



Cerritos Recycled Water Distribution System



year anniversary
1988~2008

CITY OF CERRITOS
RECYCLED WATER DISTRIBUTION SYSTEM



Verdant parks, median strips with blooming flowers and lush grass surrounding meandering sidewalks create a park-like atmosphere in the City of Cerritos.

To irrigate its 200 acres of attractively landscaped public property, the City of Cerritos constructed a Recycled Water Distribution System. By using recycled water for irrigation, the City and its customers save some 713 million gallons of drinking water every year. During the first 20 years of the system's operation, the City saved \$5,969,470 as recycled water is less costly than drinking water. In addition, the Recycled Water Distribution System ensures an adequate supply of water for irrigation purposes, even during Southern California's drought years.

Cerritos receives its recycled water from the Sanitation Districts of Los Angeles County's Los Coyotes Water Reclamation Plant. The plant is located next to the 605 Freeway in Cerritos, and produces up to 37.5 million gallons of recycled water every day.





City of Cerritos

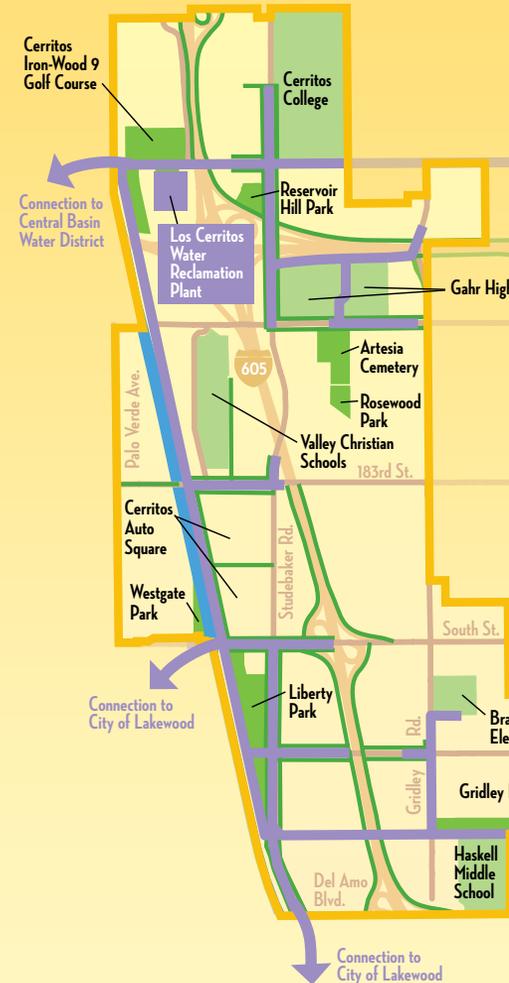
Sites irrigated with recycled water

In addition to the City's neighborhood parks, community centers, landscaped medians and parkways, the Recycled Water Distribution System transports water to the agencies listed below. Each gallon of recycled water used by government agencies and private property owners saves one gallon of precious drinking water. The agencies and the City collectively save 634,902,400 gallons of drinking water every year by using recycled water for irrigation.

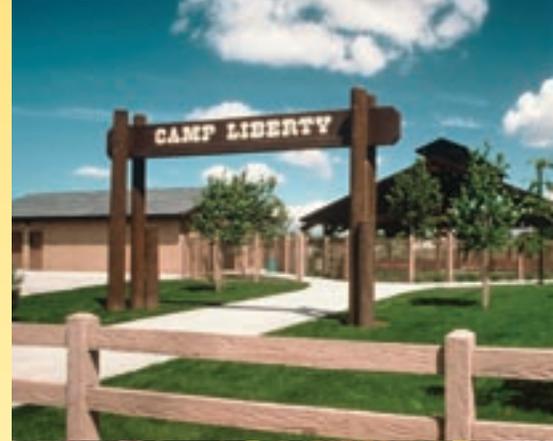
Agency	Gallons of Drinking Water Saved Annually	Agency	Gallons of Drinking Water Saved Annually
ABC Unified School District	151,131,156	Cerritos College	46,838,264
Artesia Cemetery District	9,879,584	Cerritos Post Office	3,195,456
Caltrans	52,275,476	Cerritos Regional Park	34,954,788
Central Basin Municipal Water District	176,937,156	City of Lakewood	143,251,724
		Valley Christian Schools	16,438,796

Since 1988, the use of recycled water from the Cerritos system has saved 11.8 billion gallons of drinking water. Private property owners also purchase recycled water from the City. Landscaping at Cerritos Towne Center, portions of Cerritos Auto Square and some churches, nurseries and housing developments in the City is irrigated with recycled water.

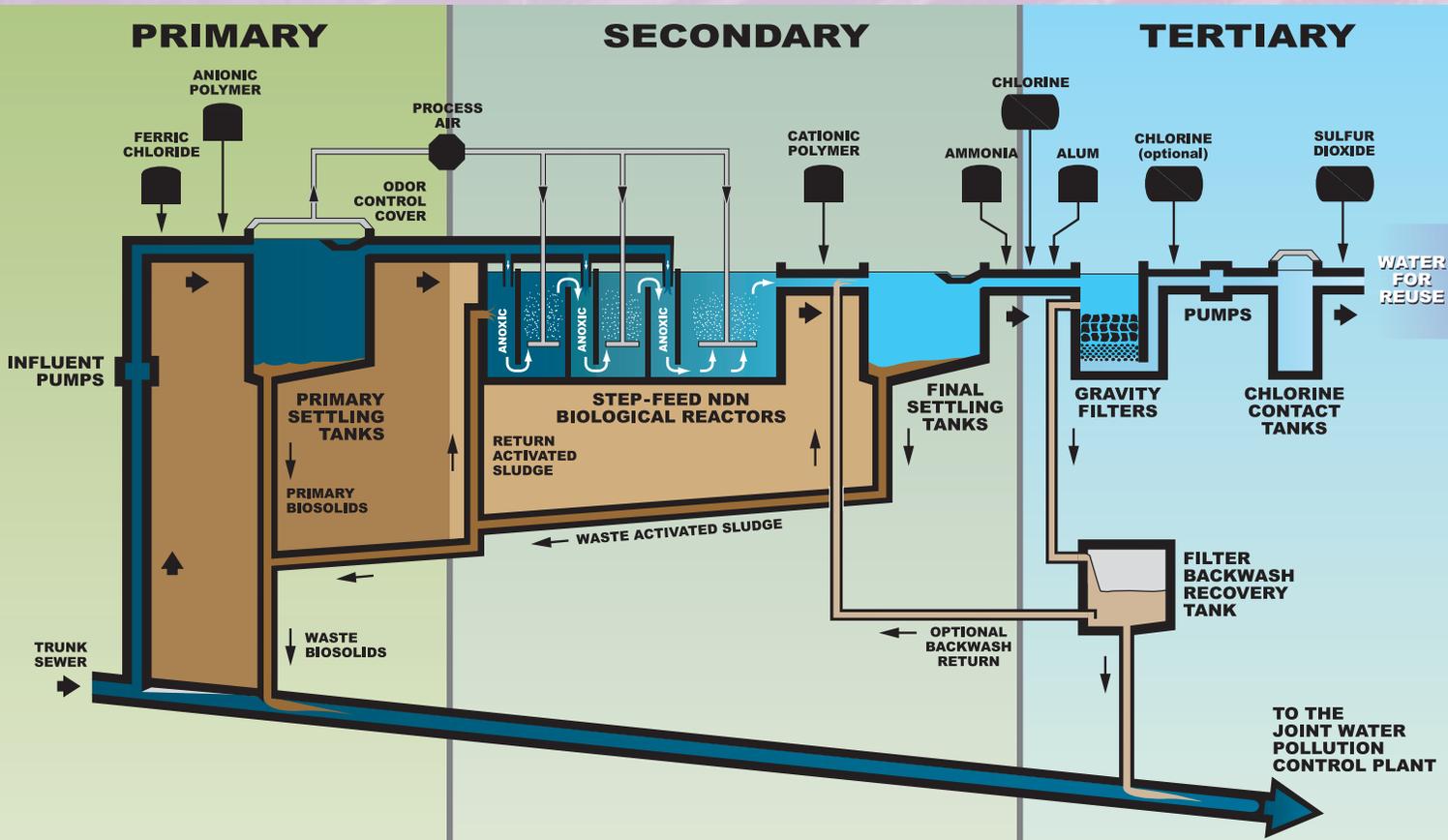
In addition, recycled water costs are significantly less than those of drinking water, and users are not required to purchase a minimum amount. From 2002 to 2007, agencies in Cerritos saved \$2,357,378 in drinking water costs.



Recycled Water Distribution System Map



Los Coyotes Water Reclamation Plant 2008





Recycled water process

Recycled water is derived from a three-stage process. The first stage is primary settling, in which solid materials are removed from the wastewater as they settle to the bottom or float to the top of the primary settling tank. These solids are returned to the sewer to be treated at the main Sanitation Districts' treatment plant. After primary settling, the water still contains dissolved and suspended organic material, which is removed in the second stage.

During the second stage of the process, a dense biological culture of bacteria and microbes breaks down and feeds on the remaining organic material in the wastewater. After the organic material is consumed, the fattened bacteria and other organisms still suspended in the water form clumps and are carried into a final settling tank where they settle to the bottom and are removed and returned to the sewer to be treated at the main Sanitation Districts' treatment plant.

In the third stage, the water flows through filters composed of anthracite coal on top of sand, which remove suspended particles that remain in the water. The filtered water is then pumped into chlorination tanks to kill any harmful organisms. It is then delivered to the City and its customers for landscape irrigation.

More than 99 percent of the suspended solids and color are removed during the three-stage treatment process. After the water is treated, it is suitable for public contact, but not drinking, and is monitored in accordance with Health Department requirements.



Benefits to plant life

Compared to drinking water, recycled water contains higher levels of potassium, phosphorus and nitrogen. These nutrients are excellent for plants, and reduce the need for fertilizer. Recycled water also has a higher salinity level, so the City has planted salt-tolerant landscaping such as tif green and paspalum vegetatum (Australian salt grass). Colorful gazanias and ice plants also thrive on recycled water.



History of the system

Located adjacent to the Los Coyotes Water Reclamation Plant, Cerritos Iron-Wood Nine Golf Course was the first City site irrigated with recycled water. After switching to recycled water at the golf course in 1978, the City saved \$4,800 per year in irrigation expenses.

Based on this success, and concerned by California's drought in the 1970s, the City began researching the feasibility of constructing a system to transport recycled water to irrigate other public areas. In May 1980, the City was awarded a \$4.5 million grant from the State Office of Water Recycling to design and construct a recycled water distribution system.

In 1984, the City Council authorized construction of a system which would transport up to 4,000 acre feet of recycled water annually to irrigate public landscaping in Cerritos. The City also entered into a 20-year agreement with the Los Angeles County Sanitation Districts to purchase up to 4,000 acre feet of recycled water per year from the Los Coyotes Water Reclamation Plant.

Construction of the system was completed in 1988 and a dedication ceremony was held on January 23, 1988. The recycled water pipeline consists of a main loop and laterals which total approximately 22 miles of underground piping ranging in size from 4 inches to 24 inches in diameter. Construction costs for these water lines, along with a water pumping facility at the Los Coyotes Sanitation Plant, totaled \$8.9 million, excluding engineering and inspection services. The City and the Cerritos Redevelopment Agency funded costs not covered by the \$4.5 million grant.

For more information about the Cerritos Recycled Water Distribution System, call the City's Water Operations Division at (562) 916-1223.



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