

# 2009 Consumer Confidence Report

## City of Lompoc - Water Division



We are pleased to present our year **2009** water quality report. This report is designed to inform you about the quality of drinking water we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. The results listed in this report **MEET OR EXCEED ALL FEDERAL AND STATE REQUIREMENTS.**

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

### Water Source and Assessment

The City of Lompoc's source of supply is groundwater. Some customers in Miguelito Canyon, including Santa Barbara County Miguelito Park, receive treated surface water (Frick Springs). Source-water assessments were completed for both supplies. Frick Springs is considered most vulnerable to agriculture and industrial activities. The City's groundwater supplies are more vulnerable to contamination from urban or storm water runoff, leaking fuel tanks, or sewer leaks.

### Important Health Information

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The mere presence of contaminants does **not** indicate that water poses a health risk.

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 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, 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.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the California State Department of Public Health (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The Department regulations also establish limits for contaminants in bottled water that must provide the same protection for public health. More information about contaminants and potential health effects can be obtained by calling the *USEPA's Safe Drinking Water Hotline*.

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 City of Lompoc 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 <http://www.epa.gov/safewater/lead>.

Some people may be more vulnerable to trace contaminants in drinking water than the general population. Immuno-compromised people, such as persons with cancer undergoing chemotherapy, or persons who have undergone organ transplants, or people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. If concerned, such 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)**.

### TERMS and ABBREVIATIONS set by the USEPA:

**-Public Health Goal or 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.

**-Maximum Contaminant Level Goal or MCLG:** The level of a contaminant in drinking water below which there is no known or expected risk to health.

**-Maximum Contaminant Level or 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 Residual Disinfectant Level (MRDL):** 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.

**-Minimal Risk Level or MRL:** An estimate of daily human exposure to a chemical that is likely to be without an appreciable risk of deleterious effects (noncancerous) over a specified duration of exposure.

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

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

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

**-Treatment Technique or TT:** A required process intended to reduce the level of a contaminant in drinking water as indicated in *Table 2 for Turbidity*.

n/a	=	not applicable
ND	=	None Detected
pCi/L	=	picocuries per liter - a measure of radioactivity
ppm	=	parts per million, or milligrams per liter (mg/L) - a measure of constituent
ppb	=	parts per billion, or micrograms per liter (µg/L) - a measure of constituent
µmhos/cm	=	micromhos per centimeter - a measure of electric conductivity
TON	=	threshold odor number - a measure of odorants
NTU	=	nephelometric turbidity unit - a measure of clarity
^	=	highest detected level

We will be happy to answer any questions you may have. For more information about your drinking water, contact Lydia Cardenas, the City of Lompoc Water Treatment Plant Chemist at (805) 736-1617.

# Water Quality Table 1

				City of Lompoc Drinking Water	2009 Frick's Drinking Water	
Inorganic Contaminants (units)	Date Tested	PHG (MCLG)	MCL	Detected Level	Detected Level	Major Sources
Arsenic (ppb)	2009	0.004	10	ND	3	Erosion of natural deposits; runoff from orchards, glass and electronics production wastes.
Barium (ppm)	2009	2	1	0.007	0.085	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Boron (ppb)	2009	---	AL=1000	200	ND	The main sources of domestic boron in the environment are laundry products, sewage, agricultural chemicals and fertilizers, coal combustion mining and glass and ceramics manufacturing
Cadmium (ppb)	2009	0.04	5	ND	0.4	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
Chromium (ppb)	2009	(100)	50	ND	ND	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Copper (ppm)	2007	0.3	AL=1.3	0.08 90th percentile level	ND	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride (ppm)	2009	1	2.0	ND	0.2	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Lead (ppb)	2007	0.2	AL=15	1.1 90th percentile level	ND	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Mercury [inorganic] (ppb)	2009	1.2	2	ND	ND	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and cropland
Nickel (ppb)	2009	12	100	ND	5	Erosion of natural deposits; discharge from metal factories
Nitrate (ppm) as NO3	2009	45	45	ND	ND	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Perchlorate (ppb)	2009	6	6	ND	ND	Perchlorate is an inorganic chemical used in solid rocket propellant, fireworks, explosives, flares, matches, and a variety of industries. It usually gets into drinking water as a result of environmental contamination from historic aerospace or other industrial operations that used or use, store, or dispose of perchlorate and its salts.
Selenium (ppb)	2009	(50)	50	7	6	Discharge from petroleum, glass, and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturer; runoff from livestock lots (feed additive)
Vanadium (ppb)	2009	---	AL=50	ND	17	Naturally-occurring; also associated with hazardous waste sites

Many other organic/inorganic contaminants were analyzed and determined to be less than the MCL or none detected. This list includes pesticides, herbicides, volatile, synthetic, and unregulated chemicals.

Each testing year additional chemicals are analyzed. A complete list is available at City Hall and the Lompoc Public Library.

Since 1993, the City has routinely sampled 30-45 homes to determine compliance under the Lead and Copper Rule. The 2007 testing year was done with the cooperation of 30 homeowners. Each sample was collected from the homeowners tap. In every case, results were below the action levels.

Annual production for the City was 1616.6 million gallons or 4.43 million gallons per day.

963 samples from the distribution system, reservoirs, wells, and 211 distribution samples from Frick Springs were tested for total coliform bacteria. A system is in compliance when no more than 5% of the total samples each month are coliform-positive. Both drinking water systems met and exceeded this standard after treatment.

Microbiological Contaminants	Date Tested	PHG (MCLG)	MCL	Detected Level(2009)	Detected Level(2009)	Major Sources
Fecal Indicators (E. coli, enterococci or coliphage) (Federal Ground Water Rule)	weekly	n/a	TT	0	n/a	Human and animal fecal waste
Fecal Coliform/E. Coli (Total Coliform Rule)	weekly	(0)	1 /month	0	0	Human and animal fecal waste
Total Coliform (Total Coliform Rule)	weekly	(0)	5% /month	^ 2.63% *	0	Naturally present in the environment

\* Two total coliform positives found in March with all successive repeat samples negative.

## Water Quality Table 2

		City of Lompoc Drinking Water			Frick's Drinking Water	
Radioactive Contaminants (units)	Date Tested	MCL	Average	Range	(2009) Detected Level	Major Sources
Gross Alpha (pCi/L) <PHG = n/a>	2009	15	2.88	1.52-4.18	4.04	Erosion of natural deposits in untreated water
Uranium (pCi/L) <PHG = 0.43>	2009	20	2.16	1.16-3.16	2.25	Erosion of natural deposits in untreated water
Radium 226 (pCi/L) <PHG = 0.05>	2009	5	n/a	n/a	n/a	Erosion of natural deposits in untreated water
Radium 228 (pCi/L) <PHG = 0.019>	2009	5	n/a	n/a	n/a	Erosion of natural deposits in untreated water

Drinking water is in compliance if Gross Alpha activity does not exceed an average of 5 pCi/L. If samples exceed 5 pCi/L then water is resampled and analyzed for Uranium and Radium 226/228 in accordance with the Federal EPA and the California Radionuclide Drinking Water Standards. The data reflects the most current year tested.

Disinfection Byproducts, Residuals, and Byproduct Precursors	Date Tested	MCL	(2009) Average	(2009) Range	(2009) Detected Level	Major Sources
Total Chlorine Residual (ppm)	Mthly/Avg	MRDL=4.0(as Cl <sub>2</sub> )	1.39	1.28-1.43		Drinking water disinfectant added for treatment
Free Chlorine Residual (ppm)	Mthly/Avg	MRDL=4.0(as Cl <sub>2</sub> )			1.4	Drinking water disinfectant added for treatment
Total Trihalomethanes (TTHMs) (ppb)	2009	80	3.0	--	20.5	By-product of drinking water chlorination
Bromodichloromethane (ppb)	2009	--	0.6	--	4.2	By-product of drinking water chlorination
Bromoform (ppb)	2009	--	0.9	--	6.8	By-product of drinking water chlorination
Chloroform (ppb)	2009	--	0.8	--	0.8	By-product of drinking water chlorination
Dibromochloromethane (ppb)	2009	--	0.7	--	8.7	By-product of drinking water chlorination

The City of Lompoc Water Department's Stage 1 Disinfection Byproduct Rule monitoring has consistently revealed low levels of TTHMs and HAA5s, and has been granted the 40/30 waiver to to reduce monitoring in the main distribution and Frick Springs system to an annual basis.

Secondary Contaminants (units)	Date Tested	MCL	(2009) Average	(2009) Range	(2009) Detected Level	Major Sources
Color (units) *	Mthly/Avg	15	<3	<3	<3	Naturally -occurring organic materials
Corrosivity	Mthly/Avg	non-corrosive	non-corrosive	non-corrosive	non-corrosive	Natural or industrially-influenced balance of hydrogen, carbon and oxygen in the water; affected by temperature and other factors.
Iron (ppb)	Mthly/Avg	300	9	ND-70	ND	Leaching from natural deposits; industrial wastes
Manganese (ppb)	Mthly/Avg	50	1.7	ND-3.8	ND	Leaching from natural deposits; industrial wastes
Odor-Threshold (TON) *	Mthly/Avg	3	<1	<1	<1	Naturally-occurring organic materials
Total dissolved solids (ppm)	Mthly/Avg	1000	797	696-930	560	Runoff/leaching from natural deposits
Specific conductance umhos/cm *	Mthly/Avg	1600	1217	1188-1245	952	Substances that form ions when in water;seawater influence
Chloride (ppm)	Mthly/Avg	500	99	85-138	57	Runoff/leaching from natural deposits; seawater influence
Sulfate (ppm)	Mthly/Avg	500	422	368-520	81	Runoff/leaching from natural deposits; industrial wastes

Turbidity 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. High turbidity can hinder the disinfection process.

What Is . . . .  
Parts per million - one part per million corresponds to a single penny in \$10,000.  
Parts per billion - one part per billion corresponds to a single penny in \$10,000,000.

Additional Constituents	Date Tested	MCL	(2009) Average	(2009) Range	(2009) Detected Level	Major Sources
Total Alkalinity as CaCO <sub>3</sub> (ppm)	Mthly/Avg	--	37	30-51	350	Runoff/leaching from natural deposits
Total Hardness as CaCO <sub>3</sub> (ppm)	Mthly/Avg	--	306	271-380	413	Hardness is the sum of polyvalent cations present in the water, generally magnesium and calcium. The cations are usually naturally occurring.
Calcium as Ca (ppm)	Mthly/Avg	--	64.0	62.2-65.5	88	Runoff/leaching from natural deposits
Sodium (ppm)	Mthly/Avg	--	146	116-184	40	Sodium refers to the salt present in the water and is generally naturally occurring.
Turbidity (NTU) *	Mthly/Avg	TT=5 NTU	0.11	0.08-0.18	^ 0.16	Soil runoff
pH units *	Mthly/Avg	--	n/a	8.18-8.52	7.35-7.58	Treatment process

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

**Footnotes:**  
\* Distribution system samples.

# Only Tap Water Delivers!

Water Quality Table 3

USEPA Unregulated Contamination Monitoring Regulation 2 (UCMR2)

List 1 Assessment Monitoring

Chemical Contaminant	MRL (ppb)	MCL	PHG MCLG	Date Tested	City of Lompoc Drinking Water Detected Level	Date Tested	Frick's Drinking Water Detected Level
Dimethoate	0.7	n/a	n/a	Sep-09	Less than MRL	Sep, Dec -09	Less than MRL
Terbufos sulfone	0.4	n/a	n/a	Sep-09	Less than MRL	Sep, Dec -09	Less than MRL
2,2',4,4'-tetrabromodiphenyl ether (BDE-47)	0.3	n/a	n/a	Sep-09	Less than MRL	Sep, Dec -09	Less than MRL
2,2',4,4',5-pentabromodiphenyl ether (BDE-99)	0.9	n/a	n/a	Sep-09	Less than MRL	Sep, Dec -09	Less than MRL
2,2',4,4',5,5'-hexabromobiphenyl (HBB)	0.7	n/a	n/a	Sep-09	Less than MRL	Sep, Dec -09	Less than MRL
2,2',4,4',5,5'-hexabromodiphenyl ether (BDE-153)	0.8	n/a	n/a	Sep-09	Less than MRL	Sep, Dec -09	Less than MRL
2,2',4,4',6-pentabromodiphenyl ether (BDE-100)	0.5	n/a	n/a	Sep-09	Less than MRL	Sep, Dec -09	Less than MRL
1,3-dinitrobenzene	0.8	n/a	n/a	Sep-09	Less than MRL	Sep, Dec -09	Less than MRL
2,4,6-trinitrotoluene (TNT)	0.8	n/a	n/a	Sep-09	Less than MRL	Sep, Dec -09	Less than MRL
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1	n/a	n/a	Sep-09	Less than MRL	Sep, Dec -09	Less than MRL

Note: Final Sampling to be completed in June 2010