

2008-2013 Accomplishments	Basin Management Objectives										
	BMO No.1 Maintain groundwater elevations for the support of beneficial uses of groundwater, and to protect against inelastic land subsidence.	BMO No.2 Balance use of groundwater relative to other water sources.	BMO No.3 Protect against adverse impacts on surface water quantity from interaction between groundwater and surface water flows.	BMO No.4 Identify and protect groundwater recharge areas and enhance the recharge of groundwater where appropriate.	BMO No.5 Maintain or improve groundwater quality for beneficial uses. Minimize saline intrusion.	BMO No.6 Protect against adverse impacts on water quality from interaction between groundwater and surface water flows.	BMO No.7 Improve the community's awareness of groundwater planning, water resources, and legal issues.	BMO No.8 Increase water conservation and water use efficiency practices that help achieve the plan goal.	BMO No.9 Improve understanding of the Sonoma Valley basin groundwater resource through consistent monitoring and continuing focused studies.	BMO No.10 Manage groundwater with local control.	BMO No.11 Explore, Identify and maximize non-regulatory approaches to manage the groundwater resource.
Component No.1 Stakeholder Involvement											
Developed, updated periodically, and implemented Public Outreach Plan				√			√	√		√	√
Regular, periodic communications including periodic reporting, fact sheets, and annual updates to stakeholders				√			√	√		√	√
GMP coordination and policy decisions through Basin Advisory Panel quarterly meetings				√			√	√		√	√
Technical review and input on program activities via Technical Advisory Committee monthly meetings				√			√	√		√	√
Focused outreach and briefings to expand volunteer monitoring program				√			√	√		√	√
Conducted local technical presentations and briefings							√	√		√	√
Produced a video highlighting key elements of the Sonoma Valley GMP							√	√		√	√
Stakeholder visits to possible Sonoma Valley sites for stormwater retention/groundwater recharge projects			√				√			√	√
Sponsored public meetings on the Stormwater Management/Groundwater Recharge Scoping Study			√				√			√	√
Sponsored public meetings on the Salt and Nutrient Management Plan			√	√			√			√	√
Component No.2 Monitoring Program											
Developed a Sampling and Analysis Plan for monitoring well data collection	√		√		√	√			√	√	√
Semi-annual measurement of water levels were coordinated with DWR, VOMWD, the City of Sonoma, SCWA and local trained volunteers	√		√		√	√			√	√	√
Expanded the groundwater level monitoring program by 81 additional wells bringing the total number of voluntary wells to 141.	√		√		√	√			√	√	√
Installed two multi-depth wells with a \$250K grant.	√		√		√	√			√	√	√
Instrumented select wells for automated groundwater level monitoring	√		√		√	√			√	√	√
Installed one new stream gage on Sonoma Creek and initiated stream gage monitoring	√		√		√				√	√	√
Conducted stable isotope testing to assess age and flowpaths in parts of the Sonoma Valley	√		√		√				√		√
Developed plan for a volunteer rainfall monitoring program	√						√		√		√
Monitoring data compiled into a GIS database, evaluated and reported on annual basis	√		√		√				√		√
Developed work plan for the California Statewide Groundwater Elevation Monitoring Program and submitted groundwater level data to DWR	√		√		√				√	√	√
Prepared and distributed the Annual Reports and Data Transmittals	√		√		√	√	√		√	√	√
Component No.3 Groundwater Resources Protection											
Preparation and distribution of a private wells owners guide ("WELLness - A Guide to Your Water Well")				√	√		√			√	√
Conducted groundwater recharge mapping under a \$20,000 grant received		√		√	√				√	√	√
Additional groundwater quality sampling in southern Sonoma Valley for salinity				√	√				√	√	√
Assembled and compiled additional Department of Public Health groundwater data on wells in the valley	√	√		√	√				√	√	
Assembled and compiled additional GeoTracker cleanup site groundwater data on wells in the valley				√	√				√	√	
Component No.4 Groundwater Sustainability											
Conducted unincorporated area water conservation audit and prepared a report under a \$25,000 grant	√	√					√	√		√	√
Distributed and publicized the "Slow It, Spread It, Sink It" guidebook as a resource for property owners to implement stormwater retention and groundwater recharge projects	√	√					√	√		√	√
The SVGMP Panel developed and gives Annual Conservation Awards	√	√					√	√		√	√
Provided input on stormwater capture/groundwater recharge and groundwater banking feasibility studies	√	√								√	√
Updated the groundwater flow model to better simulate groundwater recharge distribution	√	√			√				√	√	√
Component No.5 Planning Integration											
Coordinated funding and participation by Lead and Cooperating Agencies in the SVGMP		√								√	√
Conducted coordinated efforts to pursue funding for additional groundwater monitoring and conservation projects that resulted in the award of two AB303 Grants and one water conservation audit grant		√			√					√	√
Developed and continued coordinated monitoring in the Sonoma Valley		√			√					√	√
Participation and input on the recycled water project and development of the Salt and Nutrient Management Plan for Sonoma Valley		√			√					√	√
Participation in the CUWCC Memorandum of Understanding (MOU) for water conservation		√			√			√		√	√
Conduct periodic constituent briefings for information dissemination, to receive input and continue looking for additional opportunities to integrate future planning and program efforts		√					√			√	√

Table 2-1

Table 3-1

2012 Sonoma Valley Groundwater Basin Groundwater Demand Estimates (AF)

Subarea	Agriculture	Rural	Public Supply			Irrigated Turf*	Totals	
			Municipal	Small Systems	Mutual/Private		AF	AF/ (100 Acres)
Calabazas (1,347 ac)	131	70					202	15
Wetland (17,139 ac)	214						214	1
Glen Ellen (2,778 ac)	138	120			11		269	10
Carneros (4,753 ac)	224	150		9			383	8
Agua Caliente (2,809 ac)	263	222				16	500	18
Western Upland (27,720 ac)	306	351			176		833	3
Rodgers Creek (3,618 ac)	915	155		39		41	1,150	32
Kenwood (5,140)	565	540		51	140		1,296	25
Eastern Upland (30,044 ac)	628	439	277	83	126	47	1,601	5
City (6,798 ac)	814	497	80	112	90	22	1,615	24
El Verano/Fowler Creek (6,098 ac)	1,227	427	145			575	2,374	39
Total Sonoma Valley (108,244 ac)	5,426	2,971	502	294	544	701	10,437	10

*Irrigated golf course, parks, and sports fields

Table 4-1 - Management Components and Actions - Years 1-5 Progress and Years 6-10 Plans

Management Components/Actions	Completed Actions 2008-2012					Future Plans 2013-2018					Relative Cost
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
4.1 Stakeholder Involvement											
4.1.1 Involving the Public											
Meetings, coordination, and communication	√	√	√	√	√	✦	✦	✦	✦	✦	----
Public Outreach Plan for implementation- update and improve	√	√				✦					----
4.1.2 Advisory Groups											
Reform Panel, form TAC, and hold TAC monthly meetings	√	√	√	√	√	✦	✦	✦	✦	✦	----
Hold Quarterly Meetings with the Panel	√	√	√	√	√	✦	✦	✦	✦	✦	----
4.1.3 Informing Public Agencies and Stakeholders											
Meetings, coordination, and communication	√	√	√	√	√	✦	✦	✦	✦	✦	----
4.1.4 Partnerships & Coordination											
Meetings, coordination, and communication	√	√	√	√	√	✦	✦	✦	✦	✦	----
Seek grant funding for Plan actions	√	√	√	√	√	✦	✦	✦	✦	✦	----
4.2 Monitoring Program											
4.2.2 Groundwater Elevation Monitoring											
Groundwater Elevation Monitoring & Expand Volunteer Wells	√	√	√	√	√	✦	✦	✦	✦	✦	----
Project - Install New Multi-depth Monitoring Wells	1	1	1	1	1	✦					\$\$
CASGEM Monitoring Plan and Annual Data Submittals						✦					\$
4.2.3 Groundwater Quality Monitoring											
Groundwater Quality Monitoring-long-term program		√	√	√	√	✦					----
Conduct Depth Specific Salinity Monitoring - South Valley				√	√	✦					----
4.2.4 Land Subsidence Monitoring											
Establish Long-Term Monitoring Program for Land Subsidence						✦					\$
4.2.5 Surface Water-Groundwater Interaction Monitoring											
Study - Tracer Test and Modeling								✦			\$\$\$
Study - Stable Isotope Analysis	√		√	√	√			✦			\$\$
Project - Install and Maintain New Stream Gauges	√								✦		\$\$
Project - Conduct Seepage Runs		√	√	√	√	✦	✦	✦	✦	✦	\$
4.2.6 Monitoring Protocols											
Adopt and Implement Protocols & Monitoring Program	√	√									----
4.2.7 Central GIS Data Management System											
Update GIS Mapping of Drainage Network								✦			\$
Maintain and Update GIS Groundwater Database			√	√	√	✦	✦	✦	✦	✦	\$
WEBH2O Web-Based Data Management System	√	√	√	√	√	✦	✦	✦	✦	✦	\$
4.3 Groundwater Quality Protection											
4.3.1 Well Construction, Abandonment, and Destruction											
Study - Obtain Better Information during Well Installations							✦				----
Study - Conduct Well/Abandoned Well Survey								✦			\$\$
Project - Develop & Distribute Guide for Well Owners		√	√	√	√						----
4.3.2 Wellhead Protection											
Incorporate Information from DWSAP Plans								✦			----
4.3.3 Control Migration and Remediation of Contaminated Groundwater											
Provide Well Owners with County Guide				√	√	✦					----
Incorporate & Distribute Information on Sources							✦				----
4.3.4 Control of Saline Water Intrusion											
Study - Salinity Sources and Distribution (Salt & Nutrient Plan)					√	✦			✦		\$\$
Study - Seawater Intrusion Mitigation Measures (if appropriate)									✦		\$\$\$
4.4 Groundwater Sustainability											
4.4.1 Stormwater Recharge											
Study - Groundwater Recharge Area Mapping & Analysis		√	√	√	√						\$
Study - Recharge Area Alternatives								✦			\$\$
Project - Public Outreach Program			√	√	√	✦					\$
Study/Pilot - Stormwater Capture/Groundwater Recharge Scoping			√	√	√	✦					\$\$\$
4.4.2 Groundwater Banking											
Study - Conduct Groundwater Banking/Conjunctive Use Assessment			√	√	√	✦					\$\$\$
Study/Pilot - Feasibility Analysis/Pilot Groundwater Banking							✦				\$\$
4.4.3 Recycled Water Supply											
Study - Evaluate Graywater			√	√	√						\$\$\$
Project - Increase Recycled Water for Irrigation			√	√	√	✦					\$\$\$
Study - Evaluate Recycled Water Groundwater Recharge Feasibility										✦	\$\$
4.4.4 Conservation & Demand Reduction											
Continue Implementing Conservation BMPs & Report Annually	√	√	√	√	√	✦	✦	✦	✦	✦	----
Encourage Water Conservation BMPs for Non-Viticulture Agriculture								✦			\$
Encourage Additional Conservation and Best Practices for Viticulture									✦		\$
Study - Voluntary Water Conservation BMPs for Uninc. Areas		√	√	√	√						----
Project - Landscape Irrigation Efficiency							✦				\$
Pilot/Project - Stormwater Capture and Reuse for Irrigation							✦				\$\$
4.4.5 Groundwater Modeling											
Study - Update Land Cover Map & Water Use Estimates						✦		✦			\$\$
Update Hydrogeologic Conceptual Model						✦					\$\$
Project - Upgrade Groundwater Flow Model							✦	✦	✦		\$\$\$
Feasibility Study to Assess Ways to Address Groundwater Depletion							✦				\$
4.5 Planning Integration											
Project - Develop Multi-Beneficial Projects for Flood Hazards						✦					\$\$\$
5 Implementation Administration											
Implementation Prioritization and Financing											
Annual Summary Status Report and Data Transmittal	√	√	√	√	√	✦	✦	✦	✦	✦	----
Five-Year Program Review and Implementation Report						✦	✦	✦	✦	✦	----

Notes:

- - Funded action
- \$\$\$ - Unfunded action; indicates relative order magnitude cost - (\$) Low; (\$\$) Medium; (\$\$\$) High.
- 1 - Obtained funding commitment in 2008, funding in late 2010, implementation in 2011.

Table 4-2

Basin Management Objective	Progress to Date	Plans for 2014-18
BMO-1 Maintain groundwater elevations for the support of beneficial uses of groundwater and to protect against inelastic land subsidence.	Public outreach and stakeholder involvement on groundwater, increased voluntary monitoring, and obtained funding and installed two new multi-depth wells. Distributed and publicized the “Slow It, Spread It, Sink It” guidebook as a resource for property owners to implement stormwater retention and groundwater recharge projects.	Refined and increased public outreach and stakeholder involvement on groundwater, increased voluntary monitoring, and install new multi-depth wells. Propose conducting a feasibility study to update and reassess scenario based planning and consider possible technical, land use and institutional approaches to address groundwater depletion.
BMO-2 Improve water use efficiency and conservation.	Provided annual awards for water conservation. Conducted conservation assessments and prepared report for unincorporated areas with NBWA grant.	Pursue grants for incentive programs. Continue giving awards and publicity for increasing water conservation.
BMO-3 Identify and protect groundwater recharge areas and enhance the recharge of groundwater where appropriate.	Completed recharge-mapping study. Completed stormwater management-groundwater recharge scoping study and groundwater banking feasibility study.	Conduct groundwater banking pilot study and stormwater recharge pilot projects.
BMO-4 Manage groundwater in conjunction with other water sources.	Under the GMP, groundwater is being managed in conjunction with other water resources.	Continue implementation of the GMP with pilot projects on groundwater banking, stormwater and recharge opportunities. Continue to promote the use of recycled water for irrigation to offset groundwater demands.
BMO-5 Protect groundwater quality for beneficial uses including minimizing saline intrusion.	Coordinated monitoring efforts and increased number of wells through voluntary efforts, incorporated selected water quality data from public water systems. Developed and implemented outreach to distribute a Well Owner’s Guide “WELLness – A Guide to Your Water Well”. Completed a Salt and Nutrient Management Plan.	Continue coordinating monitoring efforts and increase number of wells through voluntary efforts, and install two new multi-depth monitoring wells. Implement the Salt and Nutrient Management Plan monitoring program.
BMO-6 Protect against adverse interactions between groundwater and surface water flows.	Continued stream gage monitoring of the Sonoma Creek watershed and conducted seepage runs along creek beds. Instrumented several shallow monitoring wells adjacent to Sonoma Creek and tributaries with pressure transducer/datalogger systems.	Continue stream gage monitoring of Sonoma Creek watershed; further consider possible additional groundwater-surface water studies.
BMO-7 Improve the community’s awareness of groundwater planning, water resources, and legal issues.	Public outreach and stakeholder involvement through Panel and TAC meetings, newsletters, fact sheets, press releases and GMP website.	Continue public outreach and stakeholder involvement through Panel and TAC meetings, newsletters, fact sheets, press releases and the GMP website. Focus outreach efforts on areas in Southern Sonoma Valley exhibiting groundwater-level declines
BMO-8 Improve the groundwater database and basin understanding through consistent monitoring and additional surveys, and improve basin analytical tools including the groundwater simulation model.	Developed a database for storage and reporting of groundwater data. Coordinated monitoring efforts, conducted volunteer training, increased 86 monitoring wells through voluntary efforts.	Continue coordination and efforts for voluntary monitoring; install two new multi-depth monitoring wells. Update hydrogeologic conceptual model, and upgrade groundwater model. Consider further upgrade to fully-coupled surface water-groundwater flow model.
BMO-9 Manage groundwater with local control.	Implemented the GMP with regular input and direction from local stakeholders through the Panel.	Continue implementation of GMP with regular input and direction from the Panel and TAC.
BMO-10 Explore, identify and maximize non-regulatory approaches to management.	Promoted voluntary groundwater-level monitoring and conservation efforts.	Continue promoting voluntary groundwater-level monitoring and conservation efforts.