



County of San Luis Obispo - Department of Public Works County Service Area 23 – Santa Margarita 2009 Water Quality Report

June 2010

TO OUR CUSTOMERS: The County of San Luis Obispo is pleased to present this annual report describing the quality of your drinking water. We sincerely hope this report gives you the information you seek and have a right to know. *Este informe contiene información muy importante sobre su agua de beber. Tradúzcalo ó hable con alguien que lo entienda bien.*

SOURCES OF DRINKING WATER

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, 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 stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- *Pesticides and herbicides*, which 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, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- *Radioactive contaminants* which can be naturally occurring or be the result of oil and gas production and mining activities.

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

YOUR WATER SUPPLY

Your water comes from two groundwater wells located in Santa Margarita, Well #3 and Well #4. Well #3 is a deep, fractured-rock well. Well #4 is a relatively shallow well that pumps water from the alluvial deposits of Santa Margarita Creek. The water is cleaned through a natural filtration process as it trickles down through the ground. During this process, water may also pick up minerals or contaminants found in the soil, either natural or man-made. Groundwater is normally very clean and is simply disinfected with chlorine to help minimize the risk from viral and bacterial contamination.

The wells are routinely monitored for contaminants and the results are reported to the California Department of Public Health. The findings are evaluated relative to the California Drinking Water Primary and Secondary Maximum Contaminant Standards. **All water quality standards were met in 2009.**

A watershed sanitary survey and a source water assessment have been conducted on the Santa Margarita system. The studies are updated by County staff every five years. The last update was completed in 2005. The studies identify potential sources of contamination or contaminating activities in the watershed and assess their impact on the water system. The studies included a review of water system information, input from operations staff, findings from field surveys, and recommendations for future surveys. No significant changes in the watershed were noted in the last update. The wells continue to be most vulnerable to the following activities for which no associated contaminant has been detected in the water supply: one gasoline station.

A copy of the assessment is available at the County of San Luis Obispo, Department of Public Works, County Government Center, Room 207, San Luis Obispo, CA 93408. You may also request a summary of the assessment be sent to you by contacting Kurt Souza, CDPH Regional Engineer, at 805-566-1326 or John Beaton, Water Quality Manager, at 805-781-5111.

OPERATIONS

The Santa Margarita water system is operated by qualified operators who are all certified by the California Department of Public Health (CDPH). They are knowledgeable professionals dedicated to maintaining your water system and providing you with the best quality water possible. Operators conduct weekly inspections of the wells, tanks, and distribution system in order to ensure safe and reliable water. In addition, the CDPH routinely inspects the facilities, operating procedures, and water quality monitoring records to verify compliance with state and federal regulatory requirements.

2009 Water Statistics

- **Water Production**
⇒ **58.4 million gallons**
- **Average Daily Demand**
⇒ **160,000 gallons**



View from Santa Margarita Water Tanks

The County routinely monitors for many more chemicals than are listed in this table. The tables list all of the drinking water contaminants that were detected in 2009, unless otherwise noted. The presence of these contaminants in water does not necessarily indicate that the water poses a health risk. 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, although representative, may be more than one year old. For questions about this data, contact John Beaton, Water Quality Manager, at (805) 781-5111 or email JBeaton@co.slo.ca.us.

REGULATED CONTAMINANTS WITH PRIMARY MCLs, MRDLs, TTs or ALs							
Contaminant (Reporting Units)	Where Sampled	MCL	PHG (MCLG)	Range Detected	Average Detected	Potential Source of Contamination	
MICROBIAL CONTAMINANTS							
Total Coliform Bacteria (Present or Absent)	Distribution	> 1 positive sample per month	(0)		Absent	Naturally present in the environment	
Heterotrophic Bacteria (CFU/mL)	Distribution	TT = < 500	-----	ND—170	4	Naturally present in the environment	
INORGANIC CONTAMINANTS							
Arsenic (ppb)	Source	10	0.004	ND—6.2	3.1	Erosion of natural deposits	
Fluoride (ppm)	Delivered	2.0	1	0.147—0.191	0.169	Erosion of natural deposits	
DISINFECTANT RESIDUALS and DISINFECTION BYPRODUCTS							
Chlorine (ppm)	Distribution	MRDL 4.0 as Cl ₂	MRDLG 4 as Cl ₂	1.47—2.10	1.71	Drinking water disinfectant added for treatment.	
Haloacetic Acids (ppb)	Distribution	RAA = 60	-----		ND (2007)	Byproduct of drinking water disinfection	
Total Trihalomethanes (ppb)	Distribution	RAA = 80	-----		3.3 (2007)	Byproduct of drinking water disinfection	
CORROSION CONTROL MONITORING							
Ortho-phosphate (ppm)	Distribution	TT (average 1.5 to 2.2)	-----	1.7—2.2	1.9	Byproduct of drinking water treatment	
pH	Distribution	TT (average 7.4 to 8.0)	-----	7.4—7.8	7.6	Runoff/leaching from natural deposits; seawater influence.	
LEAD AND COPPER IN HOMES (2008)							
Contaminant	Where Sampled	MCL	PHG	Number of Samples Collected	90th Percentile Level Detected	Number of Sites Found Above the AL	Potential Source of Contamination
Copper (ppb)	Homes	AL=1300	300	10	570	0	Internal corrosion of household water plumbing systems
Lead (ppb)	Homes	AL = 15	0.2	10	ND	0	
CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD (AESTHETICS)							
Contaminant (Reporting Units)	Where Sampled	MCL	PHG (MCLG)	Range Detected	Average Detected	Potential Source of Contamination	
Chloride (ppm)	Source	500	-----		20 (2008)	Runoff/leaching from natural deposits	
Color (CU)	Distribution	15	-----	ND—1	ND	Naturally occurring organic materials	
Manganese (ppb)	Delivered	50	-----	ND—21	ND	Leaching from natural deposits	
Odor – Threshold (TON)	Distribution	3	-----	1.1—1.6	1.2	Naturally occurring organic materials	
Specific Conductance (µS/cm)	Source	1600	-----	600—650	630 (2008)	Runoff/leaching from natural deposits	
Sulfate (ppm)	Source	500	-----	15—71	43 (2008)	Runoff/leaching from natural deposits	
Total Dissolved Solids (ppm)	Source	1000	-----	360—390	380 (2008)	Runoff/leaching from natural deposits	
Turbidity (NTU)	Distribution	5	-----	0.04—0.25	0.08	Soil runoff	
UNREGULATED CONTAMINANTS							
Contaminant (Reporting Units)	Where Sampled	MCL	PHG (MCLG)	Range Detected	Average Detected	Potential Source of Contamination	
Total Alkalinity as CaCO ₃ (ppm)	Source	-----	-----	250—290	270 (2008)	Runoff/leaching from natural deposit.	
Calcium (ppm)	Source	-----	-----	31—50	40 (2008)	Runoff/leaching from natural deposits	
Total Hardness (ppm)	Source	-----	-----	160—290	220 (2008)	Generally found in ground and surface water	
Magnesium (ppm)	Source	-----	-----	19—40	30 (2008)	Runoff/leaching from natural deposits	
Sodium (ppm)	Source	-----	-----	26—78	52 (2008)	Runoff/leaching from natural deposits	

KEY TERMS and ABBREVIATIONS

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

CFU/mL: Colony Forming Units per milliliter

MCL (Maximum Contaminant Level): 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.

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

µmS/cm (MicroSiemens per centimeter): A measure of electrical conductance.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): 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.

ND (Not Detected): Contaminant is not detectable at testing limit.

NTU: Nephelometric Turbidity Unit

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

PHG (Public Health Goal): 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.

ppm: parts per million, or milligrams per liter (mg/L)

ppb: parts per billion, or micrograms per liter (µg/L)

RAA (Running Annual Average): An arithmetic average of all samples is computed quarterly. This quarterly average is then averaged against the previous three quarters worth of data to provide an annual running average. The highest running average over a twelve month period is used for compliance.

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

TON: Threshold Odor Number

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

USEPA: United States Environmental Protection Agency

DRINKING WATER AND HEALTH RISKS

All 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 the 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.

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

DRINKING WATER NOTES

The water delivered to Santa Margarita customers meets the Federal and State drinking water requirements and overall can be considered very good water. The following are a few parameters that may be of interest to you.

Iron

Well #3 is a deep well that when **untreated**, can sometimes exceed the Secondary Drinking Water Standard for iron (300 ppb). In 2009, the **untreated** water iron levels ranged from ND to 860 ppb with an average of 69 ppb. Elevated iron levels can cause discoloration of clothing, water faucets, and toilets. For this reason, Well #3 has iron removal equipment installed at the well site. **After treatment**, the iron levels in the water ranged from ND to 19 ppb, well under the Secondary Drinking Water Standard. Water from Well #3 is always treated before it is delivered to the consumer.

Arsenic

Water from Well #3 contains low levels of arsenic, **but does meet the federal and state standard for arsenic**. The arsenic standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The U.S. Environmental Protection Agency continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Lead and Copper

The water in Santa Margarita tends to be corrosive to household and building pipes. Corrosion of pipes can introduce lead and copper into the water delivered from your tap. The USEPA has established primary drinking water regulations for lead and copper which requires monitoring "first-draw" water samples from residents' indoor taps. These samples are to be collected at high-risk homes, defined as homes with lead solder installed after 1982, homes with lead pipes, or homes with lead service lines. The water is collected by residents from a cold-water kitchen or bathroom tap. Prior to sampling, the water must be allowed to stand motionless in plumbing pipes for at least six hours. Residents are asked to fill out a simple form verifying that the sample was collected properly, as described in the supplied sampling instructions. Some of you may have participated in this sampling event in the past. The County of San Luis Obispo would like to "Thank you" for your participation. Your continued cooperation ensures the health and safety of Santa Margarita's drinking water.

Initial sampling for the Lead and Copper Rule was conducted in 1993. The first-draw water samples collected from residents' homes showed copper levels exceeding the action level (AL) of 1300 µg/L in 10% of the homes sampled. **Lead was not detected in any of the samples.** To comply with the Lead and Copper Rule, treatment with a combination of caustic soda (for adjustment of the pH) and potassium ortho-phosphate (a corrosion inhibitor) was initiated. Since this treatment began, **Santa Margarita has fully complied with the Lead and Copper Rule.** To demonstrate continued compliance, we are required to monitor for ortho-phosphate and pH in the distribution system on a weekly basis, and lead and copper at consumer's homes on a less frequent basis. The next lead and copper sampling event is scheduled for August, 2011.

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. The County of San Luis Obispo 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 USEPA at <http://www.epa.gov/safewater/lead> or from the Safe Drinking Water Hotline at 1(800) 426-4791.

PUBLIC PARTICIPATION

The Santa Margarita CSA 23 Advisory Committee meets the first Thursday of every month at 7:00 pm in the Community Hall on the corner of I and Murphy Streets. The public is welcome to attend.

The San Luis Obispo County Board of Supervisors meets every Tuesday (except the 5th Tuesday in a month) at 8:30am in the board chambers located in the new County Government Center, 1055 Monterey Street, San Luis Obispo. The Board holds budget hearings during the month of June. Interested persons should check the Board's agendas for specific dates. Agendas for all Board of Supervisors meetings are posted in some County libraries, the County Government Center, and on the Board of Supervisors internet web site at www.slocounty.ca.gov.

IMPORTANT INFO

The SLO County Public Works Department has begun a multi-phase project that will improve your water system.

Key waterlines were upsized, waterline loops were installed, and wharf head hydrants were upgraded to standard fire hydrants in 2009.

In 2010, a new 500,000 gallon water storage tank, pipeline, and access road will be constructed at the southwest end of town. Funding for these improvements will come from a low-interest loan and grant from the United States Department of Agriculture. CSA 23 water rates were increased in 2008 in order to repay the USDA loan.

Also in 2010, we anticipate a decision being made on a drought reliability program.

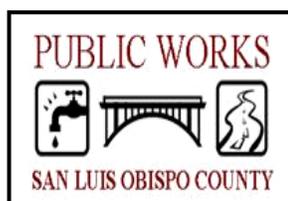
WATER CONSERVATION MEASURES



This sign will be posted when the average rainfall and groundwater levels are at or near normal levels. Residents would be entitled to all the water they can put to reasonable and beneficial use. **This is the current status.**

This sign will be posted to request all residents and business owners in Santa Margarita to voluntarily conserve water use so the water supply can remain adequate for everyone.

This sign will be posted when the groundwater drops significantly below normal levels and the supply appears at risk. Mandatory conservation measures would also be implemented.



We're on the Web! www.slocountywater.org