



LOMA LINDA UNIVERSITY 2024 WATER QUALITY REPORT

We are pleased to present our annual water quality report for water tests performed between January 1 and December 31, 2024. The water supplied to Loma Linda University, Loma Linda University Medical Center, and many other related entities on the Loma Linda University Health campus, has met or exceeded all U.S. EPA and State drinking water health standards. We are firmly committed to maintaining high quality water.

THE WATER SYSTEM

The Loma Linda University Water System operates three wells, Anderson Well 2, Anderson Well 3, and Anderson Well 4, which are located in the Bunker Hill Basin. The Bunker Hill Basin is a natural underground aquifer that is replenished from annual rainfall and snow pack from the San Bernardino Mountain Range. The water system also includes a 1.4 million gallon storage reservoir, and many miles of pipeline that service residents living in student housing and a substantial transient population. Loma Linda University also uses a supplementary supply of water from the City of Loma Linda when necessary. This report was prepared in May, 2025.



SOURCE WATER PROTECTION

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides – they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.

SAFE DRINKING WATER HOTLINE:

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 the water poses a health risk. 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.

SPECIAL HEALTH INFORMATION

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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. U.S. EPA/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 at (800) 426-4791.

FOR ADDITIONAL INFORMATION ABOUT
LOMA LINDA UNIVERSITY
WATER QUALITY,
PLEASE CONTACT THE
LOMA LINDA UNIVERSITY
CENTRAL UTILITIES PLANT
AT (909) 558-4559.

Drinking Water Sources

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 storm water 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 storm water runoff, and residential uses.

Abbreviations and Definitions

AL (Regulatory Action Level):: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that 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 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. Environmental Protection Agency (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.

ND: Not detectable at testing limit

PDWS (Primary Drinking Water Standards): MCLs, MRDLs, and treatment techniques (TTs) for contaminants that affect health, along with their monitoring and reporting 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 Environmental Protection Agency.

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

UCMR: Unregulated Contaminant Monitoring Rule

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, which can be naturally occurring or 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 (U.S. EPA) and the State Water Resources Control Board (State Water Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health.

Units of Measure

mg/L: milligrams per liter or parts per million (ppm)
Equivalent to 1 second in 11.5 days

ug/L: micrograms per liter or parts per billion (ppb).
Equivalent to 1 second in nearly 32 years

ng/L: nanograms per liter or parts per trillion (ppt).
Equivalent to 1 second in 32,000 years

pg/L: picograms per liter or parts per quadrillion (ppq).
Equivalent to 1 second in nearly 32,000,000 years

pCi/L: picocuries per liter (a measure of radiation)

NITRATE

Nitrate in drinking water at levels above 10 mg/L 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 10 mg/L 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.

2024 DRINKING WATER QUALITY TEST RESULTS

In 2024, the Loma Linda University Central Utilities Plant water technicians conducted numerous water quality tests from samples taken at various locations through-out the water system in accordance with state and federal regulations. We are pleased that our water complied with or did better than those regulations. The following chart shows contaminants that were detected in the water. The State allows us to monitor for some contaminants less than once per year because concentrations of these contaminants do not change frequently. Some of our data, though representative, is more than one year old.

PRIMARY REGULATED CONSTITUENTS						
CONSTITUENT	YEAR	LLU AVERAGE	LLU RANGE	MCL	PHG (MCLG)	SOURCE
RADIOLOGICAL						
Gross Alpha (pCi/L)	2024	1.9	ND - 3.7	15	N/A	Erosion of natural deposits
Radium 226 (pCi/L)	2024	0.52	0.52	5	0.05	
Radium 228 (pCi/L)	2024	ND	ND	5	0.019	
Uranium (pCi/L)	2024	1.8	1.5 - 2.1	20	0.43	
INORGANICS						
Chromium (Hexavalent) (ug/L)	2024	2.85	0.16 - 5.2	10	0.02	Erosion of natural deposits; transformation of naturally occurring trivalent chromium to hexavalent chromium by natural processes and human activities.
Fluoride (mg/L)	2024	0.87	0.76 - 0.98	2	1	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as Nitrogen) (mg/L)	2024	4.78	0.78 - 7.8	10	10	Runoff and leaching from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Perchlorate (ug/L)	2024	2.6	ND - 4.3	6	1	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
CONSTITUENT	YEAR	LLU AVERAGE	LLU RANGE	MRDL	MRDLG	SOURCE
DISINFECTION BY-PRODUCTS						
Total Trihalomethanes (TTHMs) (ug/L)	2024	1.77	1.3 - 2.1	80	N/A	By-product of drinking water disinfection
Haloacetic Acids (HAA5) (ug/L)	2024	ND	ND	60	N/A	By-product of drinking water disinfection
SECONDARY STANDARDS						
CONSTITUENT	YEAR	LLU AVERAGE	LLU RANGE	PHG (MCLG)		SOURCE
Chloride (mg/L)	2024	43.6	36 - 49	500		Runoff/leaching from natural deposits
Color (Units)	2024	ND	ND	15		Naturally-occurring organic materials
Iron (ug/L)	2024	110	ND - 110	?		Substances that form ions when in water
Specific Conductance (umho/cm)	2024	605	470 - 740	1,600		Substances that form ions when in water
Sulfate (mg/L)	2024	56	40 - 68	500		Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (mg/L)	2024	670	250 - 460	1,000		Runoff/leaching from natural deposits
Turbidity (Units)	2024	0.49	0.16 - 0.82	5		Runoff/leaching from natural deposits
SAMPLING RESULTS FOR SODIUM AND HARDNESS						
Sodium (mg/L)	2024	86	83 - 88	None		Salt present in the water and is generally naturally occurring
Hardness (mg/L)	2024	129	31 - 200	None		Sum of polyvalent cations present generally magnesium and calcium. The cations are usually naturally occurring
LEAD AND COPPER						
CONSTITUENT	YEAR	SAMPLES COLLECTED	90TH %ILE LEVEL DETECTED	MCL	PHG (MCLG)	SOURCE
Lead (ug/L)	2024	30	ND	15	0.2	Internal corrosion of water plumbing systems; erosion of natural deposits; leaching from wood preservatives
Copper (mg/L)	2024	30	0.23	1.3	0.3	

No schools have requested lead sampling.

UNREGULATED CONSTITUENTS AND ADDITIONAL TESTS

CONSTITUENT	LLU AVERAGE	LLU RANGE	REGULATORY ACTION LEVEL	Unregulated constituent monitoring helps the U.S. EPA and the State Water Resources Control Board to determine where certain contaminants occur and whether the contaminants need to be regulated.
Alkalinity (mg/L) (2024)	170	130 - 210	None	
Biocarbonate (mg/L) (2024)	205	150—260	None	
Boron (mg/L) (2024)	0.125	0.12—0.13	1 (NL)	
Calcium (mg/L) (2024)	41	12—62	None	
Magnesium (mg/L) (2024)	6.8	ND - 12	None	
Perfluorohexane Sulfonic Acid (PFHxS) (ng/L) (2023) (UCMR 5)	0.5	ND-3.1	3	
Perfluorooctanesulfonic Acid (PFOS) (ng/L) (2023) (UCMR 5)	0.7	ND-4.2	6.5	
pH (pH units) (2024)	8.1	7.8-8.3	None	
Potassium (mg/L) (2024)	1.9	1.2-2.6	None	
Vanadium (ug/L) (2024)	9.25	7.5—11	50 (NL)	

LEAD—Although the statement below regarding lead in water is mandatory for us to include in this water quality report, it focuses more toward water systems that provide water to your home. Loma Linda University has completed a lead service line inventory of the main water lines and is compliant with mandatory testing for lead in buildings on campus.

Lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula-fed and breastfed), and young children. Lead in drinking water is primarily from materials and parts used in service lines and in-home plumbing. Your water supplier is responsible for providing high quality drinking water and removing lead pipes but cannot control the variety of materials used in the plumbing in your home. Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time. You can help protect yourself and your family by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Using a filter, certified by an American National Standards Institute accredited certifier to reduce lead, is effective in reducing lead exposures. Follow the instructions provided with the filter to ensure the filter is used properly. Use only cold water for drinking, cooking, and making baby formula. Boiling water does not remove lead from water. Before using tap water for drinking, cooking, or making baby formula, flush your pipes for several minutes. You can do this by running your tap, taking a shower, doing laundry or a load of dishes. If you have a lead service line or galvanized requiring replacement service line, you may need to flush your pipes for a longer period. If you are concerned about lead in your water and wish to have your water tested, contact your water supplier. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <https://www.epa.gov/safewater/lead>.

DRINKING WATER SOURCE ASSESSMENT: A drinking water source assessment of Anderson Well 2 was conducted in July, 2023. Anderson Well 3 assessment was conducted by San Bernardino County Environmental Health Services in May, 2002. Anderson Well 4 drinking water source assessment was conducted in March, 2014. The purpose of these assessments is to identify potential sources of contamination and develop ways to protect the water supply. Our water source is considered most vulnerable to contamination by activities such as sewer collection systems and automobile gas stations. It is also vulnerable from a known contaminant plume that contains perchlorate.

A copy of the complete assessment may be viewed at the San Bernardino County Environmental Health Services office at 385 N. Arrowhead Avenue, 2nd Floor, San Bernardino, CA 92415-0160. You may request a summary of the assessment be sent to you by contacting the Environmental Health Specialist at (800) 442.2283.

EN ESPAÑOL:
Este informe contiene información muy importante sobre su agua para beber. Favor de comunicarse Loma Linda University Water System at (909) 558-4559 para asistirlo en español.