Inland Empire Utilities Agency (IEUA) was formed on June 6, 1950, with the mission to provide supplemental water to the Chino Basin. Today, the Agency focuses on providing key services including: 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 residents within a 242-square-mile area. IEUA provides services to Chino, Chino Hills, Cucamonga Valley Water District, Fontana, Fontana Water Company, Montclair, Monte Vista Water District, Ontario, San Antonio Water Company, Upland, and West Valley Water District.

## Inland Empire Utilities Agency Regional Water Recycling Plant No. 4

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Thinking in Terms of Tomorrow



## **Regional Water Recycling** Plant No. 4 (RP-4)

Regional Water Recycling Plant No.4 (RP-4): RP-4, located in the city of Rancho Cucamonga and in operation since 1997, treats sewage generated from areas of Fontana, Rancho Cucamonga and some unincorporated parts of San Bernardino County. Originally designed to treat seven million gallons per day (MGD) of sewage, its current capacity is 14 MGD and the average daily flow in 2021 was about 10 MGD. RP-4 employs preliminary, primary, secondary, and tertiary treatment processes to produce water that meets the standards set forth by Title 22 of the California Code of Regulations. The solids that are removed during treatment are put into the regional sewer system and conveyed to Regional Water Recycling Plant No. 1 (RP-1) located in Ontario. A summary of the treatment processes is given to the right.

"Water Smart - Thinking in Terms of Tomorrow"



## Wastewater Recycling Process

- grit to be removed for landfill disposal.
- 2 secondary treatment process.

Tertiary Treatment: The last step in producing recycled water at RP-4 is intended to remove fine particulates and to disinfect the water. The filtration process passes the water through filter media designed to capture fine particles and remove remaining suspended solids. Once filtered, the water is disinfected by adding a small amount of sodium hypochlorite (bleach) and ensuring a minimum contact time is achieved. The end result is recycled water that can be used for groundwater recharge, landscape irrigation, crop irrigation, and other beneficial uses.



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Preliminary Treatment: This first step in treating sewage is intended to remove debris that could harm downstream processes. Screening equipment captures debris, such as rags, sticks, and plastics larger than 3/8 inch in size. These screenings are washed and compacted before being placed in a bin for later disposal to a landfill. After screening, the sewage is pumped to downstream processes. Inorganic material such as sand and silt are removed in the grit removal process, where separation due to gravity and centrifugal forces allows

**Primary Treatment:** Following preliminary treatment, sewage is split equally between two primary clarifiers, which allow the flow to slow down enough for organic material to settle out by gravity or rise to the surface. The solids collected at the bottom and the scum collected from the surface are piped from the clarifiers and directed to RP-1, while the liquid portion continues on to the

Secondary Treatment: This biological treatment process utilizes aeration basins to provide an environment where naturally occurring microorganisms are able to greatly reduce the concentrations of ammonia and organic compounds. After performing their pollutant removal work, microorganisms are separated by gravity in secondary clarifiers where most of them are returned to the aeration basins to sustain the biological process. The excess microorganisms are directed to RP-1, and the clarified liquid is gravity fed to the tertiary treatment process.



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