

## Napa Valley Subbasin Groundwater Sustainability Plan

**Table 12-3. Recommendations for Plan Implementation**

Action	Summary Description	GSP Reference	Data Gap or Objective Addressed	Priority Rank	Implementation Time Frame
<b>Monitoring Subbasin Conditions <sup>1</sup></b>					
<b>Install 16 Additional Monitoring Wells <sup>2,3</sup></b>	Install 2 monitoring wells, as additions to the seawater intrusion monitoring network.	Section 5.6.6	Improve the spatial and temporal resolution of groundwater salinity monitoring sites used to track the location of the saline/freshwater interface	1	2021 - 2022
	Install 8 new monitoring wells, as additions to the interconnected surface water monitoring network.	Section 5.9.6	Expand the groundwater level monitoring network and vertical discretization of the Quaternary and Tertiary units	1	2021 - 2022
	Install 8 additional monitoring wells in areas of interest identified for expansion or refinement of the existing monitoring network, including in areas of more concentrated domestic and agricultural groundwater pumping.	Section 5.4.6, Section 5.5.6		2	2022 - 2027
<b>Install 4 Additional Continuously-recording Surface Water Quality Meters <sup>3</sup></b>	Install four new surface water quality meters as part of the surface water quality network, includes water quality (Temperature, Total Dissolved Solids, Salinity, Electrical Conductivity) monitoring at stream sites.	Section 5.7.2.6	Improve the spatial and temporal resolution of sites monitoring surface water quality in interconnected surface water to improve characterizations of the influence of groundwater conditions on surface water quality.	2	2022
<b>Install or Upgrade 10 Stream Gages</b>	In coordination with the Napa County RCD and Napa County Flood Control and Water Conservation District, expand or upgrade stream stage and discharge monitoring network	Section 5.10.6	Improve the spatial and temporal resolution of existing stream stage and discharge monitoring sites to better record low flow and baseflow conditions.	1	2022 - 2027

Action	Summary Description	GSP Reference	Data Gap or Objective Addressed	Priority Rank	Implementation Time Frame
<p><b>Develop a Monitoring and Assessment Workplan for Interconnected Surface Waters and Groundwater Dependent Ecosystems</b></p>	<p>With input from the Technical Work Group and relevant agencies (e.g., Napa County RCD, CDFW, and NOAA Fisheries), refine monitoring and analytical approaches implemented for the purpose of evaluating the effect of groundwater conditions on interconnected surface waters and GDEs. Incorporate data quality objectives, monitoring protocols, and quality control/quality assurance procedures for work plan activities (may include biological field assessments, stream habitat investigations, and evaluations of the status of rare, threatened, or endangered species)</p>	<p>Section 5.9.6, Section 5.11.6</p>	<p>Evaluate and assess data gaps related to interconnected surface waters and GDEs. Reduce uncertainty in estimates of the location, timing, and rates of depletions of interconnected surface water due to groundwater extraction.</p>	<p>1</p>	<p>2022 - 2023</p>
<p><b>Model and Water Budget Refinement</b></p>					
<p><b>Expand Collection of Groundwater Extraction and Consumptive Use Data</b></p>	<p>Adopt well metering and reporting standards. Implement Vineyard and Winery Water Conservation workplan. Expand data management system to include additional extraction and consumptive use data made available through PMAs and other sources.</p>	<p>Section 8.9.2, Section 11.7.5.2, Section 11.7.6.2</p>	<p>Reduce water budget uncertainty for the single largest groundwater budget outflow component.</p>	<p>1</p>	<p>2022 - Ongoing</p>
<p><b>Streamflow Monitoring Network Enhancement</b></p>	<p>Enhance and expand the streamflow monitoring network to improve model-derived representations of stream-aquifer interactions and estimates of stream depletion</p>	<p>Section 8.9.2, Section 5.10.6, Section 11.7.6.2</p>	<p>Improve the spatial and temporal resolution of existing stream stage and discharge monitoring sites to better record low flow and baseflow conditions. Reduce water budget uncertainty.</p>	<p>1</p>	<p>2022 - Ongoing</p>
<p><b>Collect or Acquire Aquifer Parameter Data</b></p>	<p>Continue to support planned Airborne Electromagnetic survey activities coordinated by DWR and expand aquifer testing requirements for new production wells in areas where aquifer parameter data gaps exist.</p>	<p>Section 11.7.6.2</p>	<p>Reduce water budget uncertainty and improve the delineation of hydrostratigraphic zones</p>	<p>1</p>	<p>2022 - 2027</p>
<p><b>Collect or Acquire Soil Moisture Data</b></p>	<p>Expand collection local soil moisture and irrigation scheduling data, utilizing publicly available datasets. Implement Vineyard and Winery Water Conservation workplan.</p>	<p>Section 11.7.6.2</p>	<p>Reduce water budget uncertainty and improve the representation of irrigation practices in the NVIHM.</p>	<p>1</p>	<p>2022 - Ongoing</p>

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<b>Evaluate and Incorporate Updated Climate Change Projections</b>	Evaluate and incorporate updated climate change projection datasets, as available from DWR or similar source, to continue to apply best-available data to the ongoing evaluation of potential future Subbasin conditions.	Section 11.7.6.2	Continue to utilize best-available information to inform analyses of projected Subbasin conditions.	1	2022 - Ongoing
<b>Projects and Management Actions</b>					
<b>Vineyard and Winery Water Conservation (Planned PMA)</b>	Cooperate with the Napa County RCD, grower and vintner organizations, and technology partners to develop a program design and workplan to guide implementation.	Section 11.5.1	Promote sustainable groundwater management through reduced consumptive use to achieve a 10 percent reduction in non-deminimis groundwater pumping relative to the 2005 - 2014 average rate of extraction, to avoid significant and unreasonable effects on beneficial uses and users of groundwater and interconnected surface waters resulting from groundwater extraction.	1	2022 - 2023
	Adopt or modify existing well metering and reporting standards and policy and provide direction to groundwater users on aggregate targets for groundwater use.			1	Ongoing
<b>Managed Aquifer Recharge (Planned PMA)</b>	Develop Stormwater Resource Plan to characterize stormwater availability, and opportunities and constraints for stormwater utilization.	Section 11.4.1	Develop multi-benefit projects to enhance groundwater supply reliability and maintain or improve GDE conditions, utilizing existing sources of water such as unallocated winter streamflow and runoff generated within the Subbasin, to avoid significant and unreasonable effects on beneficial uses and users of groundwater and interconnected surface waters resulting from groundwater extraction.	1	2022
	Conduct additional feasibility analysis and monitoring plan development, could include coordination with habitat restoration planning efforts.				2023 - 2027
	Implement multi-benefit projects in coordination with other local agencies and with the assistance of state and federal agencies, as available.			1	Ongoing, Subject to Subbasin conditions

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<b>Expand Recycled Water Use (Planned PMA)</b>	In partnership with other local agencies, expand the production, distribution, and use of recycled water to offset use of groundwater in the Subbasin	Section 11.4.2	Promote sustainable groundwater management by augmenting and diversifying sources of supply to offset Subbasin groundwater extraction demands, reduce consumptive use of groundwater, and avoid significant and unreasonable effects on beneficial uses and users of groundwater and interconnected surface waters resulting from groundwater extraction.	1	Ongoing
<b>Pumping Reductions (Planned PMA)</b>	Cooperate with stakeholders to develop a program design and workplan to guide implementation.	Section 11.5.2	Promote sustainable groundwater management through reduced consumptive use and avoidance of significant and unreasonable effects on beneficial uses and users of groundwater and interconnected surface waters resulting from groundwater extraction.		2022 - 2023
	Adopt or modify groundwater conservation policy including Subbasin-wide or subregion groundwater use limits, consistent with correlative rights and GSA well metering and reporting standards			1	Subject to Subbasin conditions
<b>Groundwater Ordinance and New Well Permit Conditions (Planned PMA)</b>	Adopt groundwater use restrictions or other modifications to the County groundwater ordinance and Water Availability Analysis guidelines, including measures to reflect updated consideration of public trust resources consistent with GSP water budget and sustainable yield analyses and sustainable management criteria.	Section 11.5.3	Promote sustainable groundwater management through reduced consumptive use and avoidance of significant and unreasonable effects on beneficial uses and users of groundwater and interconnected surface waters resulting from groundwater extraction.	1	2021 - 2022
<b>In-lieu Aquifer Recharge (Potential PMA)</b>	Develop or incentivize projects to enhance groundwater recharge by expanded capture and use of surplus surface water flows in-lieu of groundwater pumping (includes verification of pumping reductions through metering and reporting of water use)	Section 11.6.1	Develop multi-benefit projects to enhance groundwater supply reliability and maintain or improve GDE conditions, utilizing existing sources of water such as unallocated winter streamflow and runoff generated within the Subbasin, to avoid significant and unreasonable effects on beneficial uses and users of groundwater and interconnected surface waters resulting from groundwater extraction.	2	Subject to Subbasin Conditions

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<b>Groundwater Ordinance and New Well Permit Conditions (Potential PMA)</b>	Adopt well setback and/or well construction standards to limit 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.	Section 11.6.2	Promote sustainable groundwater management through reduced consumptive use and avoidance of significant and unreasonable effects on beneficial uses and users of groundwater and interconnected surface waters resulting from groundwater extraction.	2	Subject to Subbasin Conditions
	County and municipalities revise local codes to align future groundwater use and well permit approvals with GSP water budget results and sustainable yield analysis.	Section 11.6.3		2	Subject to Subbasin Conditions
<b>Active Production Well Inventory (Supporting Action)</b>	Document active production wells in the Subbasin through coordination with Napa County Planning, Building, and Environmental Services and other local well permitting agencies.	Section 11.7.1	Promote PMA implementation and continued sustainable groundwater management	1	2021 - 2023
<b>Tracking Impacts to Drinking Water Users Caused by Groundwater Management (Supporting Action)</b>	Encourage reporting of water supply shortages, leveraging tools provided by DWR, and report on findings regularly including through annual reports and in periodic GSP Updates.	Section 11.7.2	Avoid significant and unreasonable effects on beneficial uses and users of groundwater. Improve PMA effectiveness and achieve continued sustainable groundwater management	1	Ongoing
<b>Stakeholder Engagement and Outreach (Supporting Action)</b>	Continued implementation of the Stakeholder Communication and Engagement Plan (adopted by the GSA in 2020)	Section 11.7.3	Improve public awareness of and stakeholder engagement in sustainable groundwater management efforts.	1	Ongoing

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<b>Coordination with Land Use and Water Management Agencies (Supporting Action)</b>	Improve sustainable groundwater management implementation through coordination with local agencies that set land use policy and manage water supplies in the Subbasin. Continue to encourage participation by those same agencies in SGMA planning and implementation efforts.	Section 11.7.4	Promote PMA implementation and continued sustainable groundwater management	2	Ongoing
<b>Adopt Well Metering and Reporting Standards (Supporting Action)</b>	Develop and adopt regulations specifying acceptable equipment, installation procedures, reporting procedures, and related aspects necessary to implement groundwater use reporting management actions	Section 11.7.5	Promote PMA implementation and continued sustainable groundwater management	1	2022 - 2023
<p>1 Note, not all monitoring network enhancements described in Section 5, are reflected in this summary table.</p> <p>2 Proposed monitoring wells will be added to more than one monitoring network.</p> <p>3 Additional monitoring well needs may also be identified as part of the interconnected surface water and groundwater dependent ecosystem workplan effort described in Sections 5.9.6 and 5.11.6.</p>					