



# *San Lorenzo Valley Water District Consumer Confidence Report Northern Distribution System*

WATER QUALITY 2007

JUNE 2008

## **Your Water Passes All Tests**

Once again, the San Lorenzo Valley Water District is pleased to report that our water quality met or surpassed all State and Federal criteria for public health protection. For additional information regarding water quality, please contact the San Lorenzo Valley Water District's Director of Operations, Rick Rogers, at (831) 430-4624 or e-mail to [rrogers@slvwd.com](mailto:rrogers@slvwd.com).

## **Sources of Water**

The sources of drinking water (both tap 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 including radioactive material, and other substances resulting from the presence of animals or from human activity.

## **Where Does Your Water Come From?**

All water comes in the form of precipitation. Surface water accumulates mainly as a result of direct runoff from precipitation in the form of streams. Part of the precipitation that falls infiltrates the soil. Water drains downward (percolates) below the soil surface reaching a level at which all of the openings or voids in the ground are filled with water. This zone of saturation is referred to as groundwater.

The District primarily uses surface water sources from November to May. During these months, surfacewater may provide up to 100% of all District water. Streams utilized by the District contain water from granite formations with very low mineral content. This results in very soft, pleasant tasting water. Collection points for these streams are in remote areas high within the District's protected watershed, away from human contamination.

During the summer months from June-November the District blends surface water with groundwater sources (wells) located in the Ben Lomond and Zayante areas. All wells conform to State construction standards. These wells, with the exception of Olympia 2 and 3 in the Zayante area, produce very soft water with quality similar to our surface sources.

Olympia Wells 2 and 3 have a higher mineral content, primarily iron, manganese and carbonate hardness. These minerals are harmless when consumed in water, but may affect the aesthetic qualities of the water such as taste, odor, and color. Dissolved gases present in groundwater may also affect taste.

Consumers in the Hihn Road and Zayante areas, from time to time, may experience periods of discolored water caused by iron and manganese. As water comes in contact with chlorine at the well head and with oxygen during the trip through the mainline distribution piping, the iron and manganese precipitate deposits in the water mains. The District adds a polyphosphate chemical to slow down this process. However, this is not totally effective and some deposition still occurs. Occasionally, during higher flows, the deposits become dislodged resulting in discolored water. During this time, water is safe to use; however, you may want to avoid washing laundry as staining may occur. If you experience periods of discolored water, please contact the District at (831) 338-2153.

## **Public Involvement**

The Board of Directors of the San Lorenzo Valley Water District invites you to attend its meetings to express your views and opinions. The Board meets on the 1st and 3rd Thursday of each month. Meetings start at 7:30 p.m. at the District's Operations Building, 13057 Highway 9, Boulder Creek. Agenda information for the Board of Director's meetings can be obtained from the District at (831) 430-4636 or [www.slvwd.com](http://www.slvwd.com).

## Is the Water Safe for Everyone to Drink?

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 800-426-4791 or on the internet at <http://www.epa.gov/safewater>

*“Our mission is to provide our customers and all future generations with reliable, safe and high quality water at an equitable price; to create and maintain outstanding customer service; to manage and protect the environmental health of the aquifers and watersheds; and, to ensure the fiscal vitality of the San Lorenzo Valley Water District.”*

## Water Quality

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and 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.

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) or on the web at [www.epa.gov/safewater](http://www.epa.gov/safewater).

## Possible Contaminants

Contaminants that may be in the water prior to treatment may 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 agricultural, urban stormwater 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 stormwater runoff, agricultural application, and septic systems.

## State Standards and Monitoring

Individual water suppliers do not arbitrarily decide what constitutes “safe” drinking water. The U.S. Environmental Protection Agency and the California State Department of Public Health require all public water suppliers to meet stringent quality standards. Compliance is mandatory for public water utilities.

In California, drinking water standards (also called Maximum Contaminant Levels, or MCLs) are established for two categories. Primary Standards are set for the protection of public health. Secondary Standards are set only for aesthetic qualities such as taste, odor and color, but do not represent any threat to health.

The District maintains a monitoring program to sample and test all water sources in accordance with State and Federal standards. Should the District fail to monitor, or the District’s water exceed the MCLs allowable in the Primary Standards, it is required by law to notify all customers of the nature of the problem and any possible health effects. Some contaminants that are routinely monitored by the District are bacteria, turbidity, inorganic chemicals, metals, general minerals, volatile organic chemicals (VOCs), disinfection by-products (THMs), and radiation.

The table in this report shows our test results for 2007. Once again, the San Lorenzo Valley Water District is pleased to report that our water quality met or surpassed all State and Federal criteria for public health protection. For additional information regarding water quality, please contact the San Lorenzo Valley Water District at (831) 338-2153.

*In an effort to provide this report to everyone, the District encourages landlords to provide a copy of this report to their tenants.*

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## Protecting Our Watershed

Many common household products are hazardous if carelessly handled or stored. Chemicals poured on the ground or down the drain or toilet can pollute our drinking water. Of particular concern are Volatile Organic Chemicals (VOCs) and Synthetic Organic Chemicals (SOCs). VOCs are chemicals commonly found in paints, thinners, solvents, degreasers, and automotive products. SOCs are found in herbicides and pesticides. These products should never be poured down the sink, toilet or drain. The County of Santa Cruz receives household hazardous waste at the Ben Lomond Transfer Station. The District strongly encourages consumers to make use of this convenient program and to dispose of household hazardous waste in a proper and responsible manner. For more information on disposal and receiving times, you may call the County at (831) 454-2606. You can help protect our drinking water from sources of pollution.

The District is required to monitor for these chemicals at every water source on a periodic basis. Currently all District water sources are free from these contaminants. In the past, very small amounts of Trichloroethylene (TCE) had been occasionally detected in Quail well 5A. Amounts ranging from 0.60 to 1.0 parts per billion (ppb) had been intermittently found in water quality samples. However, detectable amounts of TCE have not been found in Quail well 5A since August of 2005. The District continues to collect water quality samples at this source with increased frequency in order to ensure that the source remains free of contamination.

The occasional detection of TCE at one of the District's facilities demonstrates the on-going vulnerability of our water sources and the need to exercise great care when using hazardous chemicals around the home. It is extremely important to help protect our drinking water from possible sources of pollution by exercising care with all household chemicals. A little pollution can go a long way!

## Source Water Assessments

In 2002 and 2004 the District completed Source Water Assessments of its deep water well aquifers and surface water watershed in Ben Lomond, Zayante and Boulder Creek. A Source Water Assessment lists possible contaminating activities and the susceptibility of identified contamination threats that might affect the quality of our drinking water supplies.

### Quail Hollow Well Field Aquifer

Factors contributing to the potential vulnerability of the District's Quail Hollow Wells include: the high percolation

capacity of the Santa Margarita Sandstone Aquifer and associated Zayante soils, the absence of a confining zone above the aquifer, residential septic tank systems, and unused production wells.

### Olympia Well Field Aquifer

Factors contributing to the potential water-quality vulnerability of the District's Olympia wells include: the high percolation capacity of the Santa Margarita Sandstone Aquifer, residential septic tank systems, and equestrian activities.

### Foreman, Peavine, Clear, and Sweetwater Creeks Watershed

Factors contributing to the potential vulnerability of the District's surface water include: managed forests, septic systems, recreational, government or institutional facilities. Copies of the Source Water Assessments for each water source are available at the District Office.

## Summer Water Conservation During Power Outages

The San Lorenzo Valley is well known for its occasional power outages. In the past, these outages were usually the result of winter weather conditions -- heavy winds and rainfall. Power outages are now becoming more frequent during summer months due to increased electrical demands overloading availability. During summer months, as well as winter, power outages adversely impact the District's ability to supply water to its customers. The greatest challenge is to maintain water to District customers during power outages in summer months when water demand is at its highest.

Throughout the District, water service is maintained through storage tanks. Electrically powered pumping stations supply water to the tanks. Currently, the District maintains 22 pumping facilities. Loss of power to these facilities greatly hinders the District's ability to replace water in the storage tanks. The higher the customer's meter is in ground elevation, the more difficult the water supply problem becomes as water is pumped to one area and then re-pumped to yet a higher area. Three or four pumping lifts are common for higher elevation areas.

During summer months June through September, during power outages, it is important for customers to conserve water until power is restored. Over the years, the District has provided greater reliability to customers during power outages by increasing the size of water storage facilities when possible and installing standby generators at key facilities.

**SAN LORENZO VALLEY WATER DISTRICT  
WATER QUALITY ANALYSIS FOR 2007  
North System - Boulder Creek, Brookdale, Ben Lomond, Zayante**



**GROUNDWATER**

<b>PRIMARY STANDARDS</b>	Meas.	MCL	PHG (MCLG)	SLVWD Range of Detection	SLVWD Water Average	Sample Date	Notes	Source
Nitrate	ppm	45	45	N.D. - 12	3.8	2007	Runoff / leaching from natural deposits.	
Fluoride	ppb	2000	1000	170 - 320	230	2006	Erosion of natural deposits.	
Arsenic	ppb	10	N/A	1.0 - 2.6	2.2	2006	Erosion of natural deposits.	
<b>SECONDARY STANDARDS</b>								
Color	CU	15	N/A	< 3.0 - 4.0	4	2006	Natural occurring organic material	
Sulfate	ppm	500	N/A	8.4 - 230	92	2006	Runoff / leaching from natural deposits.	
Total Dissolved Solids	ppm	1000	N/A	128 - 612	311	2006	Runoff / leaching from natural deposits.	
Iron	ppb	300	N/A	< 20 - 230	140	2006	Leaching from natural deposits.	
Manganese	ppb	50	N/A	91 - 120	101	2007	Leaching from natural deposits.	(3)
Chloride	ppm	500	N/A	6.2 - 8.6	7.4	2006	Runoff / leaching from natural deposits.	
Turbidity	NTU	5	N/A	0.33 - 0.79	0.44	2007	Soil runoff.	

**ADDITIONAL CONSTITUENTS ANALYZED**

Meas.	MCL	PHG (MCLG)	SLVWD Range of Detection	SLVWD Water Average	Sample Date	Notes	Source
Sodium	N/A	N/A	9.9 - 15	11.5	2006	Generally naturally occurring.	
Total Hardness	N/A	N/A	47 - 410	192	2006	Hardness is the sum of polyvalent cations present in the water, generally magnesium and calcium.	
Total Phosphorous	N/A	N/A	N.D. - 4.9	2	2007	(3)	Treatment additive

**SURFACE WATER**

<b>PRIMARY STANDARDS</b>	Meas.	MCL	PHG (MCLG)	SLVWD Range of Detection	SLVWD Water Average	Sample Date	Notes	Source
Fluoride	ppb	2000	1000	81 - 100	94	2007	Erosion of natural deposits.	
Total Organic Carbon (TOC) precursors	ppb	Treatment requirement	N/A	N.D. - 1.5	0.8	2002	(1, 4)	Various natural manmade sources.

**SECONDARY STANDARDS**

Sulfate	ppm	500	N/A	3.3 - 5.1	3.9	2007	Runoff / leaching from natural deposits.	
Total Dissolved Solids	ppm	1000	N/A	78 - 132	109	2007	Runoff / leaching from natural deposits.	
Chloride	ppm	500	N/A	5.3 - 6.4	5.3	2007	Runoff / leaching from natural deposits.	

**ADDITIONAL CONSTITUENTS ANALYZED**

Meas.	MCL	PHG (MCLG)	SLVWD Range of Detection	SLVWD Water Average	Sample Date	Notes	Source
Sodium	N/A	N/A	9.1 - 10	10	2007	Generally naturally occurring.	
Total Hardness	N/A	N/A	57 - 84	70	2007	Hardness is the sum of polyvalent cations present in the water, generally magnesium and calcium.	
Turbidity	NTU	Less Than or Equal to 0.2 NTU. In 95% of samples each month. Never to exceed 1 NTU.	N/A	Highest single measurement = 0.12 NTU	2007	(2)	Soil runoff.



**SYSTEM WIDE - COMBINED GROUNDWATER AND SURFACE WATER**

<b>DISINFECTION RESIDUAL</b>		Meas.	MCL	PHG (MCLG)	SLVWD Range of Detection	SLVWD Water Average	Sample Date	Source
Chlorine		ppm	4	4	0.2 - 1.2	0.55	2007	Drinking water disinfectant added for treatment.
<b>DISINFECTION BY-PRODUCTS</b>		Meas.	MCL	PHG (MCLG)	SLVWD Range of Detection	SLVWD Water Average	Sample Date	Source
TTHM (Total Trihalomethanes)		ppb	80	N/A	3 - 36	14	2007	By-product of drinking water chlorination.
HAA5 (Haloacetic Acids)		ppb	60	N/A	N.D. - 45	9	2007	By-product of drinking water chlorination.
<b>PRIMARY STANDARDS REGULATED AT TAP</b>		Meas.	AL	PHG (MCLG)	SLVWD Range of Detection	SLVWD Water Average	Sample Date	Source
Lead / Number of Sites Sampled = 29		ppb	15	2	90th Percentile = 2.5 Number of sites above AL = 0	N.D. - 2.5	2005	(1) Corrosion of household plumbing, discharges from industrial manufacturers, erosion of natural deposits.
Copper / Number of Sites Sampled = 29		ppb	1300	170	90th Percentile = 560 Number of sites above AL = 0	N.D. - 960	2005	(1) Corrosion of household plumbing, erosion of natural deposits, leaching from wood preservatives.

**Notes, Definitions, Terms and Abbreviations used in table:**

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. MRDLG's are set by the U.S. Environmental Protection Agency

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

Primary Drinking Water Standards (PDWS): MCL's and MRDL's for contaminants that effect health along with their monitoring and reporting requirements, and water treatment requirements.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCL's are set as close to the PHG's or (MCLG's) as is economically and technologically feasible. Secondary MCL's are set to protect the odor, taste and appearance of drinking water.  
Regulatory Action Level (AL): The concentration of a contaminant which, when exceeded, triggers treatment or other requirements that a water system must follow.

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

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

NTU: Nephelometric Turbidity Units. ppb: Parts per billion or micrograms per liter ppm: Parts per million or milligrams per liter.

N.D.: Not Detectable at testing limit P/A: Presence /Absence CU: Color Units N/A: Not Applicable

**Notes:** 1) 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. 2) Surface Water Treatment Technique ( Type of Approved Filtration Technology); Microfloc package plant with upflow clarification and gravity filtration. 3) District Olympia Wells 2 and 3 periodically exceed the Secondary Maximum Contaminant Level (MCL) for Manganese. Secondary MCL's are set for aesthetic reasons only, and do not cause adverse health effects. Manganese can cause discolored water and staining. To offset this effect, the District adds phosphate, which acts to keep the Manganese in solution and help prevent problems associated with this mineral. 4) Total Organic Carbon has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts.

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

San Lorenzo Valley Water District  
13060 Highway 9  
Boulder Creek, CA. 95006-9119

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