

The Community VOICE

Rohnert Park, Cotati, & Penngrove

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What happens to wastewater? Find out on a guided tour

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Denise Cadman, Natural Resource Specialist for the City of Santa Rosa, will lead a tour of the Laguna Treatment plant, hosted by Cotati Creek Critters, on August 6.

The plant treats an average of 22 million gallons of sewage per day from Santa Rosa, Rohnert Park, Cotati and Sebastopol. Sewage reaches the Llano Road facility through 500 miles of pipe that carry polluted water away from homes, businesses and industry.

Cadman described the three step cleaning process during an illustrated presentation and in an article published in The Community Voice in February. Now, Cadman describes a second and equally important responsibility that the Treatment Plant has, to reintegrate the water, after it is cleaned, safely back into the environment.

Approximately half of the water goes to the geysers year round to generate electricity. A very small amount is discharged in to the Laguna de Santa Rosa during the winter and the remainder is used for summer irrigation.

Recycled water is irrigated over 6,400 acres. About 80 percent of this land is agricultural, growing hay, pasture grasses, wine grapes, turf and vegetables. The remainder is urban reuse for parks, schools, ball fields and golf courses.

The majority of land is privately owned, giving landowners an opportunity to replace the use of groundwater with recycled water. The City of Santa Rosa owns about 1,500 acres in the Laguna de Santa Rosa, leasing some of the land to local agricultural producers but also taking the opportunity for many habitat enhancement projects in the unfarmed areas and buffer zones.

The natural resource management program attempts to balance competing needs: recycling water back to the hydrological cycle; providing locally produced food; and supporting biodiversity in the Laguna. Summer irrigation in a Mediterranean climate and other agricultural activities alter native habitats, making it a challenge to manage for biodiversity. Various programs have been initiated over the last fifteen years to enhance habitat and maintain populations of both rare and common species in the Laguna de Santa Rosa. Surveys for plants and animals are completed annually to look for any short or long-term changes in a population.

The first step was creek set-backs. Each farm has one or more creeks and seasonal drainages that convey rainfall to the Laguna. Initially the setbacks were small, as little as twenty feet. Irrigation and all farming activities were removed from the set-back and native trees and shrubs were installed. Set-backs have been systematically increased, adding additional layers of vegetation. Soon the goal will have been reached: A minimum set-back of 100 feet on all waterways.

Valley Oaks are experiencing a state wide decline and oak densities have diminished across the Santa Rosa plain from urban development and agriculture. On each farm efforts are being made to ensure replacement trees for each mature oak and an overall increase in oak density. Farmers that lease land cut for hay observe a minimum set-back to the outer edge of the drip-line of each tree. No irrigation, disking, cutting or fertilizing takes place in this area. On farms leased to ranching various methods are being used to protect young trees from livestock grazing. Natural regeneration is supplemented by planting acorns or seedlings of local genetic stock.

Vernal pools are unique seasonal wetlands that host many endemic and therefore rare species. Vernal pools receive no irrigation, disking or fertilizing and are monitored annually to track populations of endangered species.

Invasive species are the second major cause of the decline in native species after habitat loss and fragmentation. Many invasive species are removed including perennial pepperweed, harding grass, French broom, various thistles, water primrose and wild plum.

Several hedgerows have been installed on the city farms to provide food and refugia for beneficial insects such as

pollinators and insects that eat pests. Native plants for the hedgerow are chosen based on value to insects and birds with a mix of different pollination months and both perennial and annual species. Additional habitat features such as bird nesting boxes are often included.

Over 20 percent of the City of Santa Rosa's land holdings in the Laguna are dedicated to natural habitats and native species. Some are set-backs from creeks, frontages and oak canopies. Other areas are larger preserves, chosen due to their high potential value, for example, adjacent to the Laguna or high concentrations of vernal pools. Along with the resource management, Santa Rosa offers educational opportunities for schools and community groups.

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