ANNUAL WATER QUALITY REPORT

Reporting Year 2018

Presented By

City of Lathrop

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

PWS ID#: 3910015

Our Mission Continues

We are once again pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2018. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Please remember that we are always available should you ever have any questions or concerns about your water.

Community Participation

You are invited to participate in our citizen's forum during our City Council meetings and voice your concerns about your drinking water. The City Council's meeting agenda and schedule are posted on the City's Web site: http://www.ci.lathrop.ca.us/lathrop/listagendas.aspx. The City Council typically meets the 2nd Monday of each month, beginning at 7 p.m., at City Hall, 390 Towne Centre Drive, Lathrop, CA 95330.

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 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.

FOG (Fats, Oils, and Grease)

You may not be aware of it, but every time you pour fat, oil, or grease (FOG) down your sink (e.g., bacon grease), you are contributing to a costly problem in the sewer collection system. FOG coats the inner walls of the plumbing in your house as well as the walls of underground piping throughout the community. Over time, these greasy materials build up and form blockages in pipes, which can lead to wastewater backing up into parks, yards, streets, and storm drains. These backups allow FOG to contaminate local waters, including drinking water. Exposure to untreated wastewater is a public health hazard. FOG discharged into septic systems and drain fields can also cause malfunctions, resulting in more frequent tank pump-outs and other expenses.

Communities spend billions of dollars every year to unplug or replace grease-blocked pipes, repair pump stations, and clean up costly and illegal wastewater spills. Here are some tips that you and your family can follow to help maintain a well-run system now and in the future:

NEVER:

- Pour fats, oil, or grease down the house or storm drains.
- Dispose of food scraps by flushing them.
- Use the toilet as a waste basket.

ALWAYS:

- Scrape and collect fat, oil, and grease into a waste container such as an empty coffee can, and dispose of it with your garbage.
- Place food scraps in waste containers or garbage bags for disposal with solid wastes.
- Place a wastebasket in each bathroom for solid wastes like disposable diapers, creams and lotions, and personal hygiene products including nonbiodegradable wipes.

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Public Works at (209) 941-7430.

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. 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. 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;

> "We remain vigilant in delivering the best-quality drinking water"

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, which are by-products of industrial processes and petroleum production and 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.

Missed Monitoring

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During the calendar year 2018, we did not monitor for 1,2,3-trichloropropane from Well Nos. 6, 7, 8, 9, and 10 during the 2nd calendar quarter. Also, during the 3rd quarter of 2018, we did not monitor for disinfection by-products from the distribution system. Therefore, we cannot be sure of the quality of your drinking water during these times, but subsequent test results indicate that our drinking water meets current health standards.

Both of these violations resulted from errors made by the City's contracted water quality laboratories, which resulted in missed sampling events. City staff has reviewed these incidents and discussed means of improving communications and scheduling procedures with its laboratories in order to prevent any re-occurrence of these violations.

Source Water Assessment

A source water assessment for Well 6 was completed in January 2001, and for Wells 7, 8 and 9 in May 2001. A source water assessment for Well 10 was completed in April 2008. The sources are considered most vulnerable to the following activities: septic systems, airport maintenance, and fuel areas; wastewater treatment plants; and metal plating, finishing, and fabrication facilities. Some of these operations are located in town, but the City makes every effort to minimize their effects.

A copy of the complete assessment is available at the State Water Resources Control Board - Drinking Water Division, Field Operations Branch, Stockton District Office, 31 East Channel Street, Room 270, Stockton, California, 95202, or at the City of Lathrop, Public Works Department, 390 Towne Centre Drive, Lathrop, California, 95330.

You may request a summary of the assessment by contacting Bhupinder Sahota, District Engineer, at (209) 948-7696, or Public Works Engineering, at the City of Lathrop at (209) 941-7430.

Where Does My Water Come From?

The water supplied to you by the City of Lathrop includes groundwater from five (5) active wells, located within the City limits, that is treated at the Louise Avenue Water Treatment Facility, and surface water that is treated and delivered by South San Joaquin Irrigation District (SSJID) to the City's water service area.

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 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 at (800) 426-4791 or at www.epa.gov/safewater/lead.

Count on Us

Delivering high-quality drinking water to our customers involves far more than just pushing water through pipes. Water treatment is a complex, time-consuming process. Because tap water is highly regulated by state and federal laws, water treatment plant and system operators must be licensed and are required to commit to long-term, on-the-job training before becoming fully qualified. Our licensed water professionals have a basic understanding of a wide range of subjects, including mathematics, biology, chemistry, and physics. Some of the tasks they complete on a regular basis include:

- Operating and maintaining equipment to purify and clarify water;
- Monitoring and inspecting machinery, meters, gauges, and operating conditions;
- Conducting tests and inspections on water and evaluating the results;
- Maintaining optimal water chemistry;
- Applying data to formulas that determine treatment requirements, flow levels, and concentration levels;
- Documenting and reporting test results and system operations to regulatory agencies; and
- Serving our community through customer support, education, and outreach.

So, the next time you turn on your faucet, think of the skilled professionals who stand behind each drop.

Benefits of Chlorination

Disinfection, a chemical process used to control disease-causing microorganisms by killing or inactivating them, is unquestionably the most important step in drinking water treatment. By far, the most common method of disinfection in North America is chlorination.

Before communities began routinely treating drinking water with chlorine (starting with Chicago and Jersey City in 1908), cholera, typhoid fever, dysentery, and hepatitis A killed thousands of U.S. residents annually. Drinking water chlorination and filtration have helped to virtually eliminate these diseases in the U.S. Significant strides in public health are directly linked to the adoption of drinking water chlorination. In fact, the filtration of drinking water plus the use of chlorine is probably the most significant public health advancement in human history.

How chlorination works:

Potent Germicide Reduction in the level of many disease-causing microorganisms in drinking water to almost immeasurable levels.

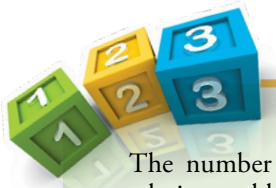
Taste and Odor Reduction of many disagreeable tastes and odors like foul-smelling algae secretions, sulfides, and odors from decaying vegetation.

Biological Growth Elimination of slime bacteria, molds, and algae that commonly grow in water supply reservoirs, on the walls of water mains, and in storage tanks.

Chemical Removal of hydrogen sulfide (which has a rotten egg odor), ammonia, and other nitrogenous compounds that have unpleasant tastes and hinder disinfection. It also helps to remove iron and manganese from raw water.

Water Treatment Process

All groundwater from the City's five active groundwater wells (Wells 6, 7, 8, 9, and 10) are pumped to the Louise Avenue Water Treatment Facility, where it is treated using a coagulation/filtration process to remove arsenic to meet drinking water standards. Surface water purchased from the South San Joaquin Irrigation District is treated at the DeGroot Water Treatment Plant, which is located near Woodward Reservoir and uses a submerged membrane filtration process.



BY THE NUMBERS

800 TRILLION The number of Olympic-sized swimming pools it would take to fill up all of Earth's water.

1¢ The average cost for about 5 gallons of water supplied to a home in the U.S.

99% The amount of Earth's water that is salty or otherwise undrinkable, or locked away and unavailable in ice caps and glaciers.

50 GALLONS The average daily number of gallons of total home water use for each person in the U.S.

71% The amount of Earth's surface that's covered by water.

330 MILLION The amount of water on Earth in cubic miles.

1% The amount of Earth's water that is available for all of humanity's needs.

75% The amount of the human brain that contains water.

Water Conservation Tips

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.

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule. Also, the water we deliver must meet specific health standards. Here, we show only those substances that were detected in our water. (A complete list of all our analytical results is available upon request.) Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring 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 are pleased to report that your drinking water meets or exceeds all federal and state requirements.

REGULATED SUBSTANCES

				LAWTF–Treated GW		SSJID–Treated SW		Distribution System (Combined GW and SW)		City Wells–Raw GW			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Arsenic (ppb)	2018	10	0.004	6.9	4–9	NA	NA	NA	NA	NA	NA	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium (ppm)	2017	1	2	NA	NA	NA	NA	NA	NA	0.28	0.22–0.33	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Chlorine (ppm)	2018	[4.0 (as Cl2)]	[4 (as Cl2)]	NA	NA	NA	NA	0.67	0.22–1.45	NA	NA	No	Drinking water disinfectant added for treatment
Fluoride[1] (ppm)	2017	2.0	1	NA	NA	NA	NA	NA	NA	0.12	0.11–0.13	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity (pCi/L)	2014 to 2016	15	(0)	NA	NA	NA	NA	NA	NA	5.1	1.7–7.9	No	Erosion of natural deposits
Haloacetic Acids (ppb)	2018	60	NA	NA	NA	NA	NA	27.25	7.8–46	NA	NA	No	By-product of drinking water disinfection
Nitrate [as nitrogen] (ppm)	2018	10	10	NA	NA	NA	NA	NA	NA	4.2	2.5–5.5	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Radium 228 (pCi/L)	2018	5	0.019	NA	NA	NA	NA	NA	NA	0.82	0.82–0.82	No	Erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2018	80	NA	NA	NA	NA	NA	35.13	17–52	NA	NA	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 %ILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2018	1.3	0.3	0.332	0/32	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2018	15	0.2	0	0/32	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	SSJID-Treated SW AMOUNT DETECTED	SSJID-Treated SW RANGE LOW-HIGH	City Wells-Raw GW AMOUNT DETECTED	City Wells-Raw GW RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2018	500	NS	2.6	2.6–2.6	53.4[2]	27–82[2]	No	Runoff/leaching from natural deposits; seawater influence
Manganese (ppb)	2017	50	NS	NA	NA	5.6	ND–28	No	Leaching from natural deposits
Specific Conductance (µS/cm)	2018	1,600	NS	90	90–90	604[2]	500–700[2]	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2018	500	NS	1.2	1.2–1.2	22[2]	15–27[2]	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2018	1,000	NS	52	52–52	382[2]	320–430[2]	No	Runoff/leaching from natural deposits
Turbidity (NTU)	2018	5	NS	0.1	0.1–0.1	NA	NA	No	Soil runoff

UNREGULATED AND OTHER SUBSTANCES [3]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	LAWTF-Treated GW AMOUNT DETECTED	LAWTF-Treated GW RANGE LOW-HIGH	SSJID-Treated SW AMOUNT DETECTED	SSJID-Treated SW RANGE LOW-HIGH	Distribution System (Combined GW and SW) AMOUNT DETECTED	Distribution System (Combined GW and SW) RANGE LOW-HIGH	City Wells-Raw GW AMOUNT DETECTED	City Wells-Raw GW RANGE LOW-HIGH	TYPICAL SOURCE
Bicarbonate Alkalinity (ppm)	2018	NA	NA	51	51–51	NA	NA	232[2]	210–270[2]	Naturally present in the environment
Bromodichloromethane (ppb)	2018	NA	NA	NA	NA	1.96	ND–3.6	NA	NA	By-product of drinking water disinfection
Bromoform (ppb)	2018	NA	NA	NA	NA	3.61	ND–13	NA	NA	By-product of drinking water disinfection
Calcium (ppm)	2018	NA	NA	12	12–12	NA	NA	60[2]	47–68[2]	Naturally occurring
Carbonate Alkalinity (ppm)	2018	NA	NA	41	41–41	NA	NA	2.4[2]	2.2–2.8[2]	Naturally occurring
Chloroform (ppb)	2018	NA	NA	NA	NA	27.36	ND–56	NA	NA	By-product of drinking water disinfection
Dibromochloromethane (ppb)	2018	NA	NA	NA	NA	1.93	ND–7	NA	NA	By-product of drinking water disinfection
Hardness, Total [as CaCO3] (ppm)	2018	NA	NA	37	37–37	NA	NA	212[2]	160–240[2]	Erosion of natural deposits
Magnesium (ppm)	2017	NA	NA	NA	NA	NA	NA	15	11–17	Naturally present in the environment
pH[4] (Units)	2018	7.3	7.0–8.0	7.9	7.9–7.9	NA	NA	NA	NA	Measurement of acidity (Neutral = 7.0)
Sodium (ppm)	2018	NA	NA	3.7	3.7–3.7	NA	NA	50.6[2]	48–54[2]	Erosion of natural deposits

[1] Lathrop does not add fluoride to its drinking water.
[2] Sampled in 2017.
[3] Unregulated contaminant 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.
[4] Results are based on pH analyzer results for the filter effluent reported in the monthly LAWTF field log reports

Definitions

90th %ile: The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

AL (Regulatory Action Level): The concentration of a contaminant that, 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.

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 and HAAs are reported as the highest 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

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NS: No standard

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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).