

Chapter 5 Implementation Measures / Best Management Practice Strategy

The process for developing implementation measures for the Salt and Nutrient Management Plan, such as Best Management Practices, is outlined below. After finalizing this Plan, implementation steps will relate to salt and nutrient program management and groundwater monitoring.

5.1 Salt and Nutrient Program Management

As lead agency for development of this Plan, the City of Santa Rosa will continue to manage the Plan implementation items and Plan updates. The City will serve as the Monitoring Coordinator (See Chapter 8) and will lead other implementation activities, including Plan reporting and updating. Coordination will include overseeing the monitoring program, collecting monitoring data, data assembly and reporting, and updating the Plan on a five-year basis. As part of the Plan update, close coordination is needed with the Groundwater Management Planning effort being conducted in the Santa Rosa Plain. At a minimum, the Plan update will integrate the USGS basin characterization and flow regimes into the existing antidegradation analysis. With this additional information, additional BMPs may be considered.

5.2 Groundwater Monitoring

Guidance and criteria for monitoring have been established in Chapter 8, Salt and Nutrient Monitoring Plan. The next steps will be to develop a formal sampling plan with detailed sampling procedures and to determine locations for the possible installation of additional shallow monitoring wells. A Groundwater Well Installation Plan will be developed and coordinated with the Santa Rosa Plain Groundwater Management Program so that the shallow wells serve multiple monitoring purposes.

Municipal wells will be sampled by the corresponding municipality, and the City will establish a schedule and sampling and reporting requirements. Responsible party and cost share for installing new, shallow monitoring wells and monitoring of those wells has not been determined at this time.

5.3 Best Management Practice Strategy

BMPs are currently in place in the major land use sectors thought to be currently contributing salts and nutrients to the groundwater basin, including the following:

- For the **vineyard sector** of the agricultural industry, soil chemistry is regularly measured and monitored by the growers to determine the appropriate amount of fertilizer and soil amendments to manage soil fertility and productivity. This keeps vineyard managers from over applying salts and nutrients to their vines.
- For the **dairy sector** of the agricultural industry, the dairy operators and regulators have been actively working, both independently and with municipal wastewater management agencies, on managing nutrients for control of surface water discharges in the context of TMDLs for the Laguna de Santa Rosa and Russian River watersheds. In addition, the Dairy Waiver process (a statewide process administered at the Regional Water Quality Control Board level) is working to assist dairies in monitoring and managing all of their wastes, including salinity. Monitoring requirements within the Dairy Waiver process will provide additional groundwater quality data for the Salt and Nutrient Planning effort to be incorporated into future Plan updates.
- For the **farmsteads** (many of the septic system owners), the Resource Conservation Districts are managing a “Safe Septics” program aimed at improving the management of septic tanks and leachfields in the region in order to minimize the likelihood of overload. Also, septic systems will fall under the State Water Resources Control Board’s recently adopted Resolution No. 2012-0032: the Water Quality Control Policy for Siting, Design, Operation and Maintenance of Onsite Wastewater Treatment Systems, which is a statewide, risk-based, tiered approach for the

regulation and management of septic installations and replacements and sets the level of performance and protection expected from septic systems. Given the presence of impaired water bodies in the Santa Rosa Plain (Laguna de Santa Rosa, Russian River, Mark West Creek, and Santa Rosa Creek), the new policy and its tiered approach will have a positive impact on area septic systems.

- Within the **urban sector**, communities are adopting BMPs for water conservation, water budgeting, water management, and prohibition of water waste to minimize over-irrigation and runoff. These same BMPs also serve to reduce the application of salts to the soils and underlying groundwater basin. For recycled water irrigation, site supervision requirements under Title 22 constitute a body of BMPs which effectively reduce the likelihood of over-application of fertilizers and soil amendments on grounds where recycled water is applied.
- For the **municipal wastewater management agencies** in the basin (Santa Rosa, Windsor, and SCWA), source control techniques are available to maintain and improve the quality of the treated wastewater which becomes recycled water, including controlling salinity from water softeners and industrial/commercial dischargers.

The groundwater quality trend analysis in Chapter 7 demonstrates that water quality objectives are anticipated to be met in the near term. If the groundwater quality trend analysis were to have demonstrated that water quality objectives were projected to be exceeded in the near term, it would have been imperative that additional BMPs be developed to moderate the trends toward exceedance, and ultimately ensure that water quality objectives are not exceeded unless impractical and in the interests of the people of the State of California.

Given the lack of near-term exceedance of water quality objectives shown through the groundwater quality trend analysis in Chapter 7, and given the improved technical information and tools that will be released in the coming years by the USGS, no additional specific BMPs are proposed in the Plan at this time. The potential implementation of new BMPs as part of Plan Implementation is addressed in Chapter 9.