



ANNUAL WATER QUALITY REPORT

Water testing performed in 2003

Proudly Presented By:
CITY OF LOMA LINDA

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Continuing Our Commitment

Once again we proudly present our annual water quality report. This edition covers all testing completed from January through December 2003. We are pleased to tell you that our compliance with all state and federal drinking water laws remains exemplary. As in the past, we are committed to delivering the best quality drinking water. To that end, we remain vigilant in meeting the challenges of source water protection, water conservation, and community education while continuing to serve the needs of all of our water users.



For more information about this report, or for any questions relating to your drinking water, please call Greg Snyder, Utilities Supervisor, at (909) 499-4410.

Where Does My Water Come From?

In 2003, the City of Loma Linda customers were fortunate because they enjoyed an abundant water supply from six sources. Our six sources consist of Richardson Wells 1, 3, and 4, and Mountain View Wells 3, 4, and 5. All of the city's wells are located in the Bunker Hill Basin. The Bunker Hill Basin is a vast natural underground water storage area referred to as an aquifer. The Bunker Hill Basin is located between the San Bernardino Mountain Range to the southern hills of Loma Linda. The water that replenishes the Bunker Hill Basin comes from annual rainfall and snow pack from the San Bernardino Mountain Range. The wells are located in the northern area of the City of Loma Linda.

Loma Linda also uses a supplemental supply of water from the City of San Bernardino Municipal Water Department. Both the City of Loma Linda and the City of San Bernardino Municipal Water Department fall under the same regulations for water set forth by the United States Environmental Protection Agency (U.S. EPA) and the State of California Department of Health Services (CDHS).

Drinking Water Source Assessment

To protect and find any potential contamination sources of our water supply, the City of Loma Linda completed a Drinking Water Source Assessment for each well. These assessments were completed as follows: Mountain View Well #3, November 1999; Richardson Well #4, February 2000; Mountain View # 4, May 2000; Richardson Wells #1 and #3, November 2000; and Mountain View #5, February 2003.

The Drinking Water Source Assessment is the first step in the development of a complete drinking water source protection program. The Assessment includes a delineation of the area around a drinking water source through which contaminants might flow to reach that drinking water supply. In addition, it includes an inventory of activities that might lead to the release of microbiological or chemical contaminants within the delineated area. This enables a determination to be made as to whether or not the drinking water source might be vulnerable to contamination. All information obtained during the assessment process is provided to CDHS for review.

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 can 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) 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.

Contamination from Cross-Connections

Cross-connections that could contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment (boilers), systems containing chemicals (air conditioning systems, fire sprinkler systems, irrigation systems) or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the equipment or system is greater than the pressure inside the drinking water line (backpressure). Contamination can also occur when the pressure in the drinking water line drops due to fairly routine occurrences (main breaks, heavy water demand) causing contaminants to be sucked out from the equipment and into the drinking water line (backsiphonage).

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or when attached to a chemical sprayer for weed killing. Fertilizers, cesspools or garden chemicals may contaminate garden hoses that are left lying on the ground. Improperly installed valves in your toilet could also be a source of cross-connection contamination.

Community water supplies are continuously jeopardized by cross-connections unless appropriate valves, known as backflow prevention devices, are installed and maintained. We have surveyed all industrial, commercial, and institutional facilities in the service area to make sure that all potential cross-connections are identified and eliminated or protected by a backflow preventer. We also inspect and test each backflow preventer to make sure that it is providing maximum protection.

For more information, visit the Web site of the American Backflow Prevention Association (www.abpa.org) for a discussion on current issues.

You are invited to participate in our public forum and voice your concerns about your drinking water. The city council meets the second and fourth Tuesday of each month beginning at 7:00 p.m. at the City of Loma Linda Council Chamber located at 25541 Barton Road, Loma Linda, California.

Substances That Might Be in 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.



In order to ensure that tap water is safe to drink, the U.S. EPA and the California Department of Health Services (CDHS) prescribe regulations that limit the amount of certain substances in water provided by public water systems. CDHS 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 substances. The presence of contaminants does not necessarily indicate that water poses a health risk.

Substances 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.

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.

Lead in Drinking Water

Lead is a naturally occurring element in our environment. Consequently, our water supply is expected to contain small, undetectable amounts of lead. However, most of the lead in household water usually comes from the plumbing in your own home, not from the local water supply. The U.S. EPA estimates that more than 40 million U.S. residents use water that can contain lead in excess of the U.S. EPA's Action Level of 15 ppb (parts per billion).

Lead in drinking water is a concern because young children, infants and fetuses appear to be particularly vulnerable to lead poisoning. A dose that would have little effect on an adult can have a big effect on a small body. On average, it is estimated that lead in drinking water contributes between 10% and 20% of total lead exposure in young children.

All kinds of water, however, may have high levels of lead. We maintain our drinking water supply at an optimum pH and mineral content level to help prevent corrosion in your home's pipes. To reduce lead levels in your drinking water you should flush your cold-water pipes by running the water until it becomes as cold as it will get (anywhere from five seconds to two minutes or longer) and use only water from the cold-water tap for drinking, cooking, and especially for making baby formula. Hot water is likely to contain higher levels of lead.

For more information, please contact National Lead Information Center at (800) LEAD-FYI and the Safe Drinking Water Hotline at (800) 426-4791.

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.

PRIMARY DRINKING WATER STANDARD (Regulated in order to protect against possible adverse health effects.)

SUBSTANCE (UNITS)	YEAR SAMPLED	MCL	PHG (MCLG)	AMOUNT DETECTED	RANGE (LOW-HIGH)	VIOLATION	TYPICAL SOURCE
Arsenic (ppb) ¹	2003	50	NA	15.3	ND-25	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Dibromochloropropane [DBCP] (ppt)	2003	200	170	15	ND-26	No	Banned nematocide that may still be present in soils due to runoff/leaching from former use on soybeans, cotton, vineyards, tomatoes, and tree fruit
Dibromochloropropane after TT (ppb)	2003	200	170	0.15	ND-0.026	No	Banned nematocide that may still be present in soils due to runoff/leaching from former use on soybeans, cotton, vineyards, tomatoes, and tree fruit
Fluoride (ppm)	2003	2	1	1.03	ND-3.4	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Fluoride after TT (ppm)	2003	2	1	1.03	1-1.5	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

SECONDARY DRINKING WATER STANDARD (Regulated in order to protect the odor, taste and appearance of drinking water.)

SUBSTANCE (UNITS)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE (LOW-HIGH)	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2003	500	NS	23.6	7.6-29	No	Runoff/leaching from natural deposits; seawater influence
Specific Conductance (µmhos/cm)	2003	1,600	NS	361	300-440	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2003	500	NS	34.5	29-42	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids [TDS] (ppm)	2003	1,000	NS	203	170-440	No	Runoff/leaching from natural deposits
Turbidity (NTU)	2003	5	NS	0.15	ND-0.5	No	Soil runoff

UNREGULATED SUBSTANCES

SUBSTANCE (UNITS)	YEAR SAMPLED	AMOUNT DETECTED	RANGE (LOW-HIGH)
Vanadium (ppb)	2003	48.12	13-120

¹Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

PERCHLORATE SAMPLING

SUBSTANCE (UNITS)	YEAR SAMPLED	AMOUNT DETECTED	RANGE (LOW-HIGH)
Perchlorate (ppb)	2003	6.61	ND-17.0
Perchlorate after TT (ppb)	2003	ND	NA

Table Definitions

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

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 (SMCL) 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.

NA: Not applicable

ND: Not detected

NS: No standard

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water.

PDWS (Primary Drinking Water Standard): MCLs 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).

ppt (parts per trillion): One part substance per trillion parts water (or nanograms per liter).

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

µmhos/cm (micromhos per centimeter): A measure of electrical conductance.

Perchlorate in the News

Perchlorate is an inorganic chemical used in manufacturing rocket fuels and explosives. At high concentrations in drinking water, it can interfere with the ability of the thyroid gland to produce hormones necessary for normal growth and development. Perchlorate was first detected in drinking water wells in northern California in 1997. It was later detected in many water wells elsewhere in the state, as well as in the Colorado River (an important source of drinking water). The source of contamination of the Colorado River has been determined to be an industrial site in Nevada.

In January 2002, the U.S. EPA revised the health-related guideline for perchlorate. The new guideline indicates that the advisory level issued by the CDHS may be too high, so the agency has reduced the advisory level for perchlorate to 4 ppb. CDHS has not yet issued a Maximum Contaminant Level for perchlorate.

We will be watching this situation closely. We are confident that sufficient action is under way to remove the source of contamination to the Colorado River. Please call us for more information or for an update on the removal process.

