	Remote Sensing	--	10	-	10	--
 Groundwater Quality	Groundwater Quality	1,532 ¹	37	21	34	--
 Seawater Intrusion	Chloride testing	--	18	11	7	--
 Surface Water Quality	Surface Water Quality	--	7	--	7	--

¹ Value is from GAMA database accessed through SWRCB's server: <https://gispublic.waterboards.ca.gov/portalservices/>

GDE = groundwater dependent ecosystem; InSAR = Interferometric Synthetic Aperture Radar; NVIHM = Napa Valley Integrated Hydrologic Model

This Report reflects an ongoing commitment by the County and NCGSA to sustainably manage groundwater and interconnected surface water resources by implementing an adaptive management approach supported by the best available information. To better manage and respond to changing conditions, the NCGSA formed a Technical Advisory Group (TAG) to advise the NCGSA and aid in the implementation of the Napa Valley Subbasin GSP. The five-member committee was first convened on August 11, 2022. Additional details about the TAG are documented in Section 7.1 of the WY 2025 Annual Report.

The Report includes data and information for water year (WY) 2025. Pursuant to GSP Regulations, this Annual Report includes the following and other information on groundwater conditions and GSP implementation:

1. Groundwater Elevation Data
2. Water Supply and Use Data
3. Groundwater Storage Data
4. Sustainable Management Criteria
5. GSP Implementation Progress

Groundwater Elevations

Groundwater elevation data in the Subbasin were analyzed for WY 2025. Groundwater elevation contour maps for seasonal low- and seasonal high-water levels have been prepared for WY 2025. Groundwater level data used to develop groundwater contours and hydrographs at representative and other monitoring sites are collected by various entities and maintained by the NCGSA's consultant, Luhdorff and Scalmanini Consulting Engineers (LSCE). Depths to groundwater in Spring 2025 ranged from four to 57 feet below ground surface, as compared to one to 21 feet below ground surface in Spring 2024. Fall depths to groundwater in the alluvial aquifer ranged from six to 93 feet below ground surface in Fall 2025, as compared to nine to 58 feet below ground surface in Fall 2024.

Following the normal (below average) WY 2025, a total of two representative monitoring sites (RMS) exceeded the groundwater level minimum threshold (MT) in Fall WY 2025. Both wells were located in the Northeast Napa Management Area.



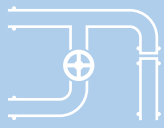


Water Supply and Use

Table 2 presents recent groundwater use data by sector from WYs 2018 to 2025. The water use sectors and methods for determining water use presented in this Annual Report are consistent with the sectors and methods presented in the Napa Valley Subbasin GSP (LSCE et al., 2022). Groundwater uses, and users in the Subbasin that rely on groundwater extracted by wells include agriculture, public water systems, which include municipalities and small public water systems (including small community supply wells and wineries), and self-supplied domestic users. Other groundwater users in the Subbasin include native vegetation, groundwater-dependent ecosystems (GDEs), and managed wetlands. These latter groundwater users depend on groundwater that occurs near the land surface. Groundwater users in the Subbasin also include disadvantaged communities (LSCE et al., 2022). Groundwater use by disadvantaged communities is included in data for the public water systems and self-supplied user sectors. As noted in **Table 2**, groundwater use is quantified through a combination of direct measurements reported by groundwater users, estimates based on population, and estimates based on irrigation demands calculated with the Napa Valley Integrated Hydrologic Model (NVIHM).

Surface water use by sector for WYs 2018 through 2025 is presented in **Table 3**, representing both imported supplies and local surface water supplies. Agricultural surface water use was compiled from surface water deliveries reported to the State Water Resources Control Board (SWRCB or State Water Board), California Water Accounting, Tracking, and Reporting System (CalWATRS), formerly Electronic Water Rights Information Management System (eWRIMS), and from reported surface water deliveries from municipalities. The Cities of Napa, Calistoga, St. Helena, and the Town of Yountville report surface water supply for municipal users. Surface water use from small PWS is self-reported to the SWRCB Electronic Annual Reporting System (EARS).



Table 2. Recent Groundwater Use by Water Use Sector

Water Use Sector	Acre-feet per Water Year							
	2018	2019	2020	2021	2022	2023	2024	2025
 Agriculture ¹	13,570	10,590	14,620	17,150	14,200	11,170	11,860	12,290
 Municipal Public Water Systems ²	270	250	420	540	450	330	480	280
 Small Public Water Systems ³	1,020	890	970	1,030	1,070	1,070	1,070	1,070
 Self-Supplied Users ⁴	3,090	2,610	3,560	4,070	3,400	2,730	2,880	2,940
 Native Vegetation (including GDEs and Managed Wetlands) ⁵	7,940	9,630	6,650	4,580	5,900	7,830	8,950	9,030
TOTAL	25,890	23,970	26,220	27,370	25,020	23,130	25,240	25,610

1. Estimated based on irrigation demand calculated by the NVIHM (Estimated, Accuracy: Medium)

2. Metered use reported by municipalities (Direct, Accuracy: High)



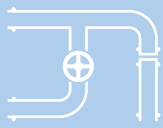
3. Metered use reported by small public water systems to the SWRCB Electronic Annual Reporting System (Direct, Accuracy: High)

4. Indoor domestic use is estimated based on self-supplied population and per capita demand. Outdoor uses for landscaping estimated based on irrigation demand calculated by the NVIHM (Estimated, Accuracy: Medium)

5. Estimated based on direct groundwater uptake calculated by the NVIHM (Estimated, Accuracy: Medium)

Note: Due to the limited availability of some hydrologic model inputs obtained from other agencies, WY 2025 groundwater extraction estimates developed using the NVIHM for this Annual Report are considered preliminary and subject to revision in subsequent Annual Reports and GSP updates.

Table 3. Recent Surface Water Use by Water Use Sector (2018-2025)

Water Use Sector	Acre-feet per Water Year							
	2018	2019	2020	2021	2022	2023	2024	2025
 Agriculture ¹	870	670	620	150	400	890	540	500
 Municipal Public Water Systems ²	14,690	14,870	15,960	14,750	13,140	13,280	13,900	13,960
 Small Public Water Systems ³	780	480	620	290	250	260	260	260
TOTAL	16,340	16,020	17,200	15,190	13,790	14,430	14,700	14,720

1. Metered use reported to the SWRCB eWRIMS (Direct, Accuracy: High)

2. Metered use reported to the NCGSA (Direct, Accuracy: High)

3. Metered use reported to the SWRCB EARs (Direct, Accuracy: High)

Note: Due to the limited availability of some data obtained from other agencies, surface water use data for WY 2023 is considered preliminary and subject to revision in subsequent annual reports and GSP updates.

Subbasin Groundwater Storage

Changes in groundwater storage in the Napa Valley Subbasin are calculated with two different methodologies (**Figure 2**). The first method is through analyzing seasonal high groundwater levels at wells throughout the Subbasin in spring within the principal aquifer (Section 6.2 of the WY 2025 Annual Report), where the year-to-year (spring-to-spring) change is used to calculate the change in groundwater storage as required by SGMA regulations §356.2(b)(5). The second method is conducted by utilizing the NVIHM, where storage is calculated for the period from October 1, 2024, to September 30, 2025. **Table 4** presents the annual storage change in the Subbasin from WY 2019 to WY 2025 and the cumulative change of groundwater in storage from WY 1988 to WY 2025 for both methodologies. The results show that groundwater storage in the principal aquifer slightly increased in WY 2025 based on spring-to-spring groundwater level measurement. The NVIHM simulation for the entire groundwater system showed a slight increase from fall to fall in WY 2025. Groundwater storage declined in WYs 2020 and 2021, both of which were very dry years. The cumulative change in groundwater storage is positive under both methodologies.

Figure 2. Change in Groundwater Storage Calculation Methods

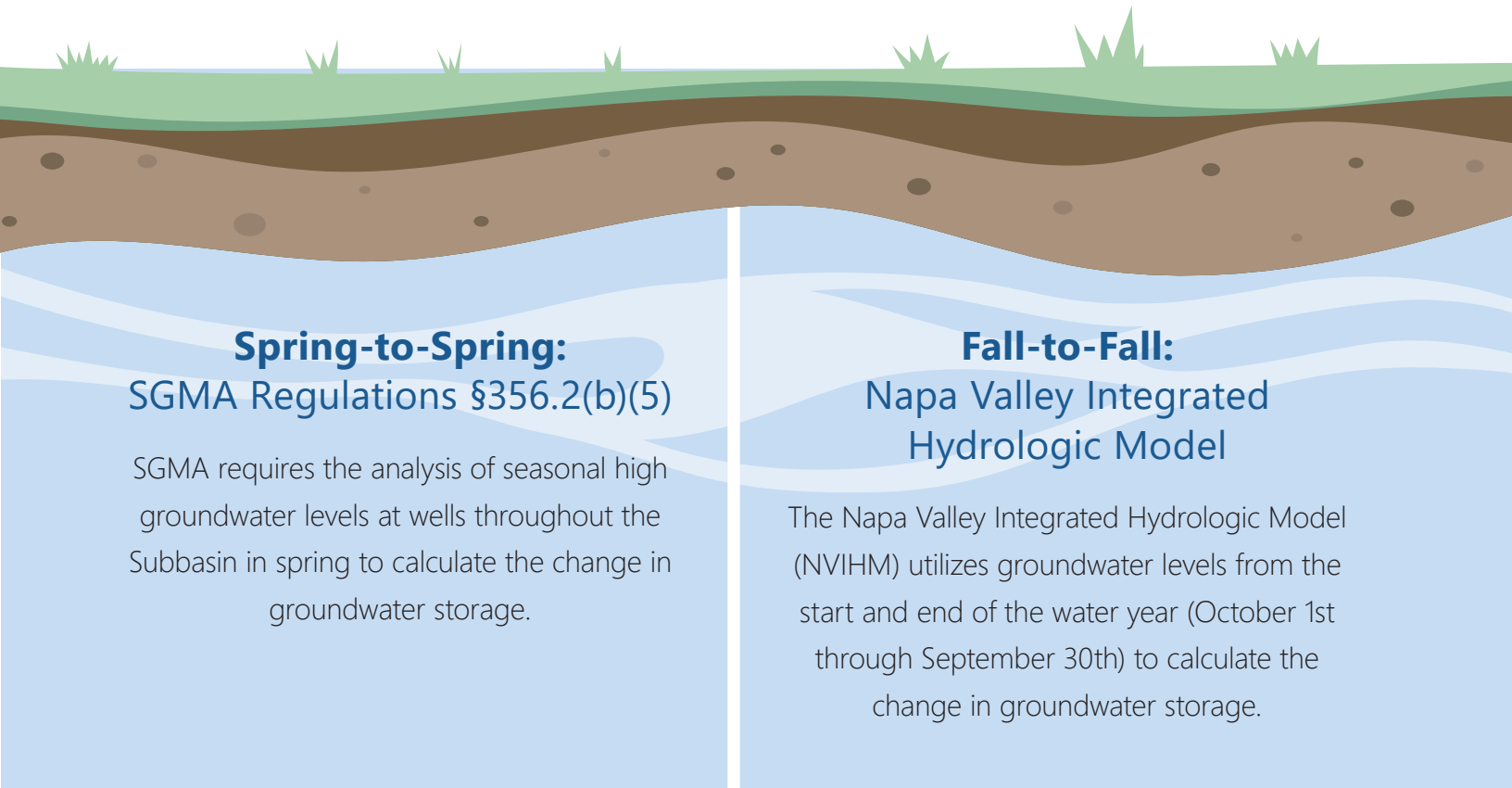


Table 4. Calculated Changes in Groundwater Storage

Storage Change Method	Water Year							1988-2025 Cumulative
	2019	2020	2021	2022	2023	2024	2025 ¹	
Seasonal (Spring-to-Spring) Groundwater Storage Change (AF) ²	11,370	-24,710	-11,930	6,510	19,200	-640	580	5,210
NVIHM (Fall to Fall) Groundwater Storage Change (AF) ³	9,310	-19,460	-16,510	9,410	20,440	2,310	1,070	7,270

1. Updated Subbasin boundary used in analyses
 2. Required by SGMA regulations §356.2(b)(5) for the Principal Aquifer.
 3. Supplemental analysis for the entire Subbasin aquifer system

AF = acre-feet

The MT for the reduction of groundwater storage sustainability indicator is defined as the net groundwater extraction by pumping that exceeds the sustainable yield for the Subbasin, where net groundwater extraction is the volume extracted less any volume of augmented recharge achieved by projects implemented in the Subbasin. An undesirable result due to reduced groundwater storage is defined as occurring when the 7-year average annual net groundwater extraction from pumping in the Subbasin exceeds the sustainable yield. The sustainable yield of the Subbasin is estimated to be 15,000 acre-feet per year. As described in the GSP (2022), given the uncertainty and variability associated with historical and projected estimates, the sustainable yield could range from 13,000 to 17,000 AFY. **Table 5** summarizes the last seven years (2019-2025) of annual groundwater extraction from pumping and the 7-year average groundwater extraction from pumping with respect to the Subbasin sustainable yield. Groundwater pumping was a total of about 16,580 acre-feet (AF) in WY 2025.

... the importance of groundwater management approaches to increase Subbasin resiliency to dry-year conditions.

Table 5. Recent Subbasin Groundwater Extraction with Respect to the Seven-Year Average Net Groundwater Extraction and Sustainable Yield

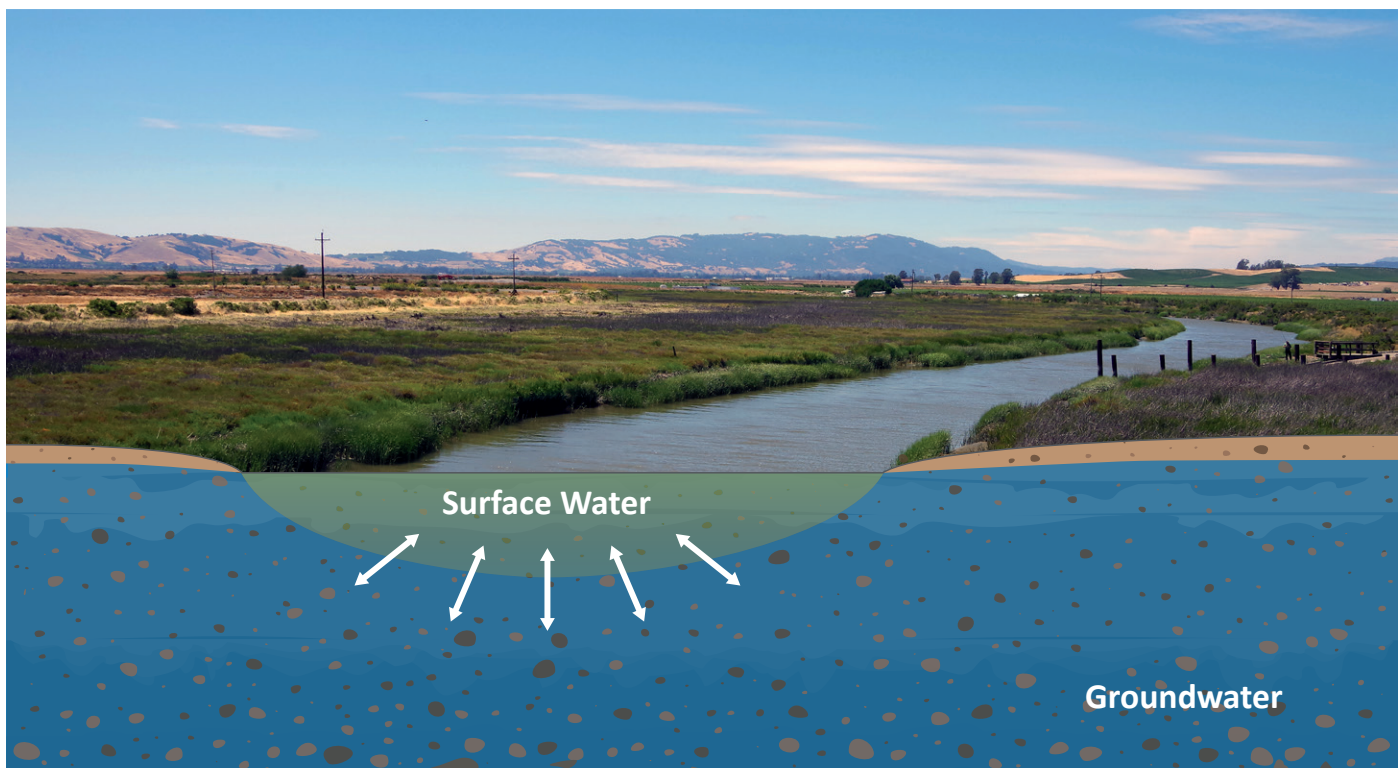
Water Year	Water Year Type	Extraction/Pumping		Annual Minimum Threshold Exceedance*
		Total	7-Year Average	
2019	Wet	14,340	16,850	No
2020	Very Dry	19,570	17,380	Yes
2021	Very Dry	22,750	18,030	Yes
2022	Normal (below average)	19,120	18,050	Yes
2023	Wet	15,300	17,670	Yes
2024	Normal (below average)	16,260	17,900	Yes
2025	Normal (below average)	16,580	17,700	Yes

* An annual minimum threshold exceedance occurs when the annual pumping total exceeds the Napa Valley Subbasin sustainable yield of 15,000 acre-feet.

Additionally, groundwater pumping in WY 2025 results in 17,700 AF as the seven-year groundwater pumping average. The seven-year groundwater pumping average in WY 2025 qualifies as an undesirable result in the Subbasin. Notably, the change in groundwater storage over WY 2024 to 2025 is 580 AF, which indicates a slight surplus in groundwater storage in the Subbasin. The reduction in groundwater storage sustainability indicator represents a longer-term average of conditions in the Subbasin. The simulated groundwater extraction has decreased significantly since WYs 2020 through 2022, and this contributes to improved groundwater conditions. The computed groundwater pumping average, which is defined as an undesirable result, does not represent a concern, but it does indicate the importance of groundwater management approaches to increase Subbasin resiliency to dry-year conditions and avoid significant and unreasonable depletions of interconnected surface water.

Interconnected Surface Water

Undesirable results for interconnected surface water occur when groundwater levels at 20 percent of the wells in the representative groundwater level monitoring network are below the MT in the fall for three consecutive years of fall measurements. In WY 2025, no groundwater levels exceeded the MT. The GSP defined the interim undesirable result specific to computed streamflow depletion as occurring when the MT for the volume of streamflow depletion during the June to October period is exceeded



A shallow groundwater table in the Napa Valley Subbasin leads to highly interconnected surface water and groundwater throughout much of the Subbasin.

for three consecutive years. The Napa River at Oak Knoll and Napa River at Pope Street gages exceeded the interim MT for seasonal streamflow depletion volume during June to October in WY 2025. This is the third consecutive interim MT exceedance for streamflow depletion at the Napa River at Oak Knoll gage, which by definition is an interim undesirable result. The GSP describes that “available information on the occurrence and duration of MT exceedances at groundwater level and depletion volume monitoring sites does not reflect a persistent undesirable result...” The Napa Valley Subbasin GSP was one of the few GSPs submitted to DWR that defined interconnected surface water sustainable management criteria using both 1) groundwater levels and 2) the volume of streamflow depletion during a sensitive period for beneficial uses; most GSPs established sustainable management criteria based only on groundwater levels. The interim undesirable result definition for streamflow volume depletion appropriately recognizes the additional work necessary during GSP implementation to refine this criterion. Additional work has been or is currently being completed to better define the potential for adverse impacts on beneficial uses due to the volume of streamflow depletion, including:

- Development and implementation of the Interconnected Surface Water and Groundwater Dependent Ecosystems (GDEs) Workplan: Napa Valley Subbasin (2024);
- Aquatic and terrestrial GDEs monitoring at six intensive survey sites together with wet/dry mapping of expansive river reaches at these sites;
- Installation of nine additional ISW/groundwater monitoring sites (including 18 new dedicated monitoring wells);
- Stream gage improvement occurring at five additional sites (CalSIP program, see Section 6.7 of the WY 2025 Annual Report); and
- Refinement of the physical representation of the channel geomorphology, hydraulic parameters, soil moisture utilization by native and non-native vegetation, and evapotranspiration in NVIHM.

It is apparent that the interim definitions for minimum thresholds and undesirable results for streamflow depletion need refinement to incorporate not only a depletion volume, but consideration of the temporal and spatial characteristics of depletion and the relationship of depletion volume to the total volume of streamflow in the river system available to meet beneficial needs. Further discussion of this will be presented in the GSP periodic evaluation.



Land Subsidence

The monitoring network for land subsidence is composed of National Geodetic Survey (NGS) land surface elevation benchmarks, groundwater well sites, and remotely sensed land surface vertical displacement (Section 6.5 of the WY 2025 Annual Report). The GSA implemented the first annual monitoring of the NGS stations in September 2022, with subsequent monitoring in August 2023. During WY 2024, monitoring of the NGS stations was discontinued in favor of remotely sensed vertical displacement. The highest rate of subsidence measured within the Subbasin occurred northwest of Yountville at the rate of -0.56 inches per year, or -0.05 feet per year, remaining below the -0.2 feet per year MT for land subsidence. Three of the 15 wells exceeded the MT groundwater levels for land subsidence. This is not considered an undesirable result based on three wells with exceedances being less than 20 percent of the land subsidence wells.

Degraded Water Quality and Seawater Intrusion

The Napa Valley Subbasin GSP identifies three main groundwater quality constituents of concern within the Subbasin: arsenic (As), nitrate (as nitrogen) (NO₃-N), and total dissolved solids (TDS). The groundwater quality monitoring network includes 39 well sites that include domestic supply, irrigation, and public supply wells that are currently monitored by Napa County, DWR, US Geological Survey, and the SWRCB's Division of Drinking Water (DDW). Following the GSA's approval of the Napa Valley Subbasin GSP on January 11, 2022, the GSA implemented annual monitoring for the established GSP monitoring network. Water quality sampling was initiated in WY 2023 and continued through WY 2025. In WY 2025, one RMS well exceeded the As MT, no RMS wells exceeded the NO₃-N MT, and one RMS well exceeded the TDS MT. The MT exceedances for As and TDS are within the historical range of the wells and are not attributable to changed groundwater conditions. The MT exceedances are not an undesirable result.



Sustainable Management Criteria

Table 6 summarizes the status of groundwater conditions in WY 2025 relative to the GSA adopted sustainable management criteria (SMC) for the Napa Valley Subbasin. Additional information on SMC and groundwater conditions relative to SMC are provided in Sections 5 and 6 of the WY 2025 Annual Report. Sustainable management criteria, specifically minimum thresholds, were exceeded for sustainability indicators addressing groundwater levels, reduction in groundwater storage, and depletion of interconnected surface water. Undesirable results occurred for the sustainability indicators for the reduction in groundwater storage and depletion of interconnected surface water. While not unforeseen, given the preceding historical drought conditions, management criteria exceedances emphasize the importance of GSP implementation activities. Historical data for the degraded water quality and seawater intrusion indicators indicate that undesirable results have not occurred for those indicators. The NCGSA is continuing to expand the monitoring effort related to those indicators, as described in the GSP. The recent very dry water years' conditions (WY 2020 through 2022) emphasize the susceptibility of the Subbasin to substantially reduced recharge and the propensity for increased groundwater pumping to meet water demands. Together, these water budget components resulted in significantly reduced groundwater storage during those very dry water years. The GSP sets forth adaptive management









Workplans can be found on the Napa County website at: <https://www.countyofnapa.org/3219/County-of-Napa-Plans-Reports-Documents>

criteria, which are also summarized in this Report. One of the adaptive management “response actions” includes review of subsequent mid-winter hydrologic conditions and consideration of projects and/or management actions to address concerning current and future conditions. WY 2022 was classified as a normal (below average) water year, and while groundwater storage and water levels increased, in general, MT thresholds were still exceeded. Most of the precipitation in WY 2022 occurred in Fall 2022, while January through May 2022 was atypically dry with very little precipitation. The precipitation in WY 2023 registered 128 percent of average and led to significant groundwater level recovery. WYs 2024 and 2025 were both below-average water years; groundwater levels in most areas saw limited additional recovery and minor seasonal fluctuations.

This Report describes GSP implementation activities that will inform management actions that help mitigate dry-year hydrologic effects. These include (but are not limited to) the development and implementation of the Groundwater Pumping Reduction Workplan: Napa Valley Subbasin, the Napa County Water Conservation Workplan – A Guide for Vineyards, Wineries and Other Water Users, and the Interconnected Surface Water and Groundwater Dependent Ecosystems Workplan: Napa Valley Subbasin. The TAG (see Section 7 of the WY 2025 Annual Report) actively reviews information and makes recommendations to the NCGSA, including addressing the unprecedented drought conditions in WYs 2021 through 2022.



Table 6. Summary of Sustainable Management Criteria Status and Responses

Sustainability Indicator	Minimum Threshold Exceedances	Trigger Occurrence	Undesirable Result Occurrence	Response Summary	
 <p>Chronic Groundwater Level Decline</p>	Yes, 2 of 26 representative wells	No. Trigger occurs if 20% of designated RMS well levels fall below the MT in fall during a single year.	No	<p>Management actions underway include (but are not limited to) implementing the Groundwater Pumping Reduction Workplan and the Napa County Water Conservation Workplan. These Workplans will help curtail groundwater pumping and overall water use to enable the Subbasin to achieve the sustainability goal (see Section 7.2 of the WY 2025 Annual Report). Efforts to expand existing monitoring networks continue to address data gaps identified in the GSP (see Section 7.3 of the WY 2025 Annual Report).</p>	
 <p>Reduction in Groundwater Storage</p>	Yes, six consecutive water years, 2020 through 2025	Yes. Trigger occurs if net groundwater extraction in three consecutive non-drought years, or four consecutive years including drought years, exceeds the sustainable yield.	Yes, the seven-year average annual net groundwater extraction has exceeded the sustainable yield of 15,000 acre-feet/year*		
 <p>Depletions of Interconnected Surface Water</p>	Yes, the interim MT for streamflow depletion volume (over the June through October period) was exceeded at the Napa River at Oak Knoll and Pope Street gages. (Groundwater elevations remained above MT.)	Yes. Trigger occurs if any groundwater level or surface water depletion volume MT is exceeded.	Yes, based on the interim MT for streamflow depletion being exceeded for three consecutive years at the Oak Knoll gage		
 <p>Land Subsidence</p>	No, all but three wells remain above MT, and land surface displacement (InSAR) data indicate no MT exceedance.	No. Trigger occurs if either groundwater levels at 20% of the RMS wells exceed the MT, or land surface elevation at the RMS location exceeds 0.2 ft/year.	No		
 <p>Degraded Water Quality</p>	Yes, in WY 2025, one RMS well exceeded the arsenic MT and one RMS well exceeded the TDS MT.	Concentrations exceeding 75% of the primary MCL (or exceeding 25% more than the baseline concentration) = Trigger; statistically significant increases in concentration at any RMS indicating nearing exceedance of criteria for Trigger may also be considered a Trigger.	No		<p>The MT exceedances were within the historical range of the RMS well and not attributable to changed groundwater conditions.</p>
 <p>Seawater Intrusion</p>	No, continued data collection in 2025 to evaluate baseline conditions for newly constructed monitoring wells.	No. Concentrations exceeding 75% of 250 mg/L, which is the secondary MCL (or exceed 25% more than the baseline concentration) = Trigger; Statistically significant increases in concentration at an RMS indicating nearing exceedance of criteria for Trigger may also be considered a Trigger.	No		

* The seven-year average annual net groundwater extraction has exceeded the sustainable yield of 15,000 acre-feet/year from 2019 to 2025.

mg/L = micrograms per liter; MT = minimum threshold; TDS = total dissolved solids; RMS = representative monitoring site; MCL = maximum contaminant level; WY = water year; mg/L= milligrams per liter; InSAR = Interferometric Synthetic Aperture Radar

GSP Implementation Progress

This Report summarizes the GSA’s progress towards implementing the GSP elements intended to avoid undesirable results and achieve the Subbasin sustainability goal by 2042, as required by SGMA (see Section 7 of the WY 2025 Annual Report). The GSP adopted in January 2022 describes Projects and Management Actions (PMAs) along with supplemental actions developed to support sustainable groundwater management, several of which entail preparatory steps and workplans.

GSP implementation activities completed prior to and/or during WY 2025 through Spring 2026 include efforts related to the following GSP PMAs (see Section 7 of the WY 2025 Annual Report) for additional details):

<p>GSP Project #1 (P1)</p>	<p>Managed Aquifer Recharge</p> <ul style="list-style-type: none"> ● Development and completion of the Stormwater Resource Plan (LWA, 2023; May 2023). ● Evaluate recharge feasibility scenarios and stakeholder discussion (ongoing). ● Explore the opportunity for NCGSA to apply for a 5-year temporary recharge permit.
<p>GSP Project #2 (P2)</p>	<p>Expansion of Recycled Water Use (ongoing)</p> <ul style="list-style-type: none"> ● Coordinate with the City of St. Helena regarding the City’s opportunities for potential in-lieu use of recycled water and/or direct recharge of recycled water.
<p>GSP Management Action #1 (MA1)</p>	<p>Water Conservation (Vineyards, Wineries and Other Water Users)</p> <ul style="list-style-type: none"> ● Continue implementation of water conservation activities related to the Napa County Water Conservation Workplan – A Guide for Vineyards, Wineries, and Other Water Users (March 2024).
<p>GSP Management Action #2 (MA2)</p>	<p>Groundwater Pumping Reductions</p> <ul style="list-style-type: none"> ● Continue implementation of activities related to the Groundwater Pumping Reduction Workplan: Napa Valley Subbasin (March 2024).




<p>GSP Management Action #3 (MA3)</p>	<p>Updates to the Napa County Groundwater Ordinance and updated Water Availability Analysis (in progress).</p> <ul style="list-style-type: none"> ● Updates to the Napa County Groundwater Ordinance and updated Water Availability Analysis (Public Draft WAA Guidance Document and Technical Report posted March 2026). ● Adopt well metering and reporting standards (in progress). ● Countywide well inventory was conducted in 2023 and is updated periodically (ongoing).
<p>GSP Section 6 to address data gaps</p>	<p>Continue implementation of activities described in the Interconnected Surface Water and Groundwater Dependent Ecosystems Workplan: Napa Valley Subbasin (March 2024).</p> <ul style="list-style-type: none"> ● Implement Workplan, including intensive monitoring of physical and biological characteristics at six survey sites. <i>Results are presented in Appendix G of the WY 2025 Annual Report.</i>



Near-term implementation activities are summarized below and described further in Section 7 of the WY 2025 Annual Report.






1. Near-term installation of surface water monitoring facilities at five sites under the DWR California Stream gage Improvement Grant (CalSIP).
2. Ongoing groundwater monitoring and further steps to expand monitoring as described in GSP Sections 5, 9, and 12.
3. Public outreach and community engagement.

The Workplans (completed in 2024) include ongoing implementation of advanced technologies for water conservation, groundwater pumping reduction, stormwater management, and potential utilization of surplus stormwater for managed aquifer recharge, measures for tracking and reporting groundwater use, and assessments of GDEs within the Subbasin. **Table 7** provides a summary list of PMAs and their status; additional details are provided in Section 7 of the WY 2025 Annual Report.

Table 7. Current Status of Projects and Management Actions

Action	Summary Description	Status	Implementation Notes
GSP Implementation: General and Supporting Activities			
Technical Advisory Group	Activities and meetings of the Technical Advisory Group	Ongoing	Periodic public meetings
Stakeholder engagement and outreach	Updated the Communication and Engagement Plan (February 2024). Outreach efforts include public meetings, social media announcements, and electronic communications through the NCGSA-interested parties email list.	Ongoing	GSP implementation includes ongoing stakeholder engagement and outreach <i>See Table 7-2 in the WY 2025 Annual Report.</i>
GSP webmap and data visualization	An interactive webmap application presents information to the public and stakeholders on the GSP monitoring network and other key sites monitored for the GSP, and available data on conditions at each site.	Ongoing	GSP implementation includes ongoing open data sharing via a public-friendly web-based application
Projects and Management Actions			
Project 1 (P1): Managed Aquifer Recharge	Completed Stormwater Resource Plan (2023). Conduct recharge feasibility analysis, including development of representative recharge feasibility modeling scenarios; explore opportunity to develop NCGSA five-year temporary recharge permit.	 Completed Technical Memorandum for Stormwater Plan Recharge feasibility in progress	Public outreach and model scenarios are informing recharge feasibility planning efforts
Project 2 (P2): Expansion of Recycled Water Use	Recycled water is produced by the Napa Sanitation District, City of Calistoga, and Town of Yountville, exploring recycled water use strategies with the City of St. Helena.	Ongoing expansion of recycled water use	Public outreach and model scenarios are informing planning efforts
Management Action 1 (MA1): Water Conservation (Vineyards, Wineries, and Other Water Users)	Completed Napa County Conservation Workplan: A Guide for Vineyards, Wineries, and Other Water Users; ongoing outreach and engagement on conservation measures that have been and can be implemented throughout Napa County for all water users.	 Completed Workplan (March 2024) Ongoing implementation	Stakeholder engagement and public outreach are part of Workplan implementation <i>See Table 7-3 of the WY 2025 Annual Report</i>
Management Action 2 (MA2): Groundwater Pumping Reductions	Completed Groundwater Pumping Reduction Workplan: Napa Valley Subbasin; a roadmap for implementing measures to reduce groundwater pumping in the Napa Valley Subbasin.	 Completed Workplan (March 2024) Ongoing Implementation	Stakeholder engagement and public outreach are part of Workplan implementation <i>See Table 7-3 of the WY 2025 Annual Report</i>

Action	Summary Description	Status	Implementation Notes
MA1 and MA2 Supplemental Action: Water Certification Partnership	NCGSA Water Certification Partnership Concept: Structure and Minimum Requirements (April 2025) Technical Memorandum to encourage the expansion of water conservation approaches and technologies; concepts include leveraging existing certification programs; released Request for Qualifications for participating partners; NCGSA partners selected (January 2026)	 Completed Technical Memorandum Water Certification Partnership Pilot implementation.	Refined draft program concept and input from stakeholders presented to the TAG on March 13, 2025; presentation to TAG in April 2025, and NCGSA in September 2025 <i>See Appendix H in the WY 2025 Annual Report</i>
MA1 and MA2 Supplemental Action: Vineyard Replanting Strategy	Technical Memorandum developed to consider incentives for and the feasibility of delaying vineyard replanting; such approaches would be considered where vineyard managers can readily incorporate the concept into ongoing operations.	In Progress	Presented to TAG in April 2025 and NCGSA in September 2025
Management Action 3 (MA3): Napa County Groundwater Ordinance, new well permit conditions, and update Water Availability Analysis	Adopt well setback and/or well construction standards to limit the direct influence of groundwater pumping on interconnected surface waters and Subbasin groundwater conditions. Includes measures to reflect updated consideration of public trust resources consistent with GSP water budget and sustainable yield analyses and sustainable management criteria.	In Progress Release of draft Water Availability Analysis Guidance document and Supplemental Technical Report for public review and comment (March 2026)	Napa County Board of Supervisors approved action to update Groundwater Ordinance in February 2022; stakeholder engagement and public outreach are included as part of MA3 <i>See Table 7-4 of the WY 2025 Annual Report</i>
MA3 Supplemental Action: Adopt well metering and reporting standards	Develop and adopt regulations specifying acceptable equipment, installation procedures, reporting procedures, and related aspects necessary to implement groundwater use reporting management actions.	In Progress Release of draft Water Availability Analysis Guidance document and Supplemental Technical Report for public review and comment (March 2026)	<i>See Table 7-4 of the WY 2025 Annual Report</i>
MA3 Supplemental Action: Countywide well inventory	In 2023, Napa County developed a refined countywide well inventory based on review of DWR well construction reports, along with County well permitting information and aerial photos to improve well location information. The inventory continues to be refined and updated with new information.	Ongoing	The countywide well inventory is being continually updated with information available through the County's permitting process and DWR updates.
MA3 Supplemental Action: Refinement of the countywide significant streams map	Napa County completed an updated countywide map of significant streams. Multiple data sources were used to verify and create more accurate stream data and stream flowlines. RCD information was also used to inform fish habitat, including fish presence and the determination of significant streams.	 Completed	The comprehensive update to the countywide streams map was completed in 2025; ongoing updates are anticipated when new data becomes available (including data generated through the Napa Valley Subbasin ISW and GDEs Workplan implementation) <i>See Table 7-4 of the WY 2025 Annual Report</i>

Action	Summary Description	Status	Implementation Notes
Ongoing and Expanded Monitoring			
Interconnected Surface Water and Groundwater Dependent Ecosystems Workplan: Napa Valley Subbasin	Ongoing ISW and GDEs Workplan implementation, including addressing data gaps, wet/dry stream reach surveys, and implementation of the California Environmental Flows Framework (CEFF) and defining ecological management goals	 Completed Workplan (March 2024) Substantial additional aquatic and terrestrial monitoring efforts are underway.	<i>For more information, see Appendix G of the WY 2025 Annual Report.</i>
Install seawater intrusion monitoring wells at two sites	Installed 2 monitoring wells as additions to the seawater intrusion monitoring network. (This is one of the 9 sites mentioned below.)	 Completed	Collection of baseline data is ongoing
Install 16 new interconnected surface water monitoring wells at eight sites.	Installed 16 new monitoring wells (8 sites) as additions to the interconnected surface water monitoring network.	 Completed	Final report submitted to DWR in Spring 2024
Install 2 new interconnected surface water monitoring wells at the Calistoga site.	Installed 2 new monitoring wells (1 site) as additions to the interconnected surface water monitoring network.	 Completed	Coordination with the City of Calistoga; completed in June 2025
Install eight new surface water stage and quality meters	Installed eight new surface water stage and quality meters as part of the surface water quality network, which includes water quality (Temperature, Total Dissolved Solids, Salinity, Electrical Conductivity) monitoring at stream sites.	 Completed	Locations correspond to new interconnected surface water monitoring well sites.
Install or upgrade ten stream gages; expand Stream Watch network	In coordination with the Napa County RCD and Napa County Flood Control and Water Conservation District, an expanded or upgraded stream stage and discharge monitoring network. Stream Watch network expanded to 43 sites; 4 sites include cameras.	In Progress	Ongoing coordination with RCD and Napa County Flood Control and Water Conservation District
Design 5 refurbished/new surface water gaging stations	Design 5 surface water gaging stations (4 refurbished and 1 new) as part of the DWR Stream Gage Improvement Program (CalSIP).	In Progress	Locations correspond to historical USGS stream gaging sites; installation in WY 2026
Model and Water Budget Refinement			
Expand the collection of groundwater extraction and consumptive use data	Adopt well metering and reporting standards. Water Conservation Workplan implementation. Water Certification Partnership program implementation. Expand the data management system to include additional extraction and consumptive use data made available through PMAs and other sources.	In Progress	Data collection through Workplan implementation

Action	Summary Description	Status	Implementation Notes
Collect or acquire soil moisture data	Expand the collection of local soil moisture and irrigation scheduling data, utilizing publicly available datasets. Implement the Napa County Water Conservation Workplan. Coordinating with USGS on the development of a soil moisture module for the OWHM platform (i.e., will refine the handling of soil moisture utilization in the NVIHM)	In Progress	Data collection through Workplan implementation; USGS soil moisture module to be completed in Winter 2026
Evaluate and incorporate updated climate change projections	Evaluate and incorporate updated climate change projection datasets, as available from DWR or a similar source, to continue to apply best-available data to the ongoing evaluation of potential future Subbasin conditions.	Planning	Expected implementation of new climate change scenarios during the GSP 5-year periodic evaluation
State Water Resources Control Board Supply and Demand Assessment (SDA) Unit Coordination	State Board is developing a Napa River Watershed model to simulate the complicated watershed hydrology, including flows, surface water and groundwater interaction, and water demands. State Board staff are coordinating with the NCGSA on use of the Napa Valley Integrated Hydrologic Model (NVIHM); a Memorandum of Understanding has been executed to recognize Napa County's, the NCGSA's, and the State Board's interest in cooperative data sharing and information, including outreach, engagement and education efforts to accomplish increased water conservation throughout Napa County for the benefit of present and future generations and in consideration of public trust principles.	In Progress	State Board Workplan Addendum completed April 2025; executed State Board and Napa County MOU May 2025; State Board anticipates completion of the Napa pilot project in 2026

CalSIP = Stream Gage Improvement Program; CEFF = California Environmental Flows Framework; DWR = California Department of Water Resources; GDE = groundwater dependent ecosystem; ISW = interconnected surface water; MOU = memorandum of understanding; NVIHM = Napa Valley Integrated Hydrologic Model; RCD = Resource Conservation District; USGS = US Geological Survey

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