Regional Water Recycling Plant No. 5

“Water Smart – Thinking in Terms of Tomorrow”

Regional Water Recycling Plant No. 5 (RP-5) includes several treatment processes that contribute to providing quality recycled water pursuant to the state of California Title 22 regulations. Major treatment processes include raw wastewater pumping, preliminary treatment, primary treatment, secondary treatment, and tertiary treatment. Each treatment process is equipped with automation for controlling and monitoring of plant operations.

Raw Wastewater Pumping: Wastewater from the RP-5 service area collection system flows by gravity into the Influent Pump Station where it is pumped to the preliminary treatment facility.

Preliminary Treatment: A physical process that consists of measuring the quantity of wastewater that flows into the facility, removing large materials like rags, sticks, Styrofoam, and miscellaneous debris with mechanically operated coarse screens and removing inorganic material such as sand and gravel. These materials are stored in large bins and disposed of at a landfill.

Primary Treatment: Wastewater is distributed equally between two primary treatment settling tanks that allow the flow of the wastewater to slow down enough to settle out the heavy solids by gravity. Primary treatment removes about 65% of the organic solids contained in the wastewater. These solids are referred to as biosolids.

The settled biosolids are concentrated, stabilized by anaerobic digestion, dewatered and made into compost for beneficial reuse.

Secondary Treatment: A biological nutrient removal system that includes aeration basins in which the organic solids are consumed by microorganisms and secondary clarification. This process removes in excess of 90% of the organic material in the wastewater.

Tertiary Treatment: The secondary effluent flows by gravity to tertiary treatment through a network of filters containing sand media designed to remove in excess of 99% of the remaining total solids.

Disinfection: After filtration, disinfection is provided through the use of sodium hypochlorite which is added to the tertiary effluent (recycled water) as it enters the tanks for a minimum time period to ensure no pathogenic organisms (i.e. disease-bearing bacteria and viruses) remain in the water.

Following disinfection, the recycled water flows by gravity from the chlorine contact basins into a common channel. From this channel, the water will either be discharged to a creek (prior to being discharged to a creek, water is dechlorinated), pumped to provide utility water within the facility, delivered to industrial users for irrigation, or pumped to basins for groundwater recharge.
Inland Empire Utilities Agency (IEUA) was formed on June 6, 1950, with the mission to supply supplemental water to the Chino Basin. Today, the Agency focuses on providing four key services: securing and supplying imported water; treating wastewater, developing recycled water, local water resources, and conservation programs to reduce the region’s dependence on imported water supplies; converting biosolids and waste products into a high-quality compost made from recycled materials; and, generating electrical energy from renewable sources.

A five-member Board of Directors is elected to represent IEUA’s 830,000 residents within a 242-square-mile area. IEUA provides service to Chino, Chino Hills, Cucamonga Valley Water District, Fontana, Fontana Water Company, Montclair, Monte Vista Water District, Ontario, and Upland.