



Recycled water is tested at every stage of treatment.

A Proven Safety Record

California has been safely using treated recycled water since 1929. There has not been one reported case of anyone becoming ill from the safe and proper use of recycled water for approved uses, such as landscape or agricultural irrigation or industrial use. Public health experts, pediatricians, specialists, leaders in the medical community, and virtually all of the credible scientific evidence available agree that irrigation is a safe use for recycled water.

The California Department of Public Health (DPH) and the California Regional Water Quality Control Boards carefully regulate the treatment and use of recycled water. These agencies create and enforce some of the strictest water quality regulations in the world – they govern production, transport and use, as well as the prevention of runoff and cross connections between potable and recycled water systems.

Recycled water is being safely and successfully used in this state to irrigate parks, playgrounds, school fields, wildlife habitat, recreation areas and landscaping. It is also used for toilet flushing, fire suppression and in industrial processing in some California cities. Farmers use recycled water to irrigate many varieties of food crops, including grapes, strawberries, lettuce and celery.

The Laguna Wastewater Treatment Plant

As part of the Santa Rosa Subregional Water Reclamation System, the Laguna Wastewater Treatment Plant takes sewage from homes, businesses and industry in Santa Rosa, Rohnert Park, Sebastopol and Cotati. Over 500 miles of underground pipes bring wastewater to the treatment plant where water goes through three stages of treatment prior to disinfection, storage, and reuse.

The Treatment Process

After entering the Laguna Wastewater Treatment Plant, wastewater from our homes and businesses undergo a carefully regulated purification and disinfection process to produce tertiary-treated recycled water. The multi-step treatment process includes Primary Treatment, Secondary Treatment, Tertiary Treatment and Disinfection. Contributing to the Plant's general reuse goals, many products of the different processes, including nitrogen and beneficial microorganisms, are reused within the system itself.

Headquarters for the Laguna Wastewater Treatment Plant.



“The Subregional System is one of the most advanced in the United States and is a model for other systems worldwide.”



1. Primary Treatment

The sewage or influent arrives at the treatment plant by passing through large bar screens that remove wood, paper, towels, sand, and gravel from the water. Sedimentation tanks allow lighter materials to float to the surface and be skimmed off. Heavier material, called sludge, falls to the bottom and is pumped to anaerobic digesters. Bacteria in the digesters break solids down, creating methane gas; a valuable substitute for other more expensive fuels. Methane powers generators, serving as the source of energy for a third of the treatment process.



2. Secondary Treatment

After the majority of solids have been removed, water flows into aeration basins. The aeration basins are tanks injected with oxygen to stimulate the growth of microorganisms and their consumption of dissolved wastes. Known as activated sludge, these microorganisms chemically break down and rearrange molecules, making them ready to be reused in the environment.



3. Tertiary Treatment and Disinfection

Water flows through a four foot bed of coal. This small, black, granular coal (like the type used in some fish aquariums) acts as a filter to trap fine suspended solids and some potential pathogens, or disease causing organisms. Finally, ultraviolet light (UV) removes bacteria and viruses by destroying their DNA, the genetic material needed to reproduce. The recycled water then leaves the plant, and is clean enough for approved reuse purposes.

Treatment Performance Monitoring

To ensure a consistent level of quality, Santa Rosa's recycled water is continually regulated, monitored, and tested by the Laguna Environmental Laboratory, the Environmental Protection Agency, the Regional Water Quality Control Board, and the Department of Public Health, ensuring that water quality far exceeds its intended use.



For more information, call (707) 543-4200 or visit www.SRCity.org/RecycledWater