

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 Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board 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, that are by-products of industrial processes and petroleum production and that can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems;

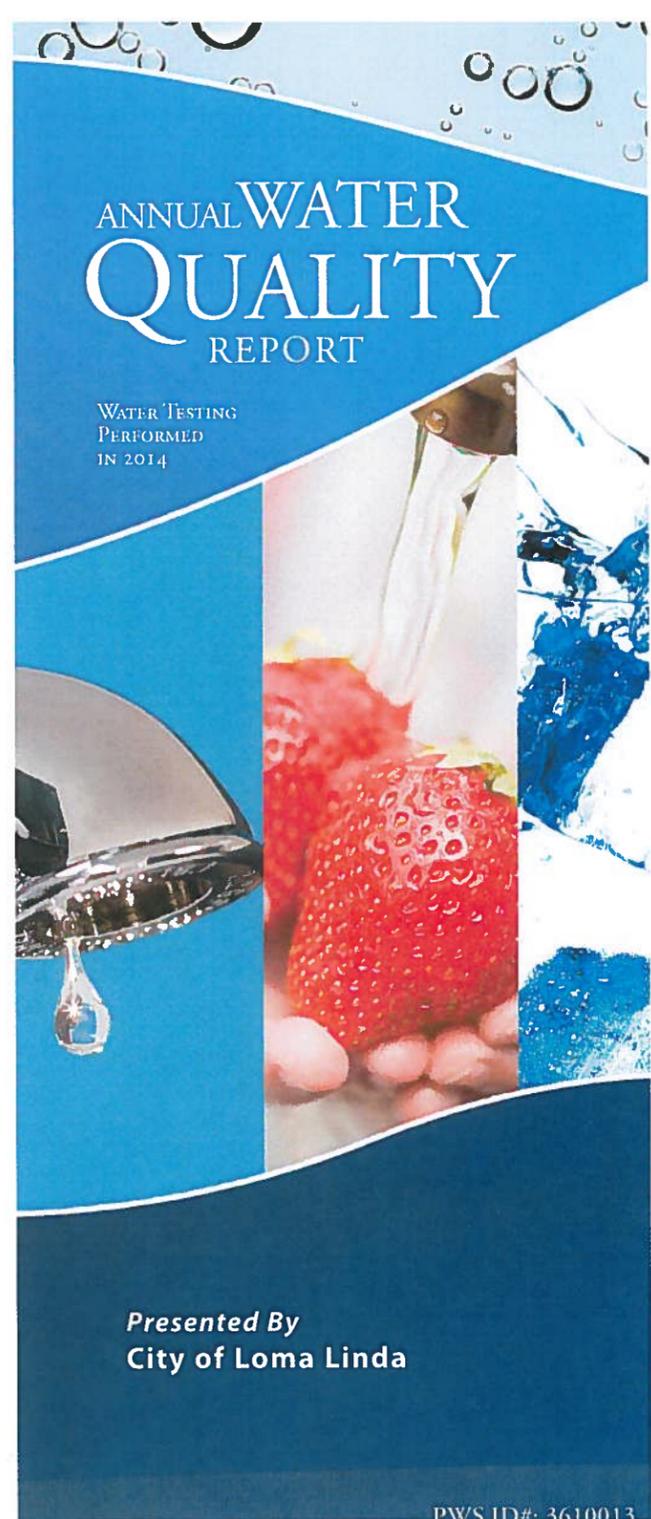
Radioactive Contaminants, that can be naturally occurring or can be the result of oil and gas production and mining activities.

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.

City of Loma Linda
25541 Barton Road
Loma Linda, CA 92354

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

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Our Mission Continues

We are proud to present once again our annual water quality report covering all testing performed between January 1 and December 31, 2014. Most notably, last year marked the 40th anniversary of the Safe Drinking Water Act (SDWA). This rule was created to protect public health by regulating the nation's drinking water supply. We celebrate this milestone as we continue to manage our water system with a mission to deliver the best-quality drinking water. By striving to meet the requirements of SDWA, we are ensuring a future of healthy, clean drinking water for years to come.

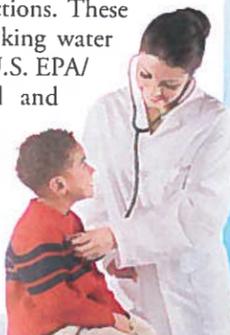
Please let us know if you ever have any questions or concerns about your water.

Community Participation

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

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as those with cancer undergoing chemotherapy, those 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 we 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.

Where Does My Water Come From?

The City of Loma Linda currently operates 6 wells: Mt. View Wells 3, 5, and 6 and Richardson Wells 3, 5 and 6. All of the City's wells are located in the Bunker Hill Basin, a vast, natural underground water storage area referred to as an aquifer. The Bunker Hill Basin stretches from the San Bernardino Mountain Range to the south hills of Loma Linda. The water that replenishes the Bunker Hill Basin comes from annual rainfall and snowmelt from the San Bernardino Mountains. The wells are located in the north area of the City of Loma Linda.

Loma Linda also uses a supplemental supply of water as needed 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 U.S. Environmental Protection Agency (U.S. EPA) and the California Department of Public Health (CDPH).

In June 2006, an arsenic removal facility was installed to treat water at our Mt. View 3 and 5 wells. This was done to maintain compliance in response to the EPA's decision to lower the MCL (maximum contaminant level) for arsenic from 50 ppb to 10 ppb.

In 2011, as part of a joint project with Lockheed Martin, Inc., two treatment facilities were installed to remove perchlorate and volatile organic chemicals (VOCs) from two new wells that were installed in 2010. This was done in an effort to isolate and remove those contaminants in the aquifer and keep them from migrating further into the Bunker Hill Basin.

Water Conservation

You can play a role in conserving water and save yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water-using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.



QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Russ Handy, Utilities Superintendent, at (909) 799-4420.

Sampling Results

During the past year, we have taken thousands of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The tables below show only those contaminants that were detected in the water. The state requires us to monitor for certain substances less often 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.

We participated in the 3rd stage of the EPA's Unregulated Contaminant Monitoring Regulation (UCMR3) program by performing additional tests on our drinking water. UCMR3 benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if the EPA needs to introduce new regulatory standards to improve drinking water quality.

REGULATED SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Arsenic ¹ (ppb)	2014	10	0.004	5.85	4.7–7.1	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Chlorine (ppm)	2014	[4.0 (as Cl ₂)]	[4 (as Cl ₂)]	0.39	0.21–0.61	No	Drinking water disinfectant added for treatment
Fluoride (ppm)	2014	2.0	1	0.76	0.56–0.91	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity (pCi/L)	2014	15	(0)	6.28	2.1–11	No	Erosion of natural deposits
Hexavalent Chromium (ppb)	2014	10	0.02	2.44	1.4–3	No	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits
Nitrate [as nitrate] ² (ppm)	2014	45	45	25.18	18–33	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Nitrate + Nitrite ² (ppb)	2014	10,000	10,000	3,944	0–9,000	No	NA
TTHMs [Total Trihalomethanes]–Stage 2 (ppb)	2014	80	NA	0.8	0–2.5	No	By-product of drinking water disinfection

Tap water samples were collected for lead and copper analyses from sample sites 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 (ppb)	2014	1,300	300	140	0/30	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

SECONDARY SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2014	500	NS	17.3	6.5–27	No	Runoff/leaching from natural deposits; seawater influence
Foaming Agents [MBAS] (ppb)	2014	500	NS	96	0–260	No	Municipal and industrial waste discharges
Manganese (ppb)	2014	50	NS	2	0–10	No	Leaching from natural deposits
Odor–Threshold (Units)	2014	3	NS	1	1–1	No	Naturally occurring organic materials
Specific Conductance (µS/cm)	2014	1,600	NS	434	280–510	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2014	500	NS	38.4	20–45	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2014	1,000	NS	270	170–330	No	Runoff/leaching from natural deposits
Turbidity (Units)	2014	5	NS	0.16	0–0.7	No	Soil runoff

UNREGULATED AND OTHER SUBSTANCES			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
Bicarbonate (ppm)	2014	172	110–210
Calcium (ppm)	2014	36.02	3.1–68
Carbonate (ppm)	2014	2	0–10
Dibromochloromethane (ppb)	2014	0.45	0–15
Hardness (ppm)	2014	106.76	78–210
Magnesium (ppm)	2014	2	0–10
Manganese (ppb)	2014	2	0–10
pH (Units)	2014	8.02	7.6–8.9
Potassium (ppm)	2014	1.72	0–2.4
Sodium (ppm)	2014	47.8	19–73
Total Alkalinity (ppm)	2014	142	110–170
Vanadium (ppb)	2014	15.5	4.9–47

¹While your drinking water meets the federal and state standard for arsenic, it does contain low levels of 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. EPA 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.

²Nitrate in drinking water at levels above 45 ppm is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 45 ppm may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider.

What Causes the Pink Stain on Bathroom Fixtures?

The reddish-pink color frequently noted in bathrooms on shower stalls, tubs, tile, toilets, sinks, toothbrush holders and on pets' water bowls is caused by the growth of the bacterium *Serratia marcescens*. *Serratia* is commonly isolated from soil, water, plants, insects, and vertebrates (including man). The bacteria can be introduced into the house through any of the above mentioned sources. The bathroom provides a perfect environment (moist and warm) for bacteria to thrive.

The best solution to this problem is to continually clean and dry the involved surfaces to keep them free from bacteria. Chlorine-based compounds work best, but keep in mind that abrasive cleaners may scratch fixtures, making them more susceptible to bacterial growth. Chlorine bleach can be used periodically to disinfect the toilet and help to eliminate the occurrence of the pink residue. Keeping bathtubs and sinks wiped down using a solution that contains chlorine will also help to minimize its occurrence.

Serratia will not survive in chlorinated drinking water.

Source Water Assessment

To find and protect against any potential contamination sources to 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; Richardson Wells 1 and 3, November 2000; Mountain View Well 5, February 2003; Richardson Well 6, August 2009; Mt. View Well 6 and Richardson Well 5, April 2009.

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 move and 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 assessment enables us to determine whether the drinking water source might be vulnerable to contamination. All information obtained during the process is provided to California Department of Public Health for review.

A copy of the assessment can be obtained by contacting us during regular business hours.

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

NS: No standard

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).



When was drinking water first regulated?

The Safe Drinking Water Act (SDWA) of 1974 represents the first time that public drinking water supplies were protected on a federal (national) level in the U.S. Amendments were made to the SDWA in 1986 and 1996.

How much water do we use every day?

The average person in the U.S. uses 80 to 100 gallons of water each day. (During medieval times, a person used only 5 gallons per day.) It takes 2 gallons to brush your teeth, 2 to 7 gallons to flush a toilet, and 25 to 50 gallons to take a shower.

When was chlorine first used in the U.S.?

In 1908, Jersey City, New Jersey, and Chicago, Illinois, were the first water supplies to be chlorinated in the U.S.

Seventy-one percent of Earth is covered in water: How much is drinkable?

Oceans hold about 96.5 percent of all Earth's water. Only three percent of the Earth's water can be used as drinking water. Seventy-five percent of the world's fresh water is frozen in the polar ice caps.