

# Zaca Fire Creates Challenge to Water Treatment

In the aftermath of the Zaca Fire and the winter rains that followed, ash, sediment and debris from the fire washed into Gibraltar Reservoir and Lake Cachuma.

The presence of these organic nutrients presents challenges for drinking water treatment. Nutrients in the water can cause algae to bloom as the water warms during summer months. All local water agencies using Lake Cachuma water are monitoring the drinking water supply carefully and are taking corrective steps as needed.

You may notice a change in the taste or odor of the water if algae blooms during the summer. If this occurs, the District will utilize powdered activated carbon to decrease the harmless but occasionally noticeable changes.

The additional organic material from the fire may also increase the level of disinfection by-products, compounds formed when chlorine—used as a disinfectant in the treatment process—reacts with organic material. The treatment staff are adding a number of additional steps to the treatment process to remove organic material and thus keep disinfection by products within the required limits.

Our team of water quality professionals are working around-the-clock to ensure that your drinking water continues to meet all quality standards.



## Our High Quality Water Source

Your drinking water originates primarily from Lake Cachuma, located within the Santa Ynez River watershed. The water quality benefits from its location surrounded by open country. The water is treated at the recently upgraded Corona del Mar Water Treatment Plant before it is delivered to your home or business.

Goleta Water District also maintains a number of groundwater wells as a drought buffer and a back-up supply, and receives water from the State Water Project. Groundwater wells were used in 2007.


## Tap Water Is More Heavily Tested



You may like the taste of bottled water better than tap water. But the simple fact is that tap water is more stringently regulated and tested than bottled water, which is often just filtered tap water. Furthermore, bottled water companies are not required to issue Consumer Confidence Reports of the type that you are now reading that reveal the results of hundreds of tests for potential contaminants in the water.

Bottled water is far more expensive, may not be as carefully tested as tap water, and it requires much more energy and creates far more pollution to bottle and transport.

*For more information about your water quality, contact Dale Armstrong at 879-4678*

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**Got Questions?**  
For more information about your water quality, contact Dale Armstrong at 879-4678.

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INFORMATION  
ABOUT YOUR WATER

### How We Provide Top-Quality Water

The District's team of state-certified water quality professionals work every day and around-the-clock to ensure that you always receive high quality drinking water.

#### Round the Clock

**Monitoring.** Our certified water quality professionals monitor your water 24 hours a day, 7 days a week, so you don't have to worry about it.

**Testing Accuracy.** Thousands of tests each year are carried out with such extraordinary accuracy that we can detect one hundredth of a part of a substance in a billion parts of water.

**Frequency of Tests.** Some of our tests are conducted daily, some weekly, some monthly, and at other intervals. With today's sophisticated equipment, we conduct some tests continuously around the clock.

**Certified Labs.** Results of tests come from our own state-certified laboratory and others from independent, state-certified laboratories.

### How You Can Get Involved

Our Board of Directors normally meets the second Tuesday of each month at 7 p.m. in the District Board Room, 4699 Hollister Avenue. You are invited to participate in these meetings.

Visit [www.goletawater.com](http://www.goletawater.com) for more information.

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

# WATER NEWS

GOLETA WATER DISTRICT

## 2008 CONSUMER CONFIDENCE REPORT We **PASSED** Our Annual Water Quality Checkup

*We are pleased to provide you with this report showing that your water continues to meet or improve upon all state and federal water quality standards.*

*The report explains in detail how we maintain high quality standards, and offers other useful information, including a description of where your water comes from and answers to common questions about water quality and health issues.*

*Last year, we faced a challenge to maintain water quality standards in the aftermath of the Zaca Fire. Winter rains washed ash, sediment and debris into Gibraltar Reservoir and Lake Cachuma. We have met this and other challenges to assure that you always receive high-quality drinking water.*

*(See more details about the fire on back page.)*

**For more information about your water,  
contact Dale Armstrong at (805) 879-4678.**



# Our Commitment: To Always Serve You With Quality Water

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the State Department of Public Health (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.

## Assessing Your Water Quality

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 indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

## People with Special Needs

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

## Source Water Assessment

A source water assessment of Lake Cachuma was completed in February 2006. An assessment of University Well was completed in January 2002. An assessment of Sierra Madre Well was completed in April 2003.

A copy of the completed assessments is available at the District's main office. You may request a summary of the assessments by contacting Operations Manager Michael Kanno at 879-4630.

## DEFINITIONS USED IN THE CHART:

**Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

**Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.

**Public Health Goal (PHG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

**Maximum Residual Disinfectant Level (MRDL):** The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.

**Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs are set by the U.S. Environmental Protection Agency.

**Primary Drinking Water Standard or PDWS:** MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

**Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.

**Regulatory Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**N/A:** Not applicable.

**ppb:** Parts per billion or micrograms per liter.

**pCi/l:** Picocuries per liter (a measure of radiation)

**NTU:** Nephelometric turbidity units.

**TOC:** Total organic carbon.

**ND:** Not detected at testing limit.

**ppm:** Parts per million or milligrams per liter.

**µmhos/cm:** Micromhos per centimeter (an indicator of dissolved minerals in the water).

**Variances and Exemptions:** State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

## FOOTNOTES TO THE CHART:

<sup>1</sup> In March 2002 a sample taken at University Well had a detection of 0.9 ppb dichloromethane. University Well was not in use at this time. Subsequent samples taken at this well have been non-detect for dichloromethane.

<sup>2</sup> Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

<sup>3</sup> Turbidity of the filtered water must: 1) Be less than or equal to 0.3 NTU in 95% of measurements in a month; 2) Not exceed 1.0 NTU.

<sup>4</sup> Conventional surface water treatment plants must remove a certain percentage of the TOC in their raw intake water using a specialized treatment technique. The percentage removal required depends on raw water quality characteristics. For Goleta Water District's raw water source, the required percentage is 15%. Due to the nature of Goleta Water District's raw water source TOC, this is not technically feasible. Goleta Water District has received verbal approval of a waiver from this treatment requirement from the USEPA and the California Department of Health Services, and we are awaiting formal written approval.

<sup>5</sup> Radon is a radioactive gas that you can't see, taste, or smell. It is found throughout the U.S. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will in most cases be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. Fix your home if the level of radon in your air is 4 picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that aren't too costly. For additional information, call your State radon program or call EPA's Radon Hotline (800-SOS-RADON).

Note: The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old. All of the surface water and distribution system data presented in the tables are from samples taken in 2007, except for the following. The surface water uranium data was obtained in 1999. All of the groundwater data presented in the tables are from samples taken in 2007, except for the following. The dichloromethane data is from 2002. The phosphate data is from 2001. The silica data is from 2001, 2003 and 2004. The radon data is from 2003 and 2006.

## Water in the Environment

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 ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

*Contaminants that may be present in source water include:*

Microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants, such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and herbicides, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

Organic chemical contaminants, including synthetic and volatile organic chemicals, that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.

Radioactive contaminants, that can be naturally-occurring or be the result of oil and gas production and mining activities.

## Results of 2007 Drinking Water Quality Tests

These tables list drinking water contaminants and other substances detected during 2007. The District also tested for many additional substances that were not detected, and therefore are not listed in this report. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data is for testing done January 1-December 31, 2007. The test results show that your water met or was better than all state and federal water quality standards.



REGULATED CONTAMINANTS WITH PRIMARY MCLS							
INORGANIC	MCL	PHG (MCLG)	Surface Water Average	Surface Water Range	Groundwater Average	Groundwater Range	Typical Source of Contaminant
Aluminum (ppm)	1	0.6	0.103	0.055-0.150	0.007	ND-0.037	Erosion of natural deposits; residue from some surface water treatment processes
Fluoride (ppm)	2	1	0.46	N/A	0.43	0.27-0.51	Erosion of natural deposits
ORGANIC							
Dichloromethane (ppb)	5	4	ND	N/A	ND	ND-0.9 <sup>1</sup>	Discharge from pharmaceutical and chemical factories; insecticide
RADIOLOGICAL							
Uranium (pCi/l)	20	0.5	N/A	N/A	2.8	ND-4.5	Erosion of natural deposits
LEAD AND COPPER RULE							
	MCL	PHG (MCLG)	90th Percentile Value	# of Sample Sites	# of Sites Exceeding Action Level	Typical Source of Contaminant	
Copper (ppm)	AL = 1.3	0.17	0.79	30	0	Internal corrosion of household water plumbing systems	
Lead (ppb)	AL = 15	2	ND (< 5)	30	0	Internal corrosion of household water plumbing systems	
MICROBIOLOGICAL							
	MCL	PHG (MCLG)	Highest Single Measurement		Lowest Percentage of Samples Meeting TT		Typical Source of Contaminant
Turbidity <sup>2</sup> (NTU)	TT <sup>3</sup>	N/A	0.269		100%		Soil runoff
DISINFECTION BYPRODUCTS, DISINFECTANT RESIDUALS, AND DISINFECTION BYPRODUCT PRECURSORS							
	MCL or MRDL	PHG (MCLG) or MRDLG	System Average		System Range		Typical Source of Contaminant
TTHMs [Total Trihalomethanes] (ppb)	80	N/A	59.2		21.4-74.8		Byproduct of drinking water chlorination
Haloacetic Acids (ppb)	60	N/A	20.7		4.5-24.0		Byproduct of drinking water chlorination
Chlorine (as Cl <sub>2</sub> ) (ppm)	MRDL = 4.0 (as Cl <sub>2</sub> )	MRDLG = 4.0 (as Cl <sub>2</sub> )	1.02		0.20-2.20		Drinking water disinfectant added for treatment
Control of DBP precursors (TOC in ppm)	TT <sup>4</sup>	N/A	2.5		2.3-2.8		Various natural and manmade sources
REGULATED CONTAMINANTS WITH SECONDARY MCLS							
CONSTITUENT	Secondary MCL	Surface Water Average	Surface Water Range	Groundwater Average	Groundwater Range		Typical Source of Contaminant
Chloride (ppm)	500	10.0	3.2-17	69	20-350		Runoff/leaching from natural deposits; seawater influence
Color (units)	15	ND	ND-5	6	ND-10		Naturally-occurring organic materials
Odor---Threshold (units)	3	1	1-4	2	1-3		Naturally-occurring organic materials
Specific Conductance (µmhos/cm)	1600	891	809-1276	1069	880-1710		Substances that form ions when in water
Sulfate (ppm)	500	280	N/A	245	130-280		Runoff/leaching from natural deposits
Total Dissolved Solids (ppm)	1000	604	N/A	733	614-1120		Runoff/leaching from natural deposits
Turbidity (NTU)	5	0.14	0.04-1.40	0.48	0.02-23		Soil runoff
OTHER CONSTITUENTS							
CONSTITUENT	Surface Water Average	Surface Water Range	Groundwater Average	Groundwater Range			
Alkalinity (ppm as CaCO <sub>3</sub> )	168	134-205	216	124-293			
Bicarbonate (ppm)	230	N/A	264	150-360			
Calcium (ppm)	77	N/A	118	92-180			
Hardness (ppm as CaCO <sub>3</sub> )	363	332-392	459	400-610			
Magnesium (ppm)	43	N/A	43	33-47			
pH (units)	7.49	6.92-8.58	7.5	6.8-8.1			
Potassium (ppm)	2.8	N/A	2.6	1.5-3.4			
Radon <sup>5</sup> (pCi/l)	ND	N/A	414	130-853			
Silica (ppm)	13.1	N/A	26	16-52			
Sodium (ppm)	46	N/A	59	46-92			

**Hardness:** Goleta's water supply has natural minerals that cause hardness. While this does not affect health, it does leave spots on dishes and decreases the effectiveness of soap. The hardness of local water generally ranges from 20-23 grains per gallon, which is about 340-400 parts per million as calcium carbonate.

**Variance:** Goleta Water District (GWD) serves unfiltered Lake Cachuma water to about 33 connections on the Goleta West Conduit. The water receives chlorination treatment but does not comply with the Surface Water Treatment Rule (SWTR). The State Department of Health Services allows GWD to provide bottled water to these customers for drinking and cooking as a temporary and interim solution. GWD notifies these consumers quarterly that the water delivered is not in compliance with the SWTR and should not be used for domestic purposes.