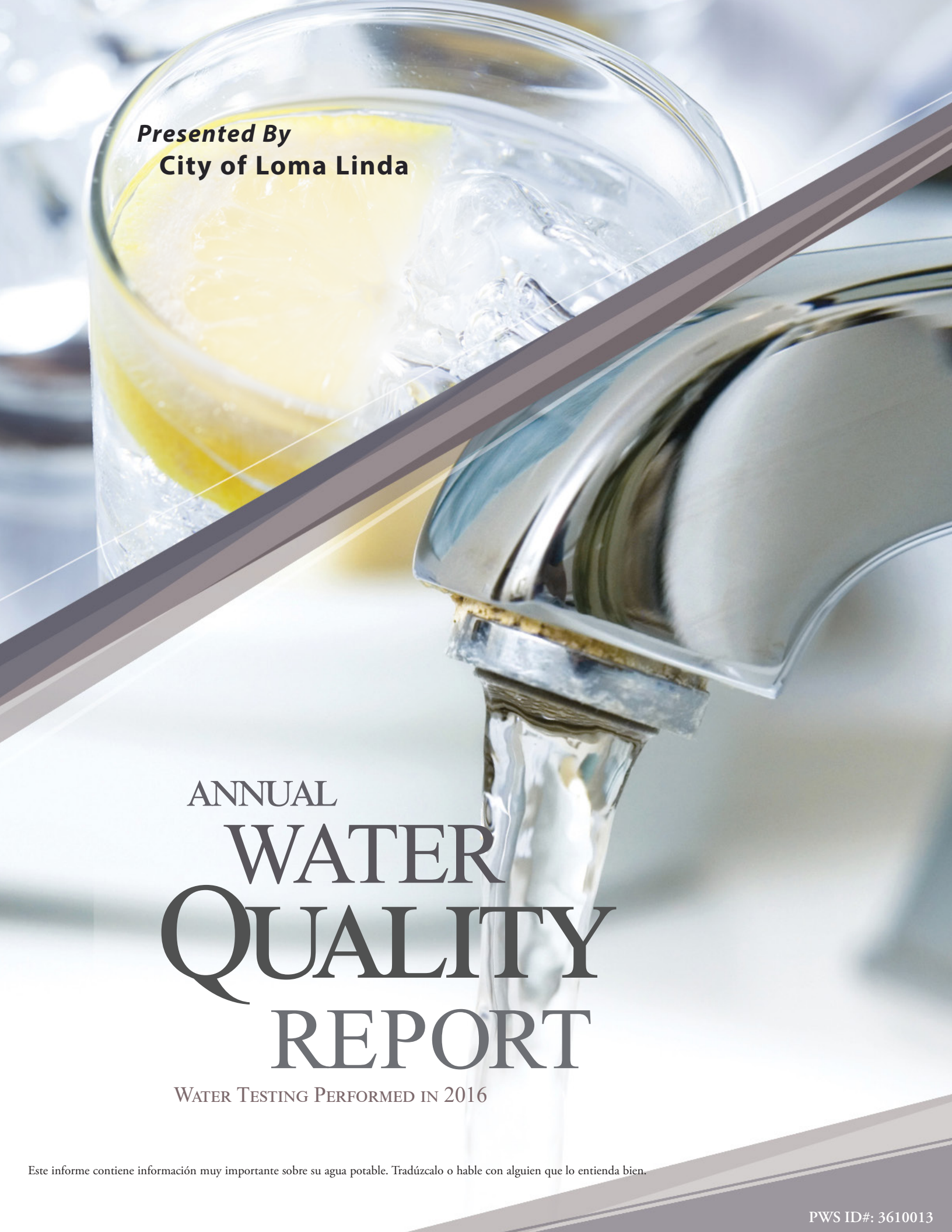


Presented By
City of Loma Linda

ANNUAL WATER QUALITY REPORT

WATER TESTING PERFORMED IN 2016

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

PWS ID#: 3610013

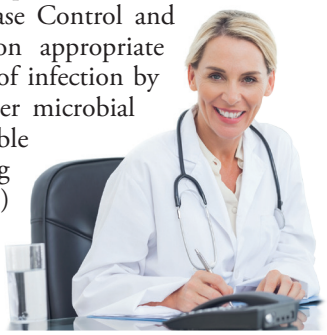
We've Come a Long Way

Once again we are proud to present our annual water quality report covering the period between January 1 and December 31, 2016. In a matter of only a few decades, drinking water has become exponentially safer and more reliable than at any other point in human history. Our exceptional staff continues to work hard every day—at any hour—to deliver the highest quality drinking water without interruption. Although the challenges ahead are many, we feel that by relentlessly investing in customer outreach and education, new treatment technologies, system upgrades, and training, the payoff will be reliable, high-quality tap water delivered to you and your family.

Important Health Information

While 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.

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 at http://water.epa.gov/drink/hotline.



Water Treatment Processes

The City removes contaminants in a variety of ways:

All water is chlorinated to kill or remove bacteria, viruses, and pathogens that may be present. To accomplish this, water is passed through a cylinder containing calcium hypochlorite, which produces a chlorine solution. Then it flows into a storage tank from which the solution is pumped into a pipeline connected to the wellhead where it mixes with the water to provide contact time. A minimum of 0.2 milligrams per liter is maintained throughout the water system to assure all possible bacteriological contaminants are deactivated. There are 14 stations throughout the city where we collect bacteria samples and test chlorine residuals from.

Blending is another form of treatment used to reduce/remove chemical and/or mineral contaminants. This is achieved by introducing water from a high-quality water source into a common pipeline where it is combined with a source of lower water quality. Water is then pushed through an in-line mixer, which reduces the contaminant/mineral to levels which meet or exceed standards set forth by EPA and State of California water quality regulations. The sources and combined water are tested at frequencies determined by the California Department of Public Health to ensure high-quality drinking water.

We also treat water to remove arsenic, using a process known as adsorption. First, the pH of the well water is adjusted using carbon dioxide gas and chlorine to reduce the pH. This changes the arsenic into an oxidized state, making it more readily adsorbed. From there, it enters the treatment vessels, which contain an iron oxide media. As water passes through the bed of media, arsenic is removed to levels that meet or exceed the standards set by the EPA and California Department of Public Health. From there, the water passes through post-treatment filters, which remove and prevent loose media from entering the distribution system. The performance of the media is closely monitored by frequent testing of the treated water. When the treated water reaches arsenic levels close to 80 percent of the maximum allowable levels, filter maintenance is performed by back-washing and forward flushing the media vessels or replacing the media.

All water is closely monitored by trained and certified personnel to assure that it meets all water quality regulations set forth by the EPA and California Department of Public Health.

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 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 storm-water 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 storm-water 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 storm-water runoff, agricultural applications, and septic systems;

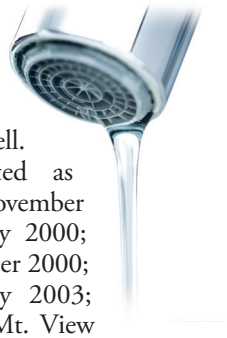
Radioactive Contaminants, that can be naturally occurring or can be the result of oil and gas production and mining activities.

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.

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 and fourth Tuesdays of each month, beginning at 7:00 p.m. at the City of Loma Linda Council Chamber, 25541 Barton Road, Loma Linda, California.

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 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.

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.

Where Does My Water Come From?

The City of Loma Linda's customers are fortunate because we enjoy an abundant ground water supply. We operate seven wells: Richardson Wells 3, 4, 5, and 6, and Mt. View 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 Mt. View #5 wells. This was done to maintain compliance in response to the EPA's decision to lower the MCL (maximum contaminant level) 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 VOCs (volatile organic chemicals) 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.

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 do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants.) 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/lead.

Information on the Internet

The U.S. EPA (https://goo.gl/TFAMKc) and the Centers for Disease Control and Prevention (www.cdc.gov) Web sites provide a substantial amount of information on many issues relating to water resources, water conservation, and public health. Also, the Division of Drinking Water and Environmental Management has a Web site (https://goo.gl/kGepu4) that provides complete and current information on water issues in California, including valuable information about our watershed.

Test Results

Our water is monitored for many different kinds of contaminants on a very strict sampling schedule. The information below represents only those substances that were detected; our goal is to keep all detects below their respective maximum allowed levels. The State recommends monitoring 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.

We participated in the 3rd stage of the EPA's Unregulated Contaminant Monitoring Rule (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 EPA needs to introduce new regulatory standards to improve drinking water quality. Contact us for more information on this program.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Arsenic (ppb)	2016	10	0.004	5.9	4.5–7.7	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium (ppm)	2016	1	2	0.0138	0–0.044	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Beryllium (ppb)	2016	4	1	0.016	0–0.099	No	Discharge from metal refineries, coal-burning factories, and electrical, aerospace, and defense industries
Chlorine (ppm)	2016	[4.0 (as Cl2)]	[4 (as Cl2)]	0.39	0.2–0.78	No	Drinking water disinfectant added for treatment
Chromium (ppb)	2016	50	(100)	1.83	0–3.6	No	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Cyanide (ppb)	2016	150	150	5	0–30	No	Discharge from steel/metal, plastic, and fertilizer factories
Fluoride (ppm)	2016	2.0	1	0.8	0.51–1.1	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity (pCi/L)	2015	15	(0)	6.48	0–14	No	Erosion of natural deposits
Nitrate [as N] (ppm)	2016	10	10	5.64	4–7.2	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Nitrate + Nitrite (ppm)	2016	10	10	3.43	0.25–9.2	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2016	80	NA	2.7	1.1–4.3	No	By-product of drinking water disinfection
Uranium (pCi/L)	2015	20	0.43	5	0–11	No	Erosion of natural deposits

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
Aluminum (ppb)	2016	200	NS	4.5	0–27	No	Erosion of natural deposits; residual from some surface water treatment processes
Chloride (ppm)	2016	500	NS	15.5	5.7–27	No	Runoff/leaching from natural deposits; seawater influence
Copper (ppm)	2016	1.0	NS	0.0012	0–0.0073	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Iron (ppb)	2016	300	NS	2.5	0–15	No	Leaching from natural deposits; industrial wastes
Odor–Threshold (Units)	2016	3	NS	1	1–1	No	Naturally occurring organic materials
Specific Conductance (µS/cm)	2016	1,600	NS	410	270–520	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2016	500	NS	35.8	18–45	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2016	1,000	NS	251.6	160–350	No	Runoff/leaching from natural deposits
Turbidity (Units)	2016	5	NS	0.14	0–0.4	No	Soil runoff

OTHER SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
Bicarbonate (ppm)	2016	149.8	99–200
Boron (ppb)	2016	90.8	75–100
Calcium (ppm)	2016	31.3	2.7–72
Carbonate (ppm)	2016	5.83	0–19
Hardness (ppm)	2016	100.74	6.8–220
Magnesium (ppm)	2016	3.58	0–10
pH (Units)	2016	8.4	7.7–9.2
Potassium (ppm)	2016	1.55	0.57–2.2
Sodium (ppm)	2016	52	20–77
Total Alkalinity (ppm)	2016	135	110–170
Vanadium (ppb)	2016	24.9	5.2–67

UNREGULATED CONTAMINANT MONITORING RULE - PART 3 (UCMR3) [1]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
Chromium VI [Hexavalent Chromium] (ppb)	2015	2.23	1.6–3
Dioxane (ppb)	2015	0.095	0–0.37
Total Chromium (ppb)	2015	1.78	0–2.5
Total Molybdenum (ppb)	2015	3.8	0–5.6
Total Strontium (ppb)	2015	208.16	0–380
Total Vanadium (ppb)	2015	13.3	0–44

[1] Unregulated contaminant monitoring helps U.S. EPA and the State Water Resources Control Board to determine where certain contaminants occur and whether the contaminants need to be regulated.

Definitions

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

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

LRAA (Locational Running Annual Average): The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Amount Detected values for TTHMs are reported as LRAAs.

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).