Guaranteed Water Program

The Guaranteed Water Program exempts research and development or industrial manufacturing firms from mandatory water restrictions in times of drought in exchange for their participation in daily water conservation programs, including the use of recycled water.

To qualify, a company must use recycled water where feasible, install ultra low-flow toilets, water-conserving showerheads and other water-efficient fixtures. Once this is done, the business is exempt from mandatory water supply cuts during a Water Warning when other businesses are being required to conserve water. According to San Diego Municipal Code 67.3806(d), a Water Warning occurs when the Water Department is not able to meet the demands of its customers. Upon implementation, local businesses are required to conserve water while businesses under the Guaranteed Water Program are exempt from mandatory cutbacks.

To participate in the City's Guaranteed Water Program, please call (619) 533-4243.

This one-day certified course is designed to provide irrigation supervisors with a basic understanding of recycled water and how to operate and maintain a safe, efficient operation. Understanding similarities and differences between recycled and potable water is critical to the successful operation of a recycled water system.

The class, sponsored by the San Diego County Water Authority, costs $35 per person. Fee includes materials, continental breakfast and lunch.

Topics covered in this class include the following:

- What is a recycled water site supervisor?
- Introduction to recycled water use
- Guidelines for recycled water use
- Water management techniques
- Cross connection control backflow testing
- Common problems/Recommended solutions

For dates and times of upcoming classes or additional information call the County Water Authority at 858-522-6756.

Recycled Water Use in San Diego

Recycled Water Makes Sense for San Diego

In San Diego, water is too precious a resource to use just once. A safe, dependable water supply is vital to our economy and quality of life. San Diego currently imports up to 90 percent of its water supply from Northern California and the Colorado River.

To meet future water demands and avoid shortages, while reducing our dependence on imported water, the City of San Diego has built the North City Water Reclamation Plant and the South Bay Water Reclamation Plant. These plants treat wastewater to a level suitable for irrigation, manufacturing and other non-drinking, or non-potable purposes. The North City Plant has the capability to treat 30 million gallons a day and the South Bay Plant can treat 15 million gallons a day. Recycled water (also referred to as reclaimed water) gives San Diego a dependable, year-round, locally controlled water resource. Using recycled water is cost-effective, reliable and good for the environment.

About the City of San Diego Water Department

The City of San Diego Water Department is committed to providing our customers with safe, high-quality, reliable water service. Through the use of long-range planning, innovative cost-saving measures and cutting-edge technology, the Water Department is working to ensure safe, reliable service for generations to come.

For more information about the City of San Diego Recycled Water program, please call (619) 533-7552.

Visit our website at: www.sandiego.gov/water/recycled

Recycled Water Uses

Landscape irrigation is the single largest use for recycled water within the City of San Diego. Recycled water is also used for industrial processes, cooling towers, soil compaction, dust suppression, and toilet and urinal flushing.

The City is currently working with businesses, public agencies, homeowners associations and academic institutions with proximity to the optimized system, to retrofit their properties and educate them on the use of recycled water.

Many customers are already using recycled water. Some of these customers include General Atomics, Motorola, CalTrans, UCSD, Torrey Pines Municipal Golf Course, Nissan Design, Burnham Institute, Metro Biosolids, Miramar Landfill, Marine Corps Air Station Golf Course, and the City of Poway.
Eight Steps to Use Recycled Water

1. **Conduct Site Assessment**
   - The City calculates fees for the cross connection control test and approves required paperwork. A City engineer is required.

2. **Prepare Design Drawings**
   - Customer authorizes representative will prepare design drawings to retrofit the site and provide a checklist of requirements that need to be met for the Water Department cross connection staff to assess customer's site.

3. **Design Review and Plan Check**
   - Customer or authorized representative submits design drawings to the City and County for review. Approved drawings are then submitted to the state Department of Health Services (DEH) for approval. A conceptual drawing of the customer's site is required.

4. **Retrofit Property**
   - Customer or qualified representative (i.e. landscape contractor) performs retrofit work on site. Eighteen months from permit issuance, an Engineering Report prepared by a civil engineer or mechanical engineer is required.

5. **Test System**
   - Customer or qualified representative performs retrofit work on site. According to San Diego's Water Regulations, proper signage and marking of all pipes, sprinkler heads, meter boxes and other irrigation equipment are properly marked or color-coded purple to distinguish them from potable supplies and avoid any potential for cross-connections.

6. **Sign User Agreement**
   - Upon completion of retrofit work, the customer's contractor shall meet with DEH and the City's Cross Connection Control staff. Staff will perform the cross connection control test for final approval by DEH.

7. **Meter/Service Installation**
   - An annual inspection or four-year cross-connection control test will be required by the City and County of San Diego. Service begins and customer enjoys the benefits and cost savings sponsored by County Water Authority. Service one day Recycled Water Certification Workshop Customer or authorized representative attends a one day Recycled Water Certification Workshop sponsored by the County Water Authority.

8. **Train Staff and Initiate Service**
   - The Water Department will work with customers to ensure they are in compliance with all State and local health regulations.

The State of California Department of Health Services sets the standards for required levels of treatment and types of uses for recycled water. These standards are included in the California Code of Regulations, Title 22.

There are extensive rules and regulations covering its usage. These include proper signage and making sure all pipes, sprinkler heads, meter boxes and other irrigation equipment are properly marked or color-coded purple to distinguish them from potable supplies and avoid any potential for cross-connections. The Water Department will work with customers to ensure they are in compliance with all State and local health regulations.

Approved uses include irrigation of food crops, parks, playgrounds, school yards, residential landscaping, common areas, nurseries, freeway landscaping, golf courses, pastures for animals and wetland projects. Additional approved uses are for recreational water bodies including fishing, boating, fish hatcheries, industrial processing, commercial laundries and soil compaction.

Careful monitoring by responsible local health and water quality control agencies ensures that the City of San Diego produces a high quality water product that meets all federal, state and local water quality standards. According to the strict standards set out in Title 22 of the California Code of Regulations, recycled water is safe for all human contact. For more than 30 years, recycled water has been safely used throughout the country in recreational lakes, sprinkler systems for homes and businesses, crop irrigation and manufacturing processes. Since recycled water is used for non-drinking purposes, a separate set of distribution pipelines has been built to deliver recycled water from the North City Water Reclamation Plant and the South Bay Water Reclamation Plant to customers.

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There are extensive rules and regulations covering its usage. These include proper signage and making sure all pipes, sprinkler heads, meter boxes and other irrigation equipment are properly marked or color-coded purple to distinguish them from potable supplies and avoid any potential for cross-connections. The Water Department will work with customers to ensure they are in compliance with all State and local health regulations.
The City of San Diego Water Department has a staff of recycled water experts available to work with customers on retrofitting their properties. If you would like to find out how to sign up for recycled water service, call (619) 533-7572.

**Typical Recycled Water Treatment Process:**

- **From Original use to Ultimate Reuse**
  - **Bar Screen** Wastewater is sent through a screen that collects and removes large debris.
  - **Grit Chamber** Heavy debris, such as sand, settles to the bottom of the tank where it is removed in the grit chamber.
  - **Primary Clarifier** In primary treatment, heavy organic particles sink to the bottom of large tanks and are removed.
  - **Debris is removed. Aeration Tanks** Wastewater is mixed with oxygen and bacteria to create an environment for the bacteria to decompose organic pollutants in the aeration tanks.
  - **Oxygen is added. Secondary Clarifier** Organic solids settle to the bottom of the tank and are separated from the treated wastewater. The organic solids consist primarily of bacteria. Most of the bacteria are pumped back to the aeration tank to continue the treatment process in the secondary clarifier.
  - **Sludge is removed. Tertiary Filters** Water trickles through anthracite coal filters to remove remaining wastes.
  - **Chlorine Contact Basin** At this stage, filtered water is disinfected with chlorine to kill any remaining bacteria. Recycled water is now available for irrigation and industrial uses.

**How to Sign up for Recycled Water Service and Save**

Sewer drains carry wastewater from our homes and businesses to the treatment plant.

- **Grit Chamber** In the grit chamber, heavy debris, such as sand, settle to the bottom of the tank where it is removed.
- **Bar Screen** The wastewater is first sent through a screen that collects and removes large debris.
- **Debris**
- **Oxygen**
- **Primary Clarifier** In primary treatment, heavy particles, such as dirt sinks to the bottom of large tanks and are removed.
- **Aeration Tanks** In the aeration tanks, wastewater is mixed with oxygen to create an environment for bacteria to decompose organic pollutants.
- **Secondary Clarifier** During the secondary treatment phase, bacteria is added to organically rid the water of harmful pollutants. The remaining waste is removed as sludge for reuse as fertilizer.
- **Tertiary Filters** Then the water trickles through anthracite coal filters to remove remaining wastes.
- **Chlorine Contact Basin** At this stage, filtered water will be disinfected to kill any remaining harmful bacteria. Recycled water is now available for irrigation and industrial uses.