

A high-speed photograph of water splashing, creating a dynamic and refreshing background. The water is captured in mid-air, with numerous droplets and a large, turbulent splash at the bottom. The color is a deep, clear blue.

# ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2019



*Presented By*  
**City of Lathrop**

## 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, 2019. 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.

## Safeguard Your Drinking Water

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.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use U.S. EPA's Adopt Your Watershed to locate groups in your community.

Organize a storm drain stenciling project with others in your neighborhood. Stencil a message next to the street drain reminding people "Dump No Waste – Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

## 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 <http://water.epa.gov/drink/hotline>.

## QUESTIONS?

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

## Per- and Polyfluoroalkyl Substances (PFAS)

Per- and polyfluoroalkyl substances (PFAS) are a large group of human-made substances that do not occur naturally in the environment and are resistant to heat, water, and oil. PFAS have been used extensively in surface coating and protectant formulations due to their unique ability to reduce the surface tension of liquids. PFAS are persistent in the environment, can accumulate within the human body over time, and are toxic at relatively low concentrations. Exposure to unsafe levels of PFAS may result in adverse health effects, including developmental effects to fetuses during pregnancy, cancer, liver effects, immune effects, thyroid effects, and other effects (such as cholesterol changes).

Beginning in May 2019, the City has performed state-mandated quarterly testing for PFAS in two of its wells (Wells 9 and 10) and detected concentrations of perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) that are above the state response levels in Well 9 and above the notification levels for PFOA and PFOS at Well 10. Subsequent testing for PFAS performed at the City's other three active wells (Wells 6, 7, and 8) detected concentrations greater than the notification levels for PFOS and other unregulated PFAS compounds.

All of the City's wells were off-line for the majority of 2019: Wells 9 and 10 have been off-line since August of 2018, and Wells 6, 7, and 8 have been off-line since January of 2019. The City is working to evaluate alternatives for treatment and blending in order to bring its wells back online such that concentrations of PFAS will be below the response levels in its drinking water.

Additional information regarding PFAS may be found at the State Water Resources Control Board website for PFAS at [www.waterboards.ca.gov/pfas/](http://www.waterboards.ca.gov/pfas/).

## 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.

## 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 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.

 We remain vigilant in delivering the best-quality drinking water 



## 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. These sources are considered most vulnerable to the following activities: septic systems, airport maintenance and fuel areas, wastewater treatment plants, metal plating, finishing, and fabrication facilities.

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, CA 95202, or at the City of Lathrop, Public Works Department, 390 Towne Centre Drive, Lathrop, CA 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.

## 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](http://www.epa.gov/safewater/lead).

## Level 1 Assessment Update

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

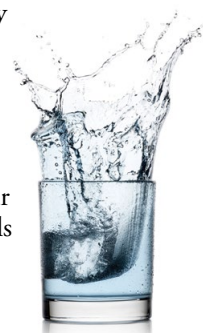
During the past year, we were required to conduct one Level 1 assessment, which was completed. In addition, we were required to take three corrective actions, and we completed all three of these actions.

## 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.



## Table Talk

Get the most out of the Testing Results data table with this simple suggestion. In less than a minute, you will know all there is to know about your water:

For each substance listed, compare the value in the Amount Detected column against the value in the MCL (or AL, SMCL) column. If the Amount Detected value is smaller, your water meets the health and safety standards set for the substance.

### Other Table Information Worth Noting

Verify that there were no violations of the state and/or federal standards in the Violation column. If there was a violation, you will see a detailed description of the event in this report.

If there is an ND or a less-than symbol (<), that means that the substance was not detected (i.e., below the detectable limits of the testing equipment).

The Range column displays the lowest and highest sample readings. If there is an NA showing, that means only a single sample was taken to test for the substance (assuming there is a reported value in the Amount Detected column).

If there is sufficient evidence to indicate from where the substance originates, it will be listed under Typical Source.

## Protecting Your Water

Bacteria are a natural and important part of our world. There are around 40 trillion bacteria living in each of us; without them, we would not be able to live healthy lives. Coliform bacteria are common in the environment and are generally not harmful themselves. The presence of this bacterial form in drinking water is a concern, however, because it indicates that the water may be contaminated with other organisms that can cause disease.

In 2016, the U.S. EPA passed a regulation called the Revised Total Coliform Rule, which requires additional steps that water systems must take in order to ensure the integrity of the drinking water distribution system by monitoring for the presence of bacteria like total coliform and *E. coli*. The rule requires more stringent standards than the previous regulation, and it requires water systems that may be vulnerable to contamination to have in place procedures that will minimize the incidence of contamination. Water systems that exceed a specified frequency of total coliform occurrences are required to conduct an assessment of their system and correct any problems quickly. The U.S. EPA anticipates greater public health protection under this regulation due to its more preventive approach to identifying and fixing problems that may affect public health.

Though we have been fortunate to have the highest-quality drinking water, our goal is to eliminate all potential pathways of contamination into our distribution system, and this requirement helps us to accomplish that goal.



## What's a Cross-Connection?

Cross-connections that 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 (back-pressure). 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 (back-siphonage).

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. Garden hoses that are left lying on the ground may be contaminated by fertilizers, cesspools, or garden chemicals. 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 industrial, commercial, and institutional facilities in the service area to make sure that potential cross-connections are identified and eliminated or protected by a backflow preventer. We also inspect and test backflow preventers to make sure that they provide maximum protection.


For more information on backflow prevention, contact the Safe Drinking Water Hotline at (800) 426-4791.

## 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 website: <http://www.ci.lathrop.ca.us/lahtrop/listagendas.aspx>. The City Council typically meets the second Monday of each month, beginning at 7 p.m., at City Hall, 390 Towne Centre Drive, Lathrop, CA 95330.

## 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.

## Where Does My Water Come From?

The water supplied to you by the City of Lathrop includes groundwater from five 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 the South San Joaquin Irrigation District (SSJID) to the City's water service area.

For the majority of 2019, all of the City's wells were off-line, and the primary source of drinking water was surface water purchased from the SSJID.

## 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.

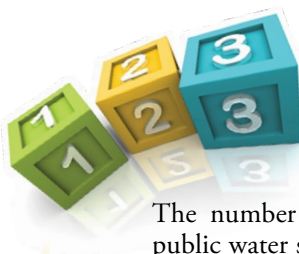
### ALWAYS:

- 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.

## Water Conservation Tips

You can play a role in conserving water and saving 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 can 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.



### BY THE NUMBERS

The number of gallons of water produced daily by public water systems in the U.S.

**34**  
BILLION

**1**  
MILLION

The number of miles of drinking water distribution mains in the U.S.

The amount of money spent annually on maintaining the public water infrastructure in the U.S.

**135**  
BILLION

**300**  
MILLION

The number of Americans who receive water from a public water system.

The age in years of the world's oldest water found in a mine at a depth of nearly two miles.

**2**  
BILLION

**151**  
THOUSAND

The number of active public water systems in the U.S.

The number of highly trained and licensed water professionals serving in the U.S.

**199**  
THOUSAND

## 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 only show 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 participated in the 4th stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR4) program by performing additional tests on our drinking water. UCMR4 sampling benefits the environment and public health by providing the U.S. EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if U.S. EPA needs to introduce new regulatory standards to improve drinking water quality. Unregulated contaminant monitoring data are available to the public, so please feel free to contact us if you are interested in obtaining that information. If you would like more information on the U.S. EPA's Unregulated Contaminants Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

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
<b>Arsenic</b> (ppb)	2019	10	0.004	5.95	2–7	NA	NA	NA	NA	NA	NA	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
<b>Barium</b> (ppm)	2017	1	2	NA	NA	NA	NA	NA	NA	0.3	0.22–0.33	No	Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits
<b>Chlorine</b> (ppm)	2019	[4.0 (as Cl <sub>2</sub> )]	[4 (as Cl <sub>2</sub> )]	0.57	0.3–1.06	NA	NA	0.82	0.14–1.17	NA	NA	No	Drinking water disinfectant added for treatment
<b>Fluoride</b> (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
<b>Gross Alpha Particle Activity</b> (pCi/L)	2019	15	(0)	NA	NA	NA	NA	NA	NA	5.5 <sup>1</sup>	3.3–8.5 <sup>1</sup>	No	Erosion of natural deposits
<b>Haloacetic Acids</b> (ppb)	2019	60	NA	NA	NA	NA	NA	39.3	25–60	NA	NA	No	By-product of drinking water disinfection
<b>Nitrate [as nitrogen]</b> (ppm)	2019	10	10	NA	NA	NA	NA	NA	NA	3.0	1.9–4.1	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
<b>Radium 228</b> (pCi/L)	2018	5	0.019	NA	NA	NA	NA	NA	NA	0.5 <sup>2</sup>	0.43–0.82 <sup>2</sup>	No	Erosion of natural deposits
<b>TTHMs [Total Trihalomethanes]</b> (ppb)	2019	80	NA	NA	NA	NA	NA	NA	NA	42.4	34–57	No	By-product of drinking water disinfection
<b>Uranium</b> (pCi/L)	2019	20	0.43	NA	NA	NA	NA	NA	NA	4.8	1.36–8.00	No	Erosion of natural deposits



Tap Water Samples Collected for Copper and Lead 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	0.3	0/32	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2018	15	0.2	0 <sup>3</sup>	0/32	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

SECONDARY SUBSTANCES

					SSJID-Treated SW		City Wells-Raw GW			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE	
Chloride (ppm)	2019	500	NS	2.8	NA	53.4 <sup>4</sup>	27–82 <sup>4</sup>	No	Runoff/leaching from natural deposits; seawater influence	
Manganese (ppb)	2017	NA	NA	NA	NA	5.6	ND–28	No	Leaching from natural deposits	
Odor–Threshold (TON)	2019	3	NS	1.2	NA	NA	NA	No	Naturally occurring organic materials	
Specific Conductance (µS/cm)	2019	1,600	NS	96	NA	604 <sup>4</sup>	500–700 <sup>4</sup>	No	Substances that form ions when in water; seawater influence	
Sulfate (ppm)	2019	500	NS	1.4	NA	22.2 <sup>4</sup>	15–27 <sup>4</sup>	No	Runoff/leaching from natural deposits; industrial wastes	
Total Dissolved Solids (ppm)	2019	1,000	NS	64	NA	382 <sup>4</sup>	320–430 <sup>4</sup>	No	Runoff/leaching from natural deposits	
Turbidity (Units)	2019	5	NS	0.21	NA	NA	NA	No	Soil runoff	

UNREGULATED SUBSTANCES <sup>5</sup>

		SSJID-Treated SW		Distribution System (Combined GW and SW)		City Wells-Raw GW			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE	
Bromodichloromethane (ppb)	2019	NA	NA	1.88	1–5	NA	NA	By-product of drinking water disinfection	
Bromoform (ppb)	2019	NA	NA	0.94	ND–10	NA	NA	By-product of drinking water disinfection	
Chloroform (ppb)	2019	NA	NA	39.19	29–55	NA	NA	By-product of drinking water disinfection	
Dibromochloromethane (ppb)	2019	NA	NA	0.44	ND–7	NA	NA	By-product of drinking water disinfection	
Hardness, Total [as CaCO3] (ppm)	2019	41	NA	NA	NA	212 <sup>4</sup>	160–240 <sup>4</sup>	Erosion of natural deposits	
Sodium (ppm)	2019	4.1	NA	NA	NA	50.6 <sup>4</sup>	48–54 <sup>4</sup>	Erosion of natural deposits	
Vanadium (ppb)	2017	NA	NA	NA	NA	18.4	15–26	Erosion of natural deposits	

## OTHER UNREGULATED SUBSTANCES

		LAWTF-Treated GW		SSJID-Treated SW		Distribution System (Combined GW and SW)		City Wells-Raw GW		
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
<b>Dibromoacetic Acid</b> (ppb)	2019	NA	NA	NA	NA	0.13	ND–2	NA	NA	By-product of drinking water disinfection
<b>Dichloroacetic Acid</b> (ppb)	2019	NA	NA	NA	NA	20	13–29	NA	NA	By-product of drinking water disinfection
<b>Monochloroacetic Acid</b> (ppb)	2019	NA	NA	NA	NA	0.25	ND–2	NA	NA	By-product of drinking water disinfection
<b>Perfluorobutanesulfonic Acid</b> [PFBS] (ppt)	2019	NA	NA	NA	NA	NA	NA	11.7	2.1–26.0	Fire training/fire response sites; industrial sites, landfills, and wastewater treatment plants/biosolids
<b>Perfluoroheptanoic Acid</b> [PFHpA] (ppt)	2019	NA	NA	NA	NA	NA	NA	2.3	2.2–2.3	Fire training/fire response sites; industrial sites, landfills, and wastewater treatment plants/biosolids
<b>Perfluorohexanesulfonic Acid</b> [PFHxS] (ppt)	2019	NA	NA	NA	NA	NA	NA	7.3	2.0–12.0	Fire training/fire response sites; industrial sites, landfills, and wastewater treatment plants/biosolids
<b>Perfluorooctanesulfonate</b> <b>Acid</b> [PFOS] (ppt)	2019	NA	NA	NA	NA	NA	NA	24.7	2.0–78	Fire training/fire response sites; industrial sites, landfills, and wastewater treatment plants/biosolids
<b>Perfluorooctanoic Acid</b> [PFOA] (ppt)	2019	NA	NA	NA	NA	NA	NA	13.4	10–17	Fire training/fire response sites; industrial sites, landfills, and wastewater treatment plants/biosolids
<b>Trichloroacetic Acid</b> (ppb)	2019	NA	NA	NA	NA	18.94	10–29	NA	NA	By-product of drinking water disinfection

<sup>1</sup>Raw GW: Well 6 sampled in 2019; Wells 7 and 8 sampled in 2014; Well 9 sampled in 2019; Well 10 sampled in 2016.

<sup>2</sup>Raw GW: Wells 6, 7, 8, 9 sampled in 2006; Well 10 sampled in 2018.

<sup>3</sup>Five school sites were sampled for lead in 2019; all results were ND or below MCL.

<sup>4</sup>Sampled in 2017.

<sup>5</sup>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

**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 which, if exceeded, triggers treatment or other requirements that a water system must follow.

**Level 1 Assessment:** A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

**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.

**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).

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

**TON (Threshold Odor Number):** A measure of odor in water.

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

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