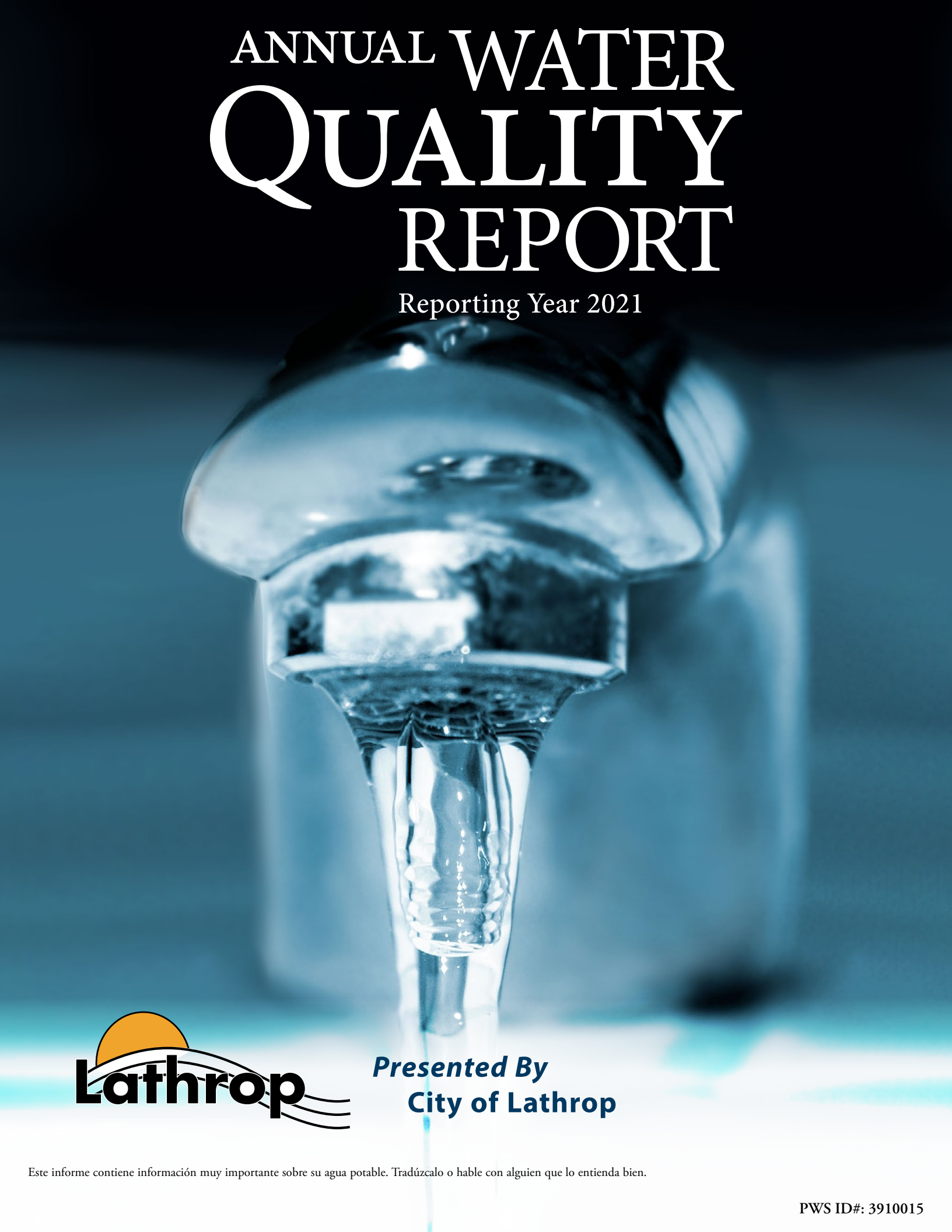
ANNUAL WATER QUALITY REPORT

Reporting Year 2021



Lathrop

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

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, 2021. 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 all hours—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.

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, and metal plating, finishing, and fabrication facilities.

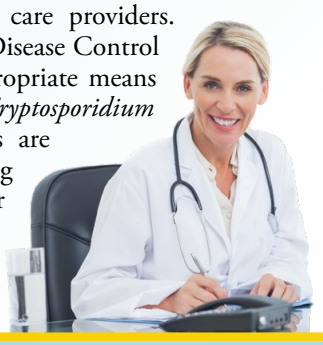
A copy of the complete assessment is available at the State Water Resources Control Board - Drinking Water Division, Field Operations Branch, Stockton District Office, 31 East Channel Street, Room 270, Stockton, California, 95202, or at the City of Lathrop, Public Works Department, 390 Towne Centre Drive,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

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. Environmental Protection Agency (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 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.



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. 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;

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 which 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.

QUESTIONS? For more information about this report, or for any questions relating to your drinking water, please contact Greg Gibson, PE, Senior Civil Engineer, Public Works Department, at (209) 941-7442.

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 it 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.

> "When the well is dry, we know the worth of water."
>
> —*Benjamin Franklin*

Water Stress

Water stress occurs when the demand for water exceeds the amount available during a certain period or when poor water quality restricts its use. Water stress causes deterioration of freshwater resources in terms of quantity (aquifer overexploitation, dry rivers, etc.) and quality (eutrophication, organic matter pollution, saline intrusion, etc.).

According to the World Resources Institute (www.wri.org), the Middle East and North Africa remain the most water-stressed regions on Earth. However, several states in the western half of the U.S. are similarly experiencing extremely high levels of water stress from overuse. It is clear that even in countries with low overall water stress, individual communities may still be experiencing extremely stressed conditions. For example, South Africa and the United States rank #48 and #71 on WRI's list, respectively, yet the Western Cape (the state home to Cape Town) and New Mexico experience extremely high stress levels.

There are undeniably worrying trends in water quality. But by taking action now and investing in better management, we can solve water issues before it's too late.

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 two 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.

Community Participation

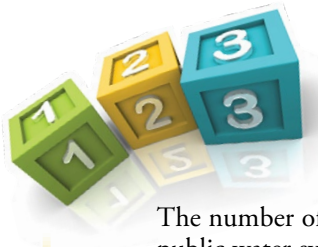
You are invited to participate in our citizen's forum during our city council meetings and voice your concerns about your drinking water. The city council's meeting agenda and schedule are posted at ci.lathrop.ca.us/meetings. The city council typically meets the second Monday of each month at 7:00 p.m. at City Hall, 390 Towne Centre Drive, Lathrop.

Water Treatment Process

All groundwater from the city's four active groundwater wells (Wells 6, 7, 8, and 10) is 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. A fifth well (Well 9) has been inactive since 2018 because of water quality concerns. 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.

Think Before You Flush!

Flushing unused or expired medicines can be harmful to your drinking water. Properly disposing of unused or expired medication helps protect you and the environment. Keep medications out of our waterways by disposing responsibly. To find a convenient drop-off location near you, please visit https://bit.ly/3IeRyXy.



BY THE NUMBERS

The number of Americans who receive water from a public water system. **300 MILLION**

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

The number of gallons of water produced daily by public water systems in the U.S. **34 BILLION**

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

The number of active public water systems in the U.S. **151 THOUSAND**

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

The age in years of the world's oldest water, found in a mine at a depth of nearly two miles. **2 BILLION**

Where Does My Water Come From?

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

What are PFAS?

Per- and polyfluoroalkyl substances (PFAS) are a group of manufactured chemicals used worldwide since the 1950s to make fluoropolymer coatings and products that resist heat, oil, stains, grease, and water. During production and use, PFAS can migrate into the soil, water, and air. Most PFAS do not break down; they remain in the environment, ultimately finding their way into drinking water. Because of their widespread use and their persistence in the environment, PFAS are found all over the world at low levels. Some PFAS can build up in people and animals with repeated exposure over time.

The most commonly studied PFAS are perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS). PFOA and PFOS have been phased out of production and use in the United States, but other countries may still manufacture and use them.

Some products that may contain PFAS include:

- Some grease-resistant paper, fast food containers/wrappers, microwave popcorn bags, pizza boxes
- Nonstick cookware
- Stain-resistant coatings used on carpets, upholstery, and other fabrics
- Water-resistant clothing
- Personal care products (shampoo, dental floss) and cosmetics (nail polish, eye makeup)
- Cleaning products
- Paints, varnishes, and sealants

Even though recent efforts to remove PFAS have reduced the likelihood of exposure, some products may still contain them. If you have questions or concerns about products you use in your home, contact the Consumer Product Safety Commission at (800) 638-2772. For a more detailed discussion on PFAS, please visit https://www.atsdr.cdc.gov/pfas/index.html.

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and 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 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.

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)	2021	10	0.004	7.4	1–14	NA	NA	NA	NA	NA	NA	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium (ppm)	2020	1	2	NA	NA	NA	NA	NA	NA	0.3	0.21–0.49	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Chlorine (ppm)	2021	[4.0 (as Cl2)]	[4 (as Cl2)]	NA	NA	NA	NA	0.8	0.24–1.24	NA	NA	No	Drinking water disinfectant added for treatment
Gross Alpha Particle Activity (pCi/L)	2019	15	(0)	NA	NA	NA	NA	NA	NA	5.5[1]	3.3–8.5[1]	No	Erosion of natural deposits
HAA5 [sum of 5 haloacetic acids]–Stage 2 (ppb)	2021	60	NA	NA	NA	NA	NA	36.3	9–62	NA	NA	No	By-product of drinking water disinfection
Nitrate [as nitrogen] (ppm)	2021	10	10	NA	NA	NA	NA	NA	NA	4	3.2–5.5	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[2]	0.82[2]	No	Erosion of natural deposits
TTHMs [total trihalomethanes]–Stage 2 (ppb)	2021	80	NA	NA	NA	NA	NA	34.1	15–47	NA	NA	No	By-product of drinking water disinfection
Uranium (pCi/L)	2020	20	0.43	NA	NA	NA	NA	NA	NA	5.6[3]	3.63–8[3]	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 %ILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2021	1.3	0.3	0.13	0/31	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

SECONDARY SUBSTANCES

				LAWTF-Treated GW		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	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2021	500	NS	NA	NA	42	NA	43.8[4]	31–61[4]	No	Runoff/leaching from natural deposits; seawater influence
Iron (ppb)	2021	300	NS	9.2	ND–80	NA	NA	NA	NA	No	Leaching from natural deposits; industrial wastes
Manganese (ppb)	2020	50	NS	NA	NA	NA	NA	14	ND–30	No	Leaching from natural deposits
Specific Conductance (µS/cm)	2021	1,600	NS	NA	NA	100	NA	697[4]	607–845[4]	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2021	500	NS	NA	NA	2.3	NA	28.2[4]	18–34[4]	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2021	1,000	NS	NA	NA	68	NA	430[4]	370–530[4]	No	Runoff/leaching from natural deposits
Turbidity (NTU)	2021	5	NS	NA	NA	0.21	NA	1.4[4]	ND–3[4]	No	Soil runoff

UNREGULATED SUBSTANCES[5]

		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)	2021	NA	NA	2.6	1–6	NA	NA	By-product of drinking water disinfection
Bromoform (ppb)	2021	NA	NA	8.8	1–16	NA	NA	By-product of drinking water disinfection
Chloroform (ppb)	2021	NA	NA	26.8	5–44	NA	NA	By-product of drinking water disinfection
Dibromochloromethane (ppb)	2021	NA	NA	6.4	ND–13	NA	NA	By-product of drinking water disinfection
Hardness, Total [as CaCO3] (ppm)	2021	41	NA	NA	NA	208[4]	170–245[4]	Erosion of natural deposits
Sodium (ppm)	2021	4.4	NA	NA	NA	43.2[4]	38–47[4]	Erosion of natural deposits
Vanadium (ppb)	2020	NA	NA	NA	NA	17.8	13–20	Erosion of natural deposits

OTHER SUBSTANCES [5]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	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
Alkalinity, Total [as CaCO3 equivalents] (ppm) (ppm)	2021	41	NA	NA	NA	226[4]	180–300[4]	Naturally present in the environment
Bromochloroacetic Acid (ppb)	2019	NA	NA	1	0.6–2.6	NA	NA	By-product of drinking water disinfection
Bromodichloroacetic Acid (ppb)	2019	NA	NA	0.7	ND–1.3	NA	NA	By-product of drinking water disinfection
Chlorodibromoacetic Acid (ppb)	2019	NA	NA	0.03	ND–0.4	NA	NA	By-product of drinking water disinfection
Dibromoacetic Acid (ppb)	2021	NA	NA	3.5	ND–5	NA	NA	By-product of drinking water disinfection
Dichloroacetic Acid (ppb)	2021	NA	NA	21	4–48	NA	NA	By-product of drinking water disinfection
Perfluorobutanesulfonic Acid [PFBS] (ppt)	2021	NA	NA	NA	NA	5.3	ND–22	Fire training/fire response sites, industrial sites, landfills, and wastewater treatment plants/biosolids
Perfluorohexanesulfonic Acid [PFHxS] (ppt)	2021	NA	NA	NA	NA	4.1	ND–12	Fire training/fire response sites, industrial sites, landfills, and wastewater treatment plants/biosolids
Perfluorooctanesulfonate Acid [PFOS] (ppt)	2021	NA	NA	NA	NA	17.1	2–79	Fire training/fire response sites, industrial sites, landfills, and wastewater treatment plants/biosolids
Perfluorooctanoic Acid [PFOA] (ppt)	2021	NA	NA	NA	NA	1.4	ND–15	Fire training/fire response sites, industrial sites, landfills, and wastewater treatment plants/biosolids
pH (units)	2021	7.8	NA	NA	NA	7.7[4]	7.6–7.9[4]	Naturally occurring
Trichloroacetic Acid (ppb)	2021	NA	NA	14.44	2–29	NA	NA	By-product of drinking water disinfection

[1] Well 10 sampled in 2016; Wells 6 and 9 sampled in 2019; Wells 7 and 8 sampled in 2020.
[2] Well 10 sampled in 2018.
[3] Well 6 sampled in 2019; Wells 7 and 8 sampled in 2020; Wells 9 and 10 sampled in 2016.
[4] Sampled in 2020.
[5] Unregulated contaminant monitoring helps U.S. EPA and the State Board 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.

GW: Groundwater.

LAWTF: Louise Avenue Water Treatment Facility.

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).

SSJID: South San Joaquin Irrigation District.

SW: Surface water.

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