



ANNUAL
WATER REPORT
Reporting Year 2011

PWSID#: CA4210006

This report was prepared by:
City of Lompoc Water Division
601 East North Ave.
Lompoc, CA 93436

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

Meeting the Challenge

We are once again proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2011. Over the years, we have dedicated ourselves to producing drinking water that meets or exceeds all state and federal standards. We continually strive to adopt new methods for delivering the best quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users. Thank you for allowing us to continue providing you and your family with quality drinking water.



For more information about this report, or for any questions relating to your drinking water, please call Lydia Cardenas, City of Lompoc Water Treatment Plant Chemist, at (805) 736-1617, or visit our City of Lompoc Water Division Web site at <http://www.cityoflompoc.com/utilities/water/>.

Community Participation

Included in the oversight of the Water Division are the City Council and Utility Commission; following are their public meeting information.

You are invited to participate in the monthly Utility Commission meetings held on the second Monday of the month, starting at 6pm at 100 Civic Center Plaza (Lompoc City Hall, Utility Conference Room). Public communications are scheduled at the beginning of the meeting agenda.

Also, the City Council meets the first and third Tuesday of each month, where public communication time is available. Meetings are held at 7pm at 100 Civic Center Plaza, City Hall.

Where Does My Water Come From?

The City of Lompoc's source of supply is from ten groundwater wells. The annual production of clean drinking water for the City was 1.47 billion gallons or 4.04 million gallons per day.

Some customers in Miguelito Canyon, including Santa Barbara County Miguelito Park, receive treated surface water from Frick Springs. The annual production for Frick Springs was 3.21 million gallons.

Water Treatment Process

The City of Lompoc uses a conventional treatment process to ensure the safety and quality of our drinking water. Our process consists of disinfection, coagulation, flocculation, sedimentation, and filtration. Constructed in 1964, the treatment plant was originally designed to allow filtration of approximately 6 million gallons per day (MGD); with some enhancements and additions of filters, our capability is now approximately 10 MGD.

The City of Lompoc is also responsible for the operation of Frick Springs treatment plant. This plant consists of small diatomaceous earth (DE) filtration and disinfection systems. The water treated at this plant is collected from seven springs located in the upper hills of Miguelito Canyon. Frick Springs water treatment plant must comply with the Surface Water Treatment Rule (SWTR).

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.

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 <http://water.epa.gov/drink/hotline>.

Lead in Home Plumbing

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.

Non-detected Contaminants

The following regulated constituents were NOT DETECTED in the City of Lompoc and Frick Springs drinking water:

Boron, Color, Odor, Mercury (inorganic); Nitrate (as nitrate); Odor-Threshold; Perchlorate; and negative results for Total and Fecal coliform and *E. coli* bacteria (Federal Ground Water Rule and Total Coliform Rule).

Fact or Fiction

Tap water is cheaper than soda pop. *(Fact: You can refill an 8 oz. glass of tap water approximately 15,000 times for the same cost as a six-pack of soda pop. And, water has no sugar or caffeine.)*

Methods for the treatment and filtration of drinking water were developed only recently. *(Fiction: Ancient Egyptians treated water by siphoning water out of the top of huge jars after allowing the muddy water from the Nile River to settle. And, Hippocrates, known as the father of medicine, directed people in Greece to boil and strain water before drinking it.)*

A typical shower with a non-low-flow showerhead uses more water than a bath. *(Fiction: A typical shower uses less water than a bath.)*

Water freezes at 32 degrees Fahrenheit. *(Fiction: You can actually chill very pure water past its freezing point (at standard pressure) without it ever becoming solid.)*

The Pacific Ocean is the largest ocean on Earth. *(Fact: The Atlantic Ocean is the second largest and the Indian Ocean is the third largest.)*

A single tree will give off 70 gallons of water per day in evaporation. *(Fact)*

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. The state allows 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. A complete list is available at City Hall and the Lompoc Public Library.

REGULATED SUBSTANCES									
				City of Lompoc		Frick Springs			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Arsenic ¹ (ppb)	2011	10	0.004	0.6 (annual average)	ND-3	4	NA	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium (ppm)	2011	1	2	0.0086	NA	0.0907	NA	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Cadmium (ppb)	2011	5	0.04	ND	NA	0.5	NA	No	Internal corrosion of galvanized pipes; erosion of natural deposits; discharge from electroplating and industrial chemical factories, and metal refineries; runoff from waste batteries and paints
Chlorine (ppm)	2011	[4.0 (as Cl ₂)]	[4 (as Cl ₂)]	1.42 (as Total Cl ₂)	1.39-1.44	1.5 (as Free Cl ₂)	1.2-2.5	No	Drinking water disinfectant added for treatment
Chromium ² (ppb)	2011	50	(100)	ND	NA	4	NA	No	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Fluoride ³ (ppm)	2011	2.0	1	ND	NA	0.2	NA	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Haloacetic Acids (ppb)	2011	60	NA	2	NA	8	NA	No	By-product of drinking water disinfection
Nickel (ppb)	2011	100	12	ND	NA	4	NA	No	Erosion of natural deposits; discharge from metal factories
Selenium (ppb)	2011	50	30	4	NA	14	NA	No	Discharge from petroleum, glass, and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive)
TTHMs [Total Trihalomethanes] (ppb)	2011	80	NA	6.3	NA	22.9	NA	No	By-product of drinking water disinfection
Tap water samples were collected for lead and copper analyses with the cooperation of 36 homeowners throughout the community									
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG (MCLG)	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE		
Copper (ppm)	2010	1.3	0.3	0.136	0/36	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives		
Lead (ppb)	2010	15	0.2	2.2	0/36	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits		

SECONDARY SUBSTANCES

		City of Lompoc				Frick Springs			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2011	500	NS	104	85–124	59	NA	No	Runoff/leaching from natural deposits; seawater influence
Iron (ppb)	2011	300	NS	20	ND–140	50	NA	No	Leaching from natural deposits; industrial wastes
Manganese (ppb)	2011	50	NS	2.1	ND–6.0	ND	NA	No	Leaching from natural deposits
Specific Conductance ⁴ (µS/cm)	2011	1,600	NS	1,192	1,179–1,210	943	903–1,011	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2011	500	NS	416	338–500	80	NA	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2011	1,000	NS	787	700–900	580	NA	No	Runoff/leaching from natural deposits
Turbidity ^{4,5} (NTU)	2011	5	NS	0.14	0.09–0.28	0.10	0.07–0.19	No	Soil runoff

UNREGULATED AND OTHER SUBSTANCES

		City of Lompoc		Frick Springs			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE	
pH ⁴ (Units)	2011	NA	8.24–8.50	NA	7.22–7.56	Treatment process	
Sodium ⁶ (ppm)	2011	148	119–176	45	NA	Sodium refers to the salt present in the water and is generally naturally occurring	
Total Hardness as CaCO₃ (ppm)	2011	305	277–336	439	NA	Hardness is the sum of polyvalent cations present in the water, generally magnesium and calcium. The cations are usually naturally occurring	
Vanadium (ppb)	2011	ND	NA	16	NA	Naturally occurring; also associated with hazardous wastes sites	

¹ Low detected amounts of Arsenic in June, August, and September in the City of Lompoc were reported to the state office. All other months were Not Detected.

² This result includes Chromium VI and is reported as Total Chromium.

³ Our treatment process does NOT add fluoride.

⁴ Results for pH, specific conductance, and turbidity are from distribution system samples.

⁵ Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

⁶ Our softening process adds sodium to the drinking water. Consumers on sodium-restricted diets may wish to consult with their physicians.

Definitions

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

µS/cm (microsiemens per centimeter): A unit expressing the amount of electrical conductivity of a solution.

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.

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.

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).