

Chapter 4 Goals

This chapter presents the goals for using recycled water and storm water in the Santa Rosa Plain basin. The goals were developed based on stakeholder input and on the information contained in UWMPs and other planning documents. The UWMPs are developed by the individual water purveyors (Santa Rosa, SCWA, Rohnert Park, and Windsor), so the information contained in those UWMPs was summarized and merged together to meet the needs of this Plan. Additionally, water conservation programs provide a useful basis for understanding and assessing recycling activities. The agencies within the basin implement extensive water conservation programs, ranging from residential, commercial, industrial and municipal to agricultural programs. More information on individual agency conservation programs can be found in each individual agency's UWMP.

4.1 Recycled Water Goals

Recycled water goals are based on information provided in 2010 UWMPs and by direct communication with stakeholders. Goals were set based on 2010 UWMP recycled water use projections.

Wastewater treatment is performed at three facilities in the Santa Rosa Plain, all of which produce recycled water:

- Santa Rosa Subregional Reclamation System, Laguna Subregional Wastewater Facility
- Airport-Larkfield-Wikiup Sanitation Zone (SCWA), Airport Treatment Plant
- Town of Windsor Water Reclamation Division, Town of Windsor Wastewater Treatment, Reclamation, and Disposal Facility

Additionally, until 2010, the Santa Rosa Subregional Reclamation System operated the Oakmont Wastewater Treatment Plant, which is in the process of being decommissioned.

Existing recycled water use is presented in Table 4-1. These values represent recycled water use within the Study Area, which is used for urban and agricultural irrigation. In addition to that use, 14,761 AF of recycled water was exported from the Study Area in 2010 for use at the Geysers Recharge Project in the Mayacamas Mountains, northeast of Healdsburg, where it is injected as part of a geothermal power facility (Santa Rosa, City of, 2011).

Table 4-1 presents the 2010 and projected 2035 recycled water use in the basin. These values do not include the recycled water produced in the basin and exported to the Geysers project. The Lower Estimate and Higher Estimate represent a range of projected future recycled water use. The Higher Estimate is utilized in the groundwater quality analysis described in Chapter 7. These future estimates represent the recycled water goals for the Santa Rosa Plain.

Table 4-1: Current Use and Future Goals for Recycled Water (AFY)

User	2010 Use	2035 Use (Lower Estimate)	2035 Use (Higher Estimate)
Agricultural Irrigation ^a	5,039	6,138	6,138
Airport-Larkfield-Wikiup Sanitation Zone ^b	1,102	1,123	1,123
Santa Rosa/ Rohnert Park	1,117	1,700	2,400
Windsor	1,546	1,546	2,231
Total	8,804	10,507	11,892
Increase over 2010 usage	n/a	1,703	3,088

- a. Agricultural irrigation from Santa Rosa's Subregional WaterReuse System. In 2010, this was applied to approximately 6,000 acres of farmlands and vineyards in the unincorporated area within the groundwater subbasin.
- b. Assets owned and operated by SCWA.
- Sources: City of Santa Rosa, 2011; City of Rohnert Park, 2011; D. Smith 2012, pers. comm., 17 February; G. Lincoln 2012, pers. comm., 9 February; R. Piazza 2012, pers. comm., 17 February. C. Scott 2012, pers. comm., 8 February.

4.2 Storm Water Goals

Entities in the Santa Rosa Plain are actively working to increase the ability to put storm water to beneficial use. For example in 2012, SCWA completed watershed scoping studies for storm water management/groundwater recharge projects in the Laguna/Mark West watershed and performed similar studies for other area watersheds. The goal of the studies is to evaluate the feasibility of implementing multi-benefit projects that will provide storm water detention and groundwater recharge, while maximizing opportunities for flood control, water quality enhancement, and potential open space benefits. The scoping study identified several potential project concepts, including expansion of floodplains, development of detention or retention basins, reservoir modification, purchase of conservation easements, reforestation, and education activities.

Additionally, there is a trend towards requiring implementation of Low Impact Development (LID) features in development and redevelopment that increase recharge of storm water. For example, Santa Rosa's storm water requirements prioritize the use of infiltration-based landscape features for storm water treatment. LID features utilize the natural cleaning properties of soil, plants, and microbial activity to breakdown pollutants and allow for storm water to recharge groundwater aquifers and maintain stream flow (Santa Rosa, City of, 2011). Water management planning efforts related to storm water and their corresponding implementation schedules are shown in Table 4-2.

Table 4-2: Basin Water Management Studies and Timeline

Study/Project	General Scope	Implementing and Cooperating Agencies	Schedule
Stormwater LID Technical Design Manual	Provide design guidance to mitigate water quality impacts due to development and encourage infiltration of storm water. ^a	City of Santa Rosa, Sonoma County Water Agency, County of Sonoma	Completed in 2011
Groundwater Banking Feasibility Study	Evaluate feasibility of using excess wintertime water from Russian River drinking water facilities for storage and subsequent recovery in the Santa Rosa Plain and/or Sonoma Valley groundwater basins during dry weather conditions or emergency situations.	Sonoma County Water Agency, Cities of Cotati, Rohnert Park and Sonoma, Town of Windsor, Valley of the Moon Water District	Complete by Winter 2013
Laguna-Mark West Watershed Stormwater Management and Groundwater Recharge Scoping Study	Assess potential projects in the watershed that can provide both flood control and groundwater recharge.	Sonoma County Water Agency	Scoping Study Completed Spring 2012

- a. SCWA is also developing a "WaterSmart Manual" to promote water smart practices including conservation, recycling and low impact development. The WaterSmart Manual is scheduled to be completed in Winter 2013.

While these efforts and others are continuing in the basin, the benefit of recharging storm water (which is likely to be low in TDS) is not included in the groundwater quality analyses in this plan due to uncertainties in the projected quantity of storm water recharge at this time. Not including storm water in the antidegradation analysis at this point is a conservative approach as storm water would likely decrease TDS and nitrate concentrations in the basin. Future updates to the Plan will consider these efforts as they continue to be developed and implemented. It is anticipated that storm water studies and projects will be far enough along that the five-year update of the Plan to provide a basis for quantitative goals for storm water recharge.