

# Water Words



Use a broom to clean driveways, sidewalks and patios.

- **Save: 8-18 gallons/minute**

Wash your car with a bucket, sponge, and hose with self-closing nozzle.

- **Save: 8-18 gallons/minute**

Install a water-efficient washing machines and use only for full loads

- **Save: 16 gallons/Load**

Install a water and energy efficient dishwasher and run only when full.

- **Save: 3 to 8 gallons/Load.**

Install a high-efficiency toilet.

- **Save: 19 gallons per person/Day**

Install low flow shower heads

- **Save: 2.5 gallons/shower**

Turn water off when brushing teeth or shaving.

- **Save: 10 Gallons/Day**

## Mandatory Water Conservation

California is currently experiencing a drought that is different than those experienced in the past. Following three straight years of below-average rainfall, very low snowmelt runoff and the largest court-ordered water transfer restrictions in state history, local water agencies in Southern California are requiring mandatory conservation including water rationing. Rainfall alone will not resolve the current situation.

On March 6, 2009, the El Toro Water District—which serves the City of Laguna Woods—adopted a conservation ordinance that establishes mandatory and permanent conservation measures. These include:

1. Limits on outside watering hours—watering is prohibited between 10:00 a.m. to 5:00 p.m. There is an exemption for watering with a hand-held bucket or a hand-held hose with a shut off nozzle.
2. Watering with a device that is not continuously monitored is limited to no more than 15 minutes per valve per day. There is an exemption for sensor and drip systems .
3. Excessive water flow or runoff onto adjacent sidewalk, gutter or street is prohibited.
4. Hosing or washing paved surfaces (sidewalks, driveways, parking areas, patios, etc.) is prohibited unless for safety or sanitary hazards.
5. Hosing or washing down vehicles is prohibited. There is an exemption for washing with a hand-held bucket or a hand-held hose with a shut off nozzle.
6. Restaurants may only provide water upon request.

Warnings will be issued for violations; penalties will be effective January 1, 2010.

On May 28, 2009, the Board declared a Level 1 Water Alert, which calls for water rationing and more restrictive conservation measures—effective July 1, 2009—such as:

1. Limit on outside watering days—between April and October, outside watering is limited to Tuesday, Friday and Saturday or Sunday. There is an exemption for watering with a hand-held bucket or hand-held hose with a shut off nozzle and for sensor and drip irrigation systems.
2. Water allocations—the Board has adopted allocation schedules for all of its customers based on prior usage. Surcharges will be assessed on customers that exceed these allocations. These “penalties” will be effective immediately.

For more information on El Toro Water District and its regulations see [www.etwd.com](http://www.etwd.com)

## Did You Know !

- **Polluted stormwater runoff is the #1 threat to California's water quality.**
- **More total water pollution in California comes from runoff in developed areas than factories.**
- **One inch of rain falling on a one-acre parking lot produces 16 times more runoff by volume than the same inch of rain falling on a one-acre meadow.**
- **Storm drains carry untreated water directly into our creeks and streams. Dirt, litter, pet waste, or motor oil on the ground or in a ditch can end up in our water with just one rain event!**
- **You can reduce stormwater pollution by picking up after your pets.**
- **One gallon of motor oil can contaminate one MILLION gallons of water and create an oil slick two acres in size!**
- **Runoff pollution is water originating from rain, snowmelt, hoses, or pipes that picked up pollution as it traveled over roofs, land, and paved surfaces.**
- **40% of U.S. rivers and streams are too polluted for fishing or swimming.**

## What is Water Quality?

Is it safe for drinking? Can fish and other aquatic life thrive in streams and lakes that are affected by human activities? What is the water quality? To answer these questions, it is helpful to understand what "water quality" means, how it is determined, and the natural processes and human activities that affect water quality.



Water quality can be thought of as a measure of the suitability of water for a particular use based on selected physical, chemical, and biological characteristics. To determine water quality, scientists first measure and analyze characteristics of the water such as temperature, dissolved mineral content, and number of bacteria. Selected characteristics are then compared to numeric standards and guidelines to decide if the water is suitable for a particular use.

Some aspects of water quality can be determined right in the stream or at the well. These include temperature, acidity (pH), dissolved oxygen, and electrical conductance (an indirect indicator of dissolved minerals in the water). Analyses of individual chemicals generally are done at a laboratory.

Standards and guidelines are established to protect water for designated uses such as drinking, recreation, agricultural irrigation, or protection and maintenance of aquatic life. Standards for drinking-water quality ensure that public drinking-water supplies are as safe as possible. The U.S. Environmental Protection Agency (USEPA) and the states are responsible for establishing the standards for elements in water that have been shown to pose a risk to human health. Other standards protect aquatic life, including fish, and fish-eating wildlife such as birds.

Natural water quality varies from place to place, with the seasons, with climate, and with the types of soils and rocks through which water moves. When water from rain or snow moves over the land and through the ground, the water may dissolve minerals in rocks and soil, percolate through organic material such as roots and leaves, and react with algae, bacteria, and other microscopic organisms. Water may also carry plant debris and sand, silt, and clay to rivers and streams making the water appear "muddy" or *turbid*. When water evaporates from lakes and streams, dissolved minerals are more concentrated in the water that remains. Each of these natural processes changes the water quality and potentially the water use.

### National Pollutant Discharge Emission System (NPDES) Permits

As authorized by the Clean Water Act (CWA), the National Pollutant Discharge Elimination System (NPDES) Permit Program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Point sources are discrete conveyances such as pipes or man-made ditches. Individual permits are tailored for a specific types of discharge. In California, NPDES permits are issued by regional water quality boards under the jurisdiction of the State water Quality Control Board. The City of Laguna Woods is under the jurisdiction of two regional water quality boards – Santa Ana and San Diego. NPDES permits typically expire five years after issuance and must be reissued. The City, together with other Orange County cities, is currently in the permit renewal process.

Additional information about the state water boards and NPDES permits may be found at <http://www.waterboards.ca.gov/>