

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION**

RESOLUTION No. R2-2014-0053

**CONCURRENCE WITH FINDINGS OF THE
SONOMA VALLEY SALT AND NUTRIENT MANAGEMENT PLAN**

WHEREAS, the California Regional Water Quality Control Board, San Francisco Bay Region (Water Board), finds that:

1. On May 14, 2009, the State Water Resources Control Board (State Water Board) adopted the “Policy for Water Quality Control for Recycled Water” (Recycled Water Policy; Resolution No. 2009-0011, as amended by Resolution No. 2013-0003). The Recycled Water Policy requires the State and Regional Water Boards to exercise the authority granted to them by the Legislature to the fullest extent possible to encourage the use of recycled water, consistent with State and federal water quality laws.
2. It is the intent of the Recycled Water Policy that salts and nutrients from all sources be managed in a manner that ensures attainment of water quality objectives and protection of beneficial uses. The State Water Board found that the appropriate way to address salt and nutrient issues is through the development of regional or sub-regional salt and nutrient management plans rather than through imposing requirements solely on individual recycled water projects. The intent of the Recycled Water Policy is for local water and wastewater entities, together with local salt and nutrient contributing stakeholders, to develop salt and nutrient management plans for each groundwater basin/subbasin in California to assess water quality and evaluate strategies for complying with salt and nutrient water quality objectives.
3. Development of the Sonoma Valley Salt and Nutrient Management Plan (Sonoma Valley Plan¹) was a collaborative effort between the Sonoma Valley County Sanitation District (Sanitation District) and local stakeholders with input from a technical advisory committee and Water Board staff. The Sonoma Valley Plan was developed for the Sonoma Valley Subbasin, defined as basin number 2-2.02 in California Department of Water Resources (DWR) Bulletin 118 (2013).² The Sonoma Valley Subbasin encompasses an area of approximately 70 square miles and is located within the larger 166 square mile Sonoma Creek watershed. For modeling and analysis purposes, the Sonoma Valley Subbasin was subdivided into a Baylands Area (containing historical brackish groundwater; 21.7 square miles) and an Inland Area (48.1 square miles).
4. As authorized by Water Board-issued permits, the Sonoma County Water Agency (Water Agency) manages and operates the wastewater treatment facility (under Order No. R2-2014-0020) owned by the Sanitation District. During dry weather months, the Sanitation District provides recycled water for vineyards, dairies, and pasturelands in the southern part of Sonoma Valley (under Order No. 92-67). The Sanitation District also provides recycled water to the Napa River Salt Marsh Restoration Project for salinity reduction and habitat restoration (under Order No. R2-2011-0035).

¹ RMC Water and Environment. 2014. Sonoma Valley Salt and Nutrient Management Plan. In association with Todd Engineers and Plan Tierra, Inc. Prepared for the Sonoma Valley County Sanitation District. June 2014.

² DWR (California Department of Water Resources). 2013. California’s Groundwater Bulletin 118 Update 2013. October 2003.

The overall goal for the Sanitation District's recycled water program is to increase water supplies and supply reliability within the groundwater subbasin; decrease the amount of pumping and strain on groundwater supplies to avoid groundwater overdraft problems; provide a reliable source for wetland enhancement; and prevent additional brackish water intrusion in the Inland Area. In 2013, the volume of recycled water used within the Sonoma Valley Subbasin to irrigate vineyards, dairies, and pasturelands was approximately 1,100 acre-feet. The Sanitation District's goal is to increase recycled water use by 3,000 acre-feet per year (AFY) to achieve 4,100 AFY by 2035.

5. The Recycled Water Policy requires salt and nutrient management plans to include stormwater recharge/use goals and objectives. The Water Agency and other local stakeholders are actively working to increase stormwater recharge and alleviate flooding while providing water quality benefit. However, due to uncertainties in the current and projected volume of stormwater recharge, the Sonoma Valley Plan does not contain quantitative goals for stormwater recharge. In addition, stormwater recharge was not included in the groundwater quality analysis. Future updates to the Sonoma Valley Plan will consider stormwater recharge efforts as they continue to be developed and implemented.
6. The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan; Water Board 2013) designates both Municipal and Domestic Supply and Agricultural Supply as existing beneficial uses for the Sonoma Valley Subbasin. The Basin Plan designates Industrial Service Supply and Industrial Process Supply as potential beneficial uses. The applicable numeric water quality objectives for protection of Municipal and Domestic Supply include 500 milligrams per liter (mg/L) for total dissolved solids (TDS) and 10 mg/L for nitrate plus nitrite (as nitrogen). The Recycled Water Policy directs the use of assimilative capacity as a benchmark to evaluate the relative contribution of additional pollutant loads to groundwater quality. Assimilative capacity is the difference between a water quality objective and ambient water quality.
7. The Sonoma Valley Plan includes an analysis of existing groundwater quality. The Inland Area has an average TDS concentration of 372 mg/L. The Baylands Area—an area adjacent to San Pablo Bay that contains brackish groundwater—has an average TDS concentration of 1,220 mg/L, significantly above the water quality objective of 500 mg/L. Nitrate concentrations are generally very low with a subbasin average of roughly 0.06 mg/L (Inland Area = 0.06 mg/L; Baylands Area = 0.07 mg/L), well below the water quality objective of 10 mg/L.
8. There is no assimilative capacity for TDS in the Baylands Area. This finding is consistent with historical documentation of brackish groundwater located adjacent to and northwest of San Pablo Bay. The intrusion of brackish groundwater has advanced over time and may be attributed to groundwater pumping southeast of the City of Sonoma, upwelling of high-TDS thermal groundwater along fault zones, and inflow of connate groundwater (i.e., water held in the pores of rocks formed in marine conditions). Due to the elevated salt in the Baylands Area, and land cover which is primarily tidal marshlands, groundwater pumping is limited, and the area is unlikely to be developed for groundwater supply in the future. Accordingly, the Sonoma Valley Plan does not include an assessment of future groundwater quality in the Baylands Area or an evaluation of strategies for complying with water quality objectives. While recycled water adds TDS and nitrate load to the subbasin, the use of recycled water in the Baylands Area acts to improve groundwater quality with respect to TDS because the average recycled water TDS concentration (440 mg/L) is lower than the ambient average groundwater concentration (1,220 mg/L TDS).

9. A mixing model was used to predict future water quality, water quality trends, and the percentage of the existing available assimilative capacity used by recycled water projects during the planning period (through 2035). Model results for three scenarios ((1) baseline existing recycled water use of 1,100 AFY; (2) 2035 planned recycled water use of 4,100 AFY; (3) 2035 planned recycled water use of 4,100 AFY plus an additional 5,000 AFY) indicate that recycled water projects will use less than 10% of the available assimilative capacity for both TDS and nitrate in the Inland Area, and projected concentrations will remain below water quality objectives. Low salinity and nutrient values in the Inland Area are a result of a combination of factors including the high percentage of mountain front and precipitation recharge with very low TDS and nitrate concentrations, the low amount of loading from sources, and the low volume and high quality of recycled water used for irrigation.
10. Because analysis of future water quality indicates stable trends, the Sonoma Valley Plan does not include any new implementation measures beyond existing best management practices (BMPs). Existing implementation measures and BMPs are associated with State and Regional Water Boards' permits for agriculture, pastureland, dairy operations, municipal wastewater management, recycled water irrigation, onsite wastewater treatment system management, stormwater runoff, and groundwater management. Additional efforts to protect water quality in the Sonoma Valley Subbasin include policies in the Sonoma County General Plan 2020 and actions of the Sonoma Valley Groundwater Management Program. These locally-recognized actions include increasing recycled water use to offset groundwater pumping, enhancing groundwater recharge, and mitigating existing contamination, including saline water intrusion.
11. The Sonoma Valley Plan includes a groundwater monitoring program that utilizes data from wells that are currently monitored by DWR, the State Water Board's Division of Drinking Water, and the Sonoma Valley Groundwater Management Program. The groundwater monitoring program is intended to serve as an early warning system by identifying any water quality trends of concern. The Sonoma Valley Plan recognizes the transition zone between the Baylands Area and Inland Area as a high-priority for monitoring efforts due to current elevated TDS levels. The Sanitation District will continue to characterize the extent of the brackish groundwater area and evaluate if actions taken to increase the use of recycled water for irrigation and reduce groundwater pumping in the southern Sonoma Valley is preventing and reducing saline groundwater intrusion. The Sanitation District is committed to reporting monitoring results through the GeoTracker database system, or other applicable database, to the Water Board every three years in a Sonoma Valley Plan groundwater monitoring report.
12. The Sonoma Valley Groundwater Management Program was formed in 2008 to implement the Sonoma Valley Groundwater Management Plan. The Sonoma Valley Groundwater Management Plan was developed by a broad coalition of stakeholders for the purpose of locally managing a sustainable high quality groundwater basin.
13. While salt and nutrient levels in the Inland Area are projected to be stable, there are concerns about localized declines of groundwater levels northwest and southeast of the City of Sonoma. Declines of up to five feet per year are resulting in storage declines of up to 1,400 AFY in the deep zone aquifer. In March 2014, the Sonoma Valley Groundwater Management Program recommended screening alternatives to consider possible technical, regulatory, and institutional approaches to address groundwater depletion.

14. The Sonoma Valley Plan is consistent with the goals and requirements of State Water Board Resolution No. 68-16 “Statement of Policy with Respect to Maintaining High Quality of Waters in California” (State Antidegradation Policy) and the federal Antidegradation Policy (40 C.F.R. § 131.12).). The use of recycled water will produce minor effects which will not result in a significant reduction of water quality and, therefore, a complete antidegradation analysis is not required. In addition, the State Water Board finds in the Recycled Water Policy that “The use of recycled water in accordance with this Policy [Recycled Water Policy], that is, which supports the sustainable use of groundwater and/or surface water, which is sufficiently treated so as not to adversely impact public health or the environment and which ideally substitutes for use of potable water, is presumed to have a beneficial impact.” Under this presumption, any change in groundwater quality from increasing the use of recycled water in the Sonoma Valley Subbasin is consistent with providing maximum benefit to the people of the State.
15. A Substitute Environmental Document (SED) was prepared by the State Water Board for the Recycled Water Policy in accordance with the State Water Board’s certified regulatory program (Cal. Code Regs., tit. 23, §§ 3775-3781). The State Water Board approved the Recycled Water Policy and the SED on May 14, 2009. Because this resolution falls within the scope of the Recycled Water Policy as analyzed by the State Water Board in the SED for the Recycled Water Policy, this resolution does not require further environmental review pursuant to the California Environmental Quality Act (CEQA) (Pub. Res. Code § 21166; Cal. Code Regs., tit. 14, § 15162 and 15163). This resolution consists of only general descriptions of existing regulations and water quality information from the Sonoma Valley Plan and does not include any regulatory changes. It therefore is not a “project” as defined in CEQA. There is no possibility that the activity in question may have a significant effect on the environment (Cal. Code Regs., tit. 14, §§ 15378 and 15061, subd. (b)(3) and Cal. Code Regs., tit. 23, § 3720).
16. Water Board staff prepared and distributed for public comment the resolution and a staff report dated October 2014. The resolution and staff report were distributed to Sonoma Valley Groundwater Management Program stakeholders, and Water Board staff presented the resolution and staff report to the Sonoma Valley Groundwater Management Program Basin Advisory Panel on October 16, 2014.
17. On December 10, 2014, the Water Board, in a public meeting, heard and considered comments pertaining to the resolution.

NOW, THEREFORE BE IT RESOLVED THAT the Water Board:

1. Recognizes the imperative for increased recycled water development and use in the San Francisco Bay Region and supports the Sanitation District’s goal of 4,100 AFY of recycled water use by 2035;
2. Recognizes the benefits of developing and implementing salt and nutrient management plans for the preservation and/or enhancement of the quality of the Region’s water resources;
3. Recognizes that the Sanitation District has developed the Sonoma Valley Plan in a manner consistent with the Recycled Water Policy;

4. Recognizes that the Sonoma Valley Plan groundwater monitoring program, including the identified steps to improve the understanding of water quality in the transition zone between the Baylands Area and Inland Area, provides a means of monitoring and evaluating water quality;
5. Recognizes that a revised implementation plan is not required for the Sonoma Valley Subbasin at this time beyond monitoring efforts to determine background water quality conditions and an ongoing evaluation of groundwater quality trends to inform the need for any future implementation actions in the subbasin;
6. Recognizes that monitoring efforts and evaluation of groundwater quality trends will determine the need for any future implementation actions in the subbasin;
7. Supports triennial review of the Sonoma Valley Plan by Water Board staff to determine if an update is needed based on changes in recycled water use or stormwater recharge quantities, trends in groundwater quality, or other need to comply with the Recycled Water Policy, the Basin Plan, and/or other Water Board permits and policies;
8. Supports the continued efforts of the Sonoma Valley Groundwater Management Program to implement its stated goal to “locally manage, protect, and enhance groundwater resources for all beneficial uses in a sustainable, environmentally sound, economical, and equitable manner for generations to come;” and
9. Recognizes that Water Board staff will continue to work collaboratively with the Sanitation District and other stakeholders to protect the beneficial uses of groundwater in the Sonoma Valley Subbasin. Water Board staff will utilize the Sonoma Valley Groundwater Management Program as a forum for coordination.

I, Bruce H. Wolfe, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of a resolution adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on December 10, 2014.

Bruce H. Wolfe
Executive Officer