

2011 WATER QUALITY REPORT



**Golden State
Water Company**

A Subsidiary of American States Water Company

An Ongoing Commitment to the Communities We Serve



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Protecting and Preserving Your Drinking Water

We are pleased to present the following 2011 Water Quality Report, which contains information about testing completed in your water system through December 2010.

For more than 80 years, Golden State Water Company (GSWC) has taken seriously its job as the guardian of drinking water quality for its customers. GSWC is regulated by county, state and federal governments, and we are proud to say the quality of your water regularly meets all drinking water standards.

We must sample for more than 230 regulated and unregulated elements in our water systems. Each week, GSWC's industry professionals take water samples to monitor quality at approved sites at the water source and throughout the distribution system. We spend more than \$650,000 per year on laboratory tests to make sure the water in all of our water systems is of high quality and meets standards.

If there is an exceedance of a drinking water standard, we are required to notify you quickly and take action to restore normal service.

We pride ourselves on our strong customer service culture that comes from industry knowledge and relationships built over 80 years in the California water industry. Our around-the-clock Customer Service Center has representatives to answer questions and address any water concerns day or night. Our website, www.gswater.com, contains a wide range of topics, including information about water quality, your local customer service area, and water-use efficiency.

Speaking of water-use efficiency, everyone must play a role to preserve our limited water resources. While the recent rainy season in California produced above average precipitation, the state will continue to experience cyclical droughts and other pressures on our limited resources. Water-use efficiency remains one of the best and least-cost ways to maintain a reliable source of high quality water now and for future generations. Thank you for any steps you may have taken to date and please continue your efforts.

On behalf of all of us at Golden State Water Company, thank you for providing us the opportunity to serve you. If you have any questions about this report, please call our Customer Service Center at 1-800-999-4033.

Sincerely,



Robert Sprowls
President and Chief Executive Officer
Golden State Water Company



Robert Hanford
Orange County District Manager
Golden State Water Company

About the Company

Every day, well over a million people in the United States depend on the American States Water Company family of companies for the water, wastewater, and electric services that enable their quality of life. American States Water Company is the holding company for Golden State Water Company and American States Utility Services, Inc.

Golden State Water Company is a public utility company regulated by the California Public Utilities Commission (CPUC). Golden State Water engages principally in the reliable delivery of water. We operate 38 separate water systems within 75 communities in 10 counties in the State of California and provide water service to over 1 million people, or 1 out of every 36 Californians. In addition, we provide electric service to over 23,000 customers in the Big Bear recreational area of California.

American States Utility Services, Inc. is our contracted services business. Through its wholly-owned subsidiaries—Fort Bliss Water Services Company, Terrapin Utility Services, Inc., Old Dominion Utility Services, Inc., Old North Utility Services, Inc., and Palmetto State Utility Services, Inc.—American States Utility Services provides full-service contracts to operate and maintain water and wastewater systems on U.S. Army and U.S. Air Force installations in Texas, New Mexico, Maryland, Virginia, North Carolina, and South Carolina.

Glossary of Terms

Maximum Contaminant Level (MCL)

The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the public health goals and maximum contaminant level goals as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste and appearance of drinking water.

California Notification Level (NL)

Non-regulatory, health-based advisory levels established by the California Department of Public Health (CDPH) for contaminants in drinking water for which an MCL has not been established.

Maximum Contaminant Level Goal (MCLG)

The level of contaminant in drinking water below which there is no known or expected risk to health. Maximum contaminant level goals are set by the U.S. Environmental Protection Agency (USEPA).

Maximum Residual Disinfectant Level (MRDL)

The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG)

The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Primary Drinking Water Standard (PDWS)

MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements and water treatment requirements.

Public Health Goal (PHG)

The level of a contaminant in drinking water below which there is no known or expected risk to health. Public health goals are set by the California Environmental Protection Agency (CalEPA).

Regulatory Action Level (AL)

The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Treatment Technique (TT)

A required process intended to reduce the level of a contaminant in drinking water.

Where Does My Water Come From?

Water delivered to customers in the West Orange system is a blend of groundwater pumped from the Orange County Groundwater Basin, and imported water from the Colorado River Aqueduct and the State Water Project (imported and distributed by the Metropolitan Water District of Southern California). The Orange County Groundwater Basin stretches 350 square miles from the Orange County line at Seal Beach and Long Beach, along the coast down to the El Toro "Y" and east to Yorba Linda.

For People with Sensitive Immune Systems...

Some people may be more vulnerable to contaminants in the water than the general population. Immuno-compromised persons such as persons undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly persons, and infants can be particularly at risk of infections. These people should seek advice from their healthcare provider about their drinking water.

USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available by calling the Safe Drinking Water Hotline at 1-800-426-4791.

Risk to Tap and Bottled Water

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily mean water may be a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline at 1-800-426-4791.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the layers in the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animal or human activity.

In order to be certain that tap water is safe to drink, the USEPA and the CDPH prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. United States Food and Drug Administration (USFDA) and CDPH regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.

Contaminants in Drinking Water Sources May Include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining and farming.
- Pesticides and herbicides, that may come from a variety of sources such as agriculture, urban storm water runoff and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems.
- Radioactive contaminants, that can be naturally occurring or be the result of oil and gas production and mining activities.

West Orange County Water System - Source Water Quality

Primary Standards - Health Based (units)	PRIMARY MCL	PHG (MCLG)	Range of Detection	Average Level	MCL Violation?	Most Recent Sampling Date	Typical Source of Constituent
Turbidity							
Highest single measurement of the Treated Surface Water (NTU)	TT = 1.0	n/a	n/a	0.08	No	2010	Soil runoff
Lowest Percent of all Monthly Readings less than 0.3 NTU (%)	TT = 95	n/a	n/a	100%	No	2010	Soil runoff
Inorganic Constituents							
Aluminum (mg/L)	1	0.6	ND - 0.2	0.1	No	2010	Erosion of natural deposits; residue from some surface water treatment processes
Arsenic (ug/L)	10	0.004	ND - 4.8	2.3	No	2010	Erosion of natural deposits; runoff from orchards, glass and electronics production wastes
Barium (mg/L)	1	2	ND - 0.1	ND	No	2010	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Fluoride (mg/L)	2.0	1	0.4 - 0.8	0.6	No	2010	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate [as NO ₃] (mg/L)	45	45	ND - 27	5.0	No	2010	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Perchlorate (ug/L)	6	6	ND - 4.8	ND	No	2010	Perchlorate is an inorganic chemical used in solid rocket propellant, fireworks, explosions, flares, matches, and a variety of industries. It usually gets into drinking water as a result of environmental contamination from historic aerospace or other industrial operations that used or use, store or dispose of perchlorate and its salts
Radioactive Constituents							
Gross Alpha Activity (pCi/L)	15	(0)	ND - 9.3	ND	No	2010	Erosion of natural deposits
Gross Beta Activity (pCi/L)	50(a)	(0)	ND - 6.4	ND	No	2010	Decay of natural and manmade deposits
Uranium (pCi/L)	20	0.43	ND - 15	6	No	2010	Erosion of natural deposits
Secondary Standards - Aesthetic (units)	SECONDARY MCL	PHG (MCLG)	Range of Detection	Average Level	MCL Violation?	Most Recent Sampling Date	Typical Source of Constituent
Aluminum (ug/L)	200	n/a	ND - 230	80	No	2010	Erosion of natural deposits; residue from some surface water treatment processes
Color (units)	15	n/a	ND - 4	0.5	No	2010	Naturally-occurring organic materials
Chloride (mg/L)	500	n/a	13 - 93	53	No	2010	Runoff/leaching from natural deposits; seawater influence
Manganese (ug/L)	50	n/a	ND - 42	ND	No	2010	Leaching from natural deposits
Odor--Threshold (units)	3	n/a	ND - 2	1	No	2010	Naturally-occurring organic materials
Specific Conductance (uS/cm)	1600	n/a	389 - 1100	750	No	2010	Substances that form ions when in water; seawater influence
Sulfate (mg/L)	500	n/a	37 - 240	140	No	2010	Runoff/leaching from natural deposits; industrial wastes
Turbidity (units)	5	n/a	ND - 0.04	0.01	No	2010	Soil runoff
Total Dissolved Solids (mg/L)	1000	n/a	241 - 676	468	No	2010	Runoff/leaching from natural deposits

West Orange County Water System - Source Water Quality

Other Parameters (units)	Notification Level	PHG (MCLG)	Range of Detection	Average Level	MCL Violation?	Most Recent Sampling Date	
Alkalinity (mg/L)	n/a	n/a	67 - 205	161	n/a	2010	
Calcium (mg/L)	n/a	n/a	21 - 124	71	n/a	2010	
Hardness [as CaCO ₃] (mg/L)	n/a	n/a	55 - 402	243	n/a	2010	The sum of polyvalent cations present in the water, generally magnesium and calcium. The cations are usually naturally-occurring.
Hardness [as CaCO ₃] (grains/gal)	n/a	n/a	3 - 25	15	n/a	2010	
Magnesium (mg/L)	n/a	n/a	2 - 28	19	n/a	2010	
pH (pH units)	n/a	n/a	7.5 - 8.4	7.9	n/a	2010	
Potassium (mg/L)	n/a	n/a	1.3 - 4.7	3.5	n/a	2010	
Sodium (mg/L)	n/a	n/a	35 - 95	62	n/a	2010	Refers to the salt present in the water and is generally naturally occurring.

West Orange County Water System - Distribution Water Quality

Microbiological Constituents (units)	PRIMARY MCL	PHG (MCLG)	Value		MCL Violation?	Most Recent Sampling Date	Typical Source of Constituent
Total Coliform Bacteria \geq 40 Samples/Month (Present / Absent)	More than 5% of monthly samples are positive	(0)	Highest percent of monthly samples positive was 2.8%		No	2010	Naturally present in the environment
Disinfection Byproducts and Disinfectant Residuals (units)	PRIMARY MCL (MRDL)	PHG (MRDLG)	Range of Detection	Highest 4-Quarterly Average	MCL Violation?	Most Recent Sampling Date	Typical Source of Constituent
Chlorine [as Cl ₂] (mg/L)	(4.0)	(4)	0.2 - 3.0	1.2	No	2010	Drinking water disinfectant added for treatment
HAA5 [Total of Five Haloacetic Acids] (ug/L)	60	n/a	1 - 27	9	No	2010	Byproduct of drinking water disinfection
THMs [Total of Four Trihalomethanes] (ug/L)	80	n/a	1 - 69	27	No	2010	Byproduct of drinking water chlorination
Inorganic Constituents (units)	ACTION LEVEL	PHG (MCLG)	Sample Data	90th % Level	MCL Violation?	Most Recent Sampling Date	Typical Source of Constituent
Copper (mg/L)	1.3	0.3	None of the 52 samples collected exceeded the action level.	0.47	No	2010	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ug/L)	15	0.2	None of the 52 samples collected exceeded the action level.	1.9	No	2010	Internal corrosion of household plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

(a) CDPH considers 50 pCi/L to be the level of concern for beta particles.

ND = Not Detected

Laboratory Analyses

Over the years we have taken thousands of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants in your drinking water. The enclosed table shows only those contaminants that were detected in the water.

Although all the substances listed here are under the Maximum Contaminant Level (MCL), we feel it is important that you know exactly what was detected and how much of these substances were present in the water. Compliance (unless otherwise noted) is based on the average level of concentration being below the MCL. The state allows us to monitor for some contaminants less than once per year because the concentrations do not change frequently. Some of our data, though representative, is more than a year old.

Lead

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. GSWC is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>.

Chloramination

The water imported from Metropolitan Water District of Southern California (MWDSC) contains chloramine. Chloramine is added to the water for public health protection. Chloraminated water is safe for people and animals to drink, and for all other general uses.

Three special user groups, including kidney dialysis patients, aquarium owners, and businesses or industries that use water in their treatment process, must remove chloramine from the water prior to use.

Hospitals or dialysis centers should be aware of chloramine in the water and should install proper chloramine removal equipment, such as dual carbon adsorption units.

Aquarium owners can use readily available products to remove or neutralize chloramine.

Businesses and industries that use water in any manufacturing process or for food or beverage preparation need to be aware of a change in water disinfectant from chlorine to chloramine. Chloramination may require companies to adjust or upgrade their current treatment system. Businesses should contact their water treatment equipment supplier to determine if chloramine could impact their system.

Should you have any questions or concerns regarding chloramine in your water, please contact MWDSC at (213) 217-6850, option 3.

Fluoridation

Customers receiving water from MWDC will see no difference in the taste, color or odor of their water as a result of fluoridation. Fluoridation will not change the way you normally use water for fish, pets, or cooking. Children who receive fluoride supplements should consult their doctor or dentist. For information regarding fluoridation of your water, please contact MWDC at (213) 217-6850, option 2, or visit CDPH's fluoridation website at www.cdph.ca.gov/certlic/drinkingwater/Pages/Fluoridation.aspx.

Aluminum

The secondary MCL for aluminum is set for aesthetic reasons and there is no health concern associated with the aluminum levels detected in the West Orange System.

Nitrate

Nitrate in drinking water at levels above 45 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 45 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider.

Turbidity

Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of surface water filtration.

Measurements

To ensure the best possible quality, water is sampled and tested consistently throughout the year.

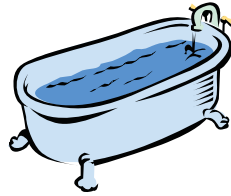
Contaminants are measured in:

- Parts per million (ppm) or milligrams per liter (mg/L).
- Parts per billion (ppb) or micrograms per liter ($\mu\text{g/L}$).
- Parts per trillion (ppt) or nanograms per liter (ng/L).
- Grains per gallon (grains/gal) – A measurement of water hardness often used for sizing household water softeners. One grain per gallon is equal to 17.1 mg/L of hardness.
- MicroSiemens per centimeter ($\mu\text{S/cm}$) – A measurement of a solution's ability to conduct electricity.
- Nephelometric Turbidity Units (NTU) – A measurement of the clarity of water. Turbidity in excess of 5 NTU is noticeable to the average person.
- PicoCuries per liter (pCi/L) – A measurement of radioactivity in water.

If this is difficult to imagine, think about these comparisons:

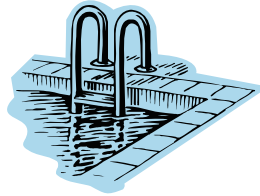
Parts per **million**:

1 drop in 14 gallons
1 second in 12 days
1 inch in 16 miles



Parts per **billion**:

1 drop in 14,000 gallons
1 second in 32 years
1 inch in 16,000 miles



Parts per **trillion**:

1 second in 32,000 years
1 inch in 16 million miles
10 drops in enough water to fill the Rose Bowl



Source Water Assessment

A source water assessment was conducted for each of the groundwater wells serving the customers of GSWC's West Orange County in 2003, finalized in 2003.

The groundwater sources are considered most vulnerable to the following activities not associated with detected contaminants:

- Confirmed leaking underground storage tanks, dry cleaners, gas stations, historic gas stations, repair shops

The groundwater sources are considered most vulnerable to the following activities which have been associated with contaminants that have been detected in the water supply:

- Fertilizer, pesticide/herbicide application, housing – high density, irrigated crops, sewer collection systems

A copy of the assessment may be viewed at:

CDPH Santa Ana Region Office	or	GSWC – Orange County District Office
28 Civic Center Plaza, Room 325		1920 W. Corporate Way
Santa Ana, CA 92701		Anaheim, CA 90801

You may request a summary of the assessment be sent to you by contacting:

CDPH Santa Ana District Office at (714) 558-4410

For more details or information contact:

Bob Jordan at 1-800-999-4033

In December 2002, MWDSC completed a source water assessment of its Colorado River and State Water Project supplies. Colorado River supplies are considered to be most vulnerable to recreation, urban/storm water runoff, increasing urbanization in the watershed and wastewater. State Water Project supplies are considered to be most vulnerable to urban/storm water runoff, wildlife agriculture, recreation and wastewater. A copy of the assessment can be obtained by contacting MWDSC by phone at (213) 217-6850, option 3.

Cross Connection Control Program

GSWC's Cross Connection Control Program provides a level of certainty that the water in the Company's distribution system is protected from possible backflow of contaminated water from commercial or industrial customers' premises. For additional information, visit the water quality page at www.gswater.com.

If You Have Questions – Contact Us

For information about your water quality or to find out about upcoming opportunities to participate in public meetings, please contact our 24 hour customer call center at 1-800-999-4033. Visit us online at www.gswater.com or e-mail us at customerservice@gswater.com.

Este informe contiene información muy importante sobre su agua de beber. Tradúzcalo o hable con alguien que lo entienda bien.





Golden State Water Company

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Anaheim, CA 92801

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Golden Rules for Water Conservation

- 1** End Wasteful Outdoor Water Activities
- 2** Fix Water Leaks
- 3** Replace Older Toilets with High-Efficiency Models
- 4** Be Water-Wise with your Clothes and Dish Washers
- 5** Make your Showerheads and Faucets Water-Efficient

Visit our website, www.gswater.com, to see videos of each Golden Rule.



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