



# Water News

Detailed Test Results & Information About Drinking Water in 2011

## YOUR ANNUAL DRINKING WATER QUALITY REPORT: Water Quality Continues to Exceed Standards



Juncal Dam

*Once again, we are very pleased to provide you with this year's Annual Water Quality Report. We want to keep you informed about the quality water and services we have delivered to you over the past year. Montecito's drinking water meets and is better than all drinking water quality requirements.*

This report offers the results of our extensive water quality tests conducted during 2011. In addition, the report provides a description of where your water comes from, answers common questions about water quality and offers other useful information.

The District participated in additional voluntary sampling to assess the potential of other surface water and groundwater contaminants. No contaminants were detected in any samples assessed. The District is fortunate that the watersheds filling our local lakes and reservoirs provide us with high-quality water.

### CONSERVATION REPORT

#### Water Use is Down

In October 2008, nearly four years ago, your Board of Directors adopted the water conservation rate structure to curb the back-to-back years of record high water demand. Water demand levels in 2007 and 2008 exceeded the District's reliable long-term available water supply of 2.1 billion gallons by over 225 million gallons for each of these years. If supplemental State Project water had not been available, the District would have entered into another water shortage emergency that would have curtailed deliveries to our community.

Since the adoption of the water conservation rates District staff have been carefully analyzing water usage community-wide. We are pleased to report that water usage has dropped to levels that, without a major drought, appear to be within the available long-term water supply.

For the 2011 calendar year, water demand dropped to 1.67 billion gallons. This was due to conservation by our customers and higher than average rainfall. The nearly 28% drop in water demand enabled the District to reduce its annual State Water deliveries by 50%.

The encouraging trend to lower annual water demand by conservation continues into 2012. In a year with only 60% of average seasonal rainfall (20" versus 11") this year's water demand is projected to be 1.9 billion gallons. The conservation rate structure has been successful and has resulted in a more efficient use of water by our customers without changing the character of our community.

Bella Vista Water Treatment Plant



### Steps We Take to Ensure That the Water You Drink Is Safe and Healthful

- STEP 1: We begin with a high-quality water supply.
- STEP 2: We treat the water with a variety of filtration processes.
- STEP 3: We add trace amounts of chlorine to disinfect the water as it travels through the water system.
- STEP 4: We test the water. Samples from various locations around the District are analyzed each day in our own laboratory or by independent state-certified labs. Additional testing is conducted each week for bacterial contamination. Results of these and other tests are reported regularly to state authorities.

### How Accurate Are The Tests?

The tests, using ultra sensitive measuring equipment, are so accurate that we are able to detect substances as small as one-half part per billion!

## High-Quality Water Supply

More than half of the District's water supply comes from Lake Cachuma.

Other water sources include Jameson Lake, Alder and Fox Creeks and a limited groundwater supply. Water from all these sources is thoroughly treated before it is delivered to our customers.

Our water quality program is carried out by state-certified water quality experts. Regular water-quality tests ensure that your drinking water is safe.

## 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 storm water 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 storm water runoff, and residential uses.

**Organic chemical contaminants**, including synthetic and volatile organic chemicals, that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water 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.



## Water & Health

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 U.S. Environmental Protection Agency's (USEPA) 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).

## Water Quality Standards

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

### 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.

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

**Secondary Drinking Water Standards (SDWS):** MCLs for contaminants that affect taste, odor, or appearance of drinking water. Contaminants with SDWS do not affect the health at MCL levels.

### 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.

**Regulatory Action Level (RAL):** 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.

**mg/L:** Milligrams per liter, or parts per million. 1 mg/L is equal to about one drop in 17 gallons of water.

**ug/L:** Micrograms per liter, or parts per billion. 1 ug/L is equal to about one drop in 17,000 gallons of water.

**< :** Less than.

**NA:** Not applicable.

**NS:** No Standard.

**ND:** Non-detected.

**pCi/L:** Pico curies per liter, a measure of radiation

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

**NTU:** Nephelometric turbidity unit.

### Footnotes:

<sup>1</sup>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.

<sup>2</sup>Surface water sources include the District's Jameson Lake and Lake Cachuma. The District's Amapola Well, Ennisbrook Well No. 2, and Las Entradas Well No. 1 were used as groundwater supply sources.

<sup>3</sup>Turbidity is a measure of the cloudiness of the water. Montecito Water District monitors for it continuously because turbidity is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants. 100% of the District's samples met the Turbidity Performance standard. The highest single surface water turbidity measurement during the year was 0.13 NTU.

<sup>4</sup>An average number of 51 coliform samples were collected each month at 12 District sampling stations in compliance with the Federal Coliform Rule.

## RESULTS OF 2011 DRINKING WATER QUALITY TESTS

The table below lists all the drinking water contaminants and other constituents that we detected during the 2011 calendar year. Not included in the list below are substances for which we test but were not detected. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing conducted between January 1 and December 31, 2011<sup>1,2</sup>.

Primary Standards (PDWS)	Units	Maximum Contaminant Level	Public Health Goal	Jameson Lake Average	Jameson Lake Range	Ground Water Average	Ground Water Range	Cachuma Lake Average	Cachuma Lake Range	Major Sources of Contamination in Drinking Water	
<b>Water Clarity</b>											
Treated Turbidity <sup>3</sup>	NTU	TT = 1 NTU TT = 95% of Samples	NA	0.07	0.04 - 0.13 100%	0.10	ND - 0.30 100%		ND - 0.09 100%	Soil runoff.	
<b>Radioactive Contaminants</b>											
Gross Alpha Particle Activity	pCi/L	15	NA	0.2	0.2	3.625	2.73 - 4.52	ND	NA	Erosion of natural deposits.	
<b>Inorganic Contaminants</b>											
Aluminum	ug/L	1000	600	ND	ND	ND	ND	50	10 - 150	Erosion of natural deposits; residual from some surface water treatment processes.	
Boron	ug/L	1000 (RAL)	NA	ND	ND	67	ND - 100	39	39	NA	
Chromium	ug/L	50	100 (MCLG)	ND	ND	ND	ND	2.5	ND - 6.4	Erosion of natural deposits.	
Fluoride	mg/L	2	1	0.2	0.2	0.7	0.5 - 0.8	0.37	0.31 - 0.42	Erosion of natural deposits; water additive that promotes strong teeth.	
Nitrate as NO <sub>3</sub> <sup>5</sup>	mg/L	45	45	0.1	ND - 0.4	9.3	1.3 - 14.3	ND	NA	Runoff or leaching from fertilizer use; leaching from septic tanks and sewage; erosion from natural deposits	
Selenium	ug/L	50	50 (MCLG)	ND	ND	2.3	ND - 4.0	ND	NA	Discharge from petroleum, glass, and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive).	
<b>Primary Standards for Distribution System</b>											
Units	Maximum Contaminant Level	Public Health Goal	Distribution System Average	Distribution System Range	Major Sources of Contamination in Drinking Water						
<b>Disinfectant</b>											
Free Chlorine Residual	mg/L	MRDLG, 4.0	MRDLG, 4.0	0.77	0.20 - 2.09	By-product of drinking water chlorination.					
<b>Disinfection By Products</b>											
Total Trihalomethanes	ug/L	80	NA	53.7	31.1 - 92.8	By-product of drinking water chlorination.					
Haloacetic Acids	ug/L	60	NA	25	0.0 - 63.0	By-product of drinking water chlorination.					
<b>Microbiological Contaminant Samples</b>											
Total Coliform Bacteria <sup>4</sup>	% Tests Positive	<5% of Monthly Samples	0	0.16%	0% - 1.96%	Naturally present in the environment.					
<b>Lead and Copper Rule</b>											
Units	RAL	PHG	Samples Collected	Above RAL	90th Percentile	Major Sources of Contamination in Drinking Water					
Lead <sup>6</sup>	ug/L	15	2	30	0	2	Corrosion of household plumbing; erosion of natural deposits.				
Copper <sup>6</sup>	ug/L	1300	0.17	30	0	138	Corrosion of household plumbing; erosion of natural deposits.				
<b>Secondary Drinking Water Standards (SDWS)</b>											
Units	Maximum Contaminant Level	Jameson Lake Average	Jameson Lake Range	Ground Water Average	Ground Water Range	Cachuma Lake Average	Cachuma Lake Range	Major Sources of Contamination in Drinking Water			
<b>Aesthetic Standards</b>											
Color	Color	15		9	9	ND	ND	ND	NA	Naturally-occurring organic minerals.	
Odor	Threshold	3		ND	ND	ND	ND	6	1 - 12	Naturally-occurring organic minerals.	
Chloride	mg/L	500		5	5	157	93 - 202	18	13.4 - 20.9	Runoff or leaching from natural deposits; seawater influence.	
Iron	ug/L	300		ND	ND	37	ND - 110	15	ND - 135	Leaching from natural deposits; industrial wastes.	
Manganese	ug/L	50		20	20	30	20 - 50	ND	NA	Leaching from natural deposits.	
Specific Conductance	umhos	1600		675	675	1201	833 - 1390	833	729 - 946	Substances that form ions in water.	
Sulfate	mg/L	500		157	157	165	109 - 211	239	198 - 280	Runoff or leaching from natural deposits; industrial wastes.	
Total Dissolved Solids	mg/L	1000		440	440	743	510 - 910	608	514 - 710	Runoff or leaching from natural deposits.	
Zinc	ug/L	5		ND	ND	ND	ND	10	10 - 30	Naturally-occurring in trace amounts, but can be detected in soft, acidic water systems.	
<b>Additional Constituents Analyzed</b>											
pH	pH units	NS		8.00	7.50 - 8.50	6.90	6.80 - 6.90	8.07	7.86 - 8.30		
Total Hardness	mg/L	NS		319	284 - 368	434	260 - 560	371	326 - 410		
Total Alkalinity	mg/L	NS		157	104 - 180	207	190 - 230	193	178 - 210		
Calcium	mg/L	NS		90	90	113	63 - 152	87	76.9 - 93.7		
Magnesium	mg/L	NS		21	21	37	25 - 44	38	30.5 - 45.8		
Sodium	mg/L	NS		21	21	86	74 - 93	44	37.7 - 51.4		
Potassium	mg/L	NS		2.0	2.0	1.0	1.0 - 1.0	4.6	2.9 - 19.5		

<sup>5</sup>**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 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 specific enzyme deficiencies. If you are

caring for an infant, or you are pregnant, you should ask advice from your health care provider.

### <sup>6</sup>Lead & Copper Rule

Every three years, 30 residences are tested for lead and copper levels at the tap. The most recent set of samples was collected in 2010. All of the samples were well below the regulatory action level (RAL). Lead (RAL 12.0 ug/L) was detected in 22 samples with the 90th percentile value registering 2.0 ug/L.

Copper (RAL 1,300 ug/L) was detected in 30 samples with the 90th percentile value registering 138 ug/L. It has been found that, 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. Montecito Water District 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 or at [www.epa.gov/safewater/](http://www.epa.gov/safewater/) lead.



## Barker Pass Pump Station Gets Makeover

As part of our 2011 capital improvement program, the District modernized the Barker Pass Pump Station, adding new safety features including a connection point for an emergency generator.

This 1958 pump station was the first of the District's three major pump stations on the Cachuma Project's South Coast Conduit (SCC). Up to 80% of our water comes from Lake Cachuma and is treated at the regional City of Santa Barbara Cater Filtration Plant, then delivered to our District by the SCC, a 30-inch diameter water transmission pipeline.

The District has a total of seven SCC connections, with the capacity to move over seven million gallons (MG) of water per day. The three

major pump stations, including Barker Pass, directly feed customers and our reservoirs and must operate at all times.

The Barker Pass pump station delivers up to 1.25 MG of water per day for the entire western portion of the District and also to five storage reservoirs along the Montecito foothills.

The 2008 Tea Fire exposed this facility's vulnerability to power outages. The District nearly emptied 4.37 MG of reservoir storage when electrical power to the area was cut off by Edison for fear the above-ground high voltage transmission cables would burn through and cause additional fires.

The reliability of the Baker Pass Pump Station has now been greatly improved, and the pump station can use a portable emergency power generator in the event power is lost.



Chad Hurshman  
Water Treatment Superintendent

## For More Information About Water Quality

- **Who to Contact:** For answers to your questions about water quality, please contact Chad Hurshman, Water Treatment and Production Superintendent, at 969-7924. Chad joined the District in 2001 and became the Treatment Superintendent in 2006. He holds a State Level 4 Treatment Certification and is a valued and experienced employee serving the District and our community.
- **Source Water Assessment:** A comprehensive source water assessment of the District's surface water sources was completed in December 2010. A copy of this report is available for public inspection at the District Office.
- **Public Information:** To learn more about water, the District, or public participation opportunities, please call Tom Mosby, General Manager, at 969-2271, or visit our website at [www.montecitowater.com](http://www.montecitowater.com)
- **En Español** Este informe contiene información muy importante sobre su agua potable. Tradúzcalo ó hable con alguien que lo entienda bien.



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## Your Water Quality Report

Please visit us at [montecitowater.com](http://montecitowater.com). Learn about the District's history, Board of Directors, agendas and minutes, newsletters, ongoing construction projects, water quality, billing information, conservation and more.

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