



ANNUAL
WATER
QUALITY
REPORT

Water testing performed in 2009

Presented By:



PWS ID#: 4010009

Maintaining High Standards

Once again we are proud to present our annual water quality report. This report covers all testing performed between January 1, 2009, and December 31, 2009. The events of the past few years have presented many of us with challenges we could not have imagined. Yet in spite of this, we have maintained our high standards in an effort to continue delivering the best quality drinking water possible. There may be other hurdles in the future, but know that we will always stand behind you and the drinking water we work diligently to provide.

We encourage you to share your thoughts with us on the information contained in this report. Should you ever have any questions, we are always available to assist you.

Information on the Internet

The U.S. EPA Office of Water (www.epa.gov/watrhome) and the Centers for Disease Control and Prevention (www.cdc.gov) Web sites provide a substantial amount of information on many issues relating to water resources, water conservation, and public health. Also, the Division of Drinking Water and Environmental Management has a Web site (<http://www.cdph.ca.gov/programs/Pages/DWP.aspx>) that provides complete and current information on water issues in California, including valuable information about our watershed. Other Utility Department information can be found on the City's Web site (<http://www.slocity.org/utilities/index.asp>).

Where Does My Water Come From?

The City of San Luis Obispo is fortunate to have several sources of water. The Salinas Reservoir (also known as Santa Margarita Lake, eight miles east of Santa Margarita) is our primary source of water, with Whale Rock Reservoir (Cayucos) being our secondary, backup supply. The surface water from the two lakes is treated at the Stenner Creek Water Treatment Plant. At present, well water is used to meet a small percentage – less than 2 percent – of the City's demand for water. The active well is the Pacific Beach Well #1 (Los Osos Valley Road). During 2009 our treatment plant and wells delivered 2.1 billion gallons of water to San Luis Obispo.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) 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 (800) 426-4791 or www.epa.gov/safewater/hotline/.



Substances That Could Be in 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.

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

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 can 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, which are by-products of industrial processes and petroleum production and which can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems;

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

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Community Participation

City council meetings are held on the first and third Tuesday of each month at 7:00 p.m. at City Hall, 990 Palm Street, San Luis Obispo, California. A public comment period is held at the beginning of each meeting.

Questions?

For more information about this report, or for any questions relating to your drinking water, please call Dean Furukawa, Water Treatment Plant Supervisor, at (805) 781-7566.

Source Water Assessment

An assessment of the drinking water sources for the City of San Luis Obispo was conducted in July 2001. The surface water sources, Salinas Reservoir and Whale Rock Reservoir, are considered most vulnerable to the following activities, although no associated contaminants have been detected: cattle grazing and historic mining activities. To request a summary of the assessment, contact Kurt Souza, District Engineer, Santa Barbara District, at (805) 566-1326 or the City of San Luis Obispo at (805) 781-7215.

A copy of the complete assessment is available from Department of Health Services, 1180 Eugenia Place, Suite 200, Carpinteria, California 93013, or the City of San Luis Obispo, 879 Morro Street, San Luis Obispo, California 93401.

Lead and Drinking Water

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. We are 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/lead.

Stormwater Runoff Affects Water Quality

Runoff from our urban areas affects the water quality in our creeks and the ocean. Anything that enters a storm drain ends up in our creeks and eventually flows untreated to the ocean. Although you may think the impact of one person or business is insignificant, the combined pollution of an entire city is monumental. Here are a few ways that you can help stop polluted runoff:

- Avoid over watering your lawn. Dirt, chemicals, and clippings can wash into the storm drain.
- Do not wash debris from the driveway and sidewalks into the gutter.
- Pick up after your pets. Pet waste can harm aquatic life as it decomposes in our waterways. Dispose of pet waste in the trash.
- Drain your swimming pool or spa to the sewer, never to the gutter.
- Properly dispose of household hazardous wastes such as automobile fluids, paints, and fertilizers by taking them to the household collection center at Cold Canyon Landfill.
- Maintain your cars to prevent fluids from dripping onto the streets and your driveway.
- When doing minor or major construction projects around your home or business, properly contain and dispose of all construction wastes.
- Place your yard waste into a green waste bin or into a compost pile.
- If you live next to a creek, don't dispose of yard waste, pet waste, excess dirt, or BBQ ashes on the creek bank.
- Cover your trash cans to prevent trash from blowing into the storm drains and creek.

Sampling Results

During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. Although all of 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 the substance was present in the water. The State requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Aluminum (ppm)	2009	1	0.6	0.161	ND–0.280	No	Erosion of natural deposits; residue from some surface water treatment processes
Barium (ppm)	2009	1	2	0.081	0.048–0.114	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Chlorine (ppm)	2009	[4.0 (as Cl ₂)]	[4 (as Cl ₂)]	0.75	ND–1.2	No	Drinking water disinfectant added for treatment
Chromium (ppb)	2009	50	(100)	8.0	1.0–15	No	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Control of DBP precursors [TOC] ¹ (% removal)	2009	TT	NA	25	4–56	No	Various natural and man-made sources
Fluoride ² (ppm)	2009	2.0	1	0.81	0.6–1.0	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity (pCi/L)	2005	15	(0)	0.58	ND–1.16	No	Erosion of natural deposits
Haloacetic Acids ³ (ppb)	2009	60	NA	14.6	4.0–67.0	No	By-product of drinking water disinfection
Nickel (ppb)	2009	100	12	1.5	1.0–2.0	No	Erosion of natural deposits; discharge from metal factories
Nitrate [as nitrate] (ppm)	2009	45	45	5.37	0.70–8.0	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
TTHMs [Total Trihalomethanes] ³ (ppb)	2009	80	NA	53.1	17.8–203.0	No	By-product of drinking water chlorination
Turbidity ⁴ (NTU)	2009	TT	NA	0.07	0.05–0.14	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2009	TT	NA	100%	NA	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG	AMOUNT DETECTED (90TH% TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2007	1.3	0.3	0.159	0/30	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2007	15	2	1.9	0/30	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Aluminum (ppb)	2009	200	NS	161	ND–280	No	Erosion of natural deposits; residual from some surface water treatment processes
Chloride (ppm)	2009	500	NS	26	24–28	No	Runoff/leaching from natural deposits; seawater influence
Specific Conductance (micromhos)	2009	1,600	NS	669	546–792	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2009	500	NS	53	23–83	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2009	1,000	NS	375	300–450	No	Runoff/leaching from natural deposits

¹Total organic carbon (TOC) has no health effects. However, TOC provides a medium for the formation of disinfection by-products such as TTHMs and HAA5s. The City's TOC reduction requirement varies from 15 percent to 25 percent on a running annual average calculated quarterly.

²The City currently adds fluoride to the treated water produced by the water treatment plant to achieve an optimum target residual of 0.8 ppm. Some limited areas in the city along Los Osos Valley Road receive a blend of surface water and ground water that may have a lower fluoride residual, from 0.4 ppm to 0.9 ppm.

³We were required by the U.S. EPA to conduct an evaluation of our distribution system. This is known as an Initial Distribution System Evaluation (IDSE) and is intended to identify locations in our distribution system that have elevated disinfection by-product concentrations. Disinfection by-products (e.g., HAAs and TTHMs) result from continuous disinfection of drinking water and form when disinfectants combine with organic matter that naturally occurs in the source water.

⁴Turbidity 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. During the reporting year, 100 percent of all samples taken to measure turbidity met water quality standards.

Definitions

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

Amount Detected: The average of the total actual analyses.

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. Secondary MCLs (SMCLs) are set to protect the odor, taste, and appearance of drinking water.

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 U.S. EPA.

micromhos: 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.

NA: Not applicable.

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NS: No standard.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

pCi/L (picocuries per liter): A measure of radioactivity.

PDWS (Primary Drinking Water Standard): 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 EPA.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

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