La Crosse Water Utility
2019 Water Quality Report

DISTRIBUTED JUNE 2020

SPECIAL POINTS OF INTEREST FOUND IN THIS REPORT:

- Health Information
- How to protect our water
- Cross Connection Control
- Water Quality
- Hydrant Flushing and Hydrant Use
- Conservation

YOUR WATER UTILITY

The La Crosse Water Utility is made up of and maintains:

- 13 Wells
- 2 Reservoirs
- 220.2 Miles of Water Main
- 2,976 Valves
- 16,543 Services
- 2,018 Fire Hydrants
- 16,456 Meters

Our Water Supply

The La Crosse Water Utility is pleased to present you with its annual Water Quality Report that provides a complete summary of water quality information from 2019. We are committed to providing safe, high-quality, and dependable drinking water supply. We have an extensive water quality monitoring and treatment program in accordance with Federal and State laws.

All water supplied to City of La Crosse is groundwater, drawn by wells from an unconsolidated sand and gravel aquifer approximately 170 feet below the City. The aquifer is an impressive source of water, easily producing millions of gallons of water daily. The Water Utility operates thirteen active high capacity wells which range in depth between 100 to 160 feet deep and have pumping capacities of up to 3,500 gallons per minute (gpm).

Water use in the city of La Crosse averaged 9.53 million gallons per day (MGD) in 2019, as compared to 9.19 MGD in 2018. Maximum water production in 2019 was 15.068 MGD on July 15th. The City's all-time maximum production of 37.3 MGD occurred on June 6, 1988.

Hydrant Flushing 2020

Insuring the integrity of the water system and providing high quality water

Normal water pressure to La Crosse customers ranges between 35 and 100 psi. A water system study completed in 1999 indicated that the existing water supply system has adequate capacity to meet projected demands for water at least through the year 2020. A new study is currently underway. Fluoride and chlorine are added to the water as it is pumped into the distribution system. City-wide, in 2019 fluoride and chlorine dosages from all City wells averaged 0.71 PPM and 1.01 PPM, respectively. The Water Utility also doses a polyphosphate additive at seven wells to control problems related to manganese in the water. For the seven treated wells, in 2019 polyphosphate dosage at these wells averaged 0.86 PPM of total phosphate. Samples from the water distribution system in 2019 averaged 0.07 PPM of total phosphorus.

We are proud to report that our drinking water is safe and meets all Federal and State requirements.

In order to maintain a safe and dependable water supply, the Utility continually makes improvements to benefit all of its customers. This includes replacing old water mains, fire hydrants, service lines and valves.

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Visit the Water Utility webpage online at www.cityoflacrosse.org/water for more information related to the water system.

Who oversees the Water Utility

The La Crosse Water Utility operates under the direction of the City's Board of Public Works and Common Council. The Board of Public Works usually meets weekly and considers a wide variety of issues related to Water Utility operations. Agendas for Board of Public Works meetings are posted in City Hall, and are also available on the City's Web Site: www.cityoflacrosse.org. If you have questions regarding this report or concerning the La Crosse water system, please call: **Bernard Lenz, Utilities Manager, 400 La Crosse Street, La Crosse, WI 54601 (608-789-7536).**

Important Health Information

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. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791), or by visiting their Office of Water website at www.epa.gov/OW.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/ Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the environmental protection agency's Safe Water Drinking Hotline (800-426-4791).

The La Crosse Water Utility vigilantly tests and monitors the City's water supply to assure the end quality to consumers. Test results have detected some contaminants. The Water Quality Data Table section of this report provides information showing that all water quality criteria met or exceeded Federal and State requirements in 2019. **The EPA has determined that City of La Crosse water is safe at the levels detected.**

Substances That Could Be in Water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, springs, reservoirs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and substances resulting from the presence of animals or human activity.

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

Substances that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban 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 may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities;

Radon: Radon is a radioactive gas that you can't see, taste, or smell. It is found throughout the U.S. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will in most cases be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. Fix your home if the level of radon in your air is 4 Picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that aren't too costly. For additional information, call your state radon program or call EPA's Radon Hotline (800-SOS-RADON);

Nitrates: Nitrates in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider;

Lead: Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

MICROBIAL TESTING

To ensure drinking water safety, routine bacteriological tests are conducted. Over 60 samples from the distribution system and wells are collected each month from representative locations. Samples are tested for coliform bacteria, indicators of potential contamination. In 2019 the Water Utility collected 761 samples. None tested positive for coliform bacteria. The absence of coliform positive samples reflects good source water quality and adequate disinfection maintained in the distribution system.

- **In 2019, the Water Utility pumped 3,478,480 gallons of water.**
- **The cost of a gallon of water from the tap in 2019 was $0.04375.**

Current Water Rates can be found on the back of your quarterly bill or are available online at www.cityoflacrosse.org.

IMPORTANT NOTE ABOUT THE WATER QUALITY DATA TABLE:

Our water is tested for many contaminants. The Water Quality Table, see insert provided, lists only those contaminants which were detected in our water. Some contaminants are tested for annually, while others are done more or less frequently. The report includes the minimum and maximum levels found for each substance found in at least one well or sampling site within the past 5 years. Contaminants could be found at only one well and not any others. Contamination levels found in the table may not be representative of the water quality at your home.

See Insert labeled *Water Quality Data Table Insert*

Contaminant Reporting Definitions

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

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 allow for a margin of safety.

MCLs are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, a person would have to consume 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

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

V & E (Variances & Exemptions): State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

90th Percentile: 90% of samples are equal to or less than the number on the chart.

n/d (Non-Detects): Laboratory analysis indicates the constituent is not present.

n/a (Not-Applicable): Limits do not apply.

NR (Not-Regulated): State or EPA has not established a limit.

ppm- (Parts per million) or mg/l (Milligrams per liter): One part per million corresponds to one minute in two years or one penny in $10,000.

ppb (Parts per billion) or ug/l (Micrograms per liter): One part per billion corresponds to one minute in 2,000 years or one penny in $10,000,000.

pCi/L (Picocuries per liter): Picocuries per liter is a measure of the radioactivity in water.

TCR (Total Coliform Rule): Refers to EPA regulations for microbiological standards.

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

HYDRANT FLUSHING

The Water Utility flushes the entire water system annually to purge naturally occurring minerals and sediments that accumulate over time. These materials do not pose a health hazard but can discolor the water when the system is disrupted. Most system flushing is done at night, which allows use of wells that are normally off during the day and makes almost the full system capacity available for flushing. Night flushing has been very successful in significantly reducing daytime problems when water demand is highest. If you experience discolored water as a result of water system flushing, these materials can usually be flushed out of home plumbing systems by running cold water from an outside hose bib, an interior basement faucet, or into a bathtub.

LEAD AND COPPER

Lead and Copper found in drinking water is typically caused from corrosion of household plumbing; leaching, and erosion of natural deposits. Lead and Copper are tested every three years.

	Ideal Goal (MCLG)	Action Level (AL)	90th Percentile	# of Samples Collected	# of samples greater than AL	Sample Date	Exceeds AL
Copper (ppm)	1.3	1.3	.646	30	0	2017	No
Lead (ppb)	0	15	2.27	30	0	2017	No

INDICATOR SAMPLES AT THE WELLS

Samples are taken periodically at City wells to monitor concentration of several common indicators. The information shown below shows ranges of results of water samples taken directly from the City's thirteen active wells, in accordance with sampling requirements and schedule provided by the DNR.

Indicator	Sample Date	Range of Results	Average
Alkalinity	2017	114 to 341 ppm	234 ppm
Aluminum	2017	0 to 0.032 ppm	.007ppm
Calcium	2017	35.4 to 87.6 ppm	70.1 ppm
Chloride	2017	8.9 to 161 ppm	61.0 ppm
Hardness	2017	64 to 397 ppm	282 ppm
Iron	2017	0 to .14 ppm	.04 ppm
Magnesium	2017	9.4 to 41.4 ppm	26.9 ppm
Manganese	2017	0 to 0.253 ppm	0.057ppm
pH	2017	7.22 to 7.75 S.U.	7.5 S.U.
Total Dissolved Solids	2017	163 to 596 ppm	395 ppm

The treatment method using a polyphosphate additive to sequester or "tie-up" iron and manganese in the drinking water has been very successful in preventing customer problems related

Public Notice

As part of lead and copper sampling in 2017, the Utility was required to conduct special Water Quality Parameter Sampling during the specified monitoring period of June 1 – September 30, 2017. Although all of the required sampling was completed with results submitted and accepted by WDNR, some of the sampling was conducted prior to the specified monitoring timeframe, which resulted in issuance of a Notice of Noncompliance by the WDNR. The situation was resolved and no additional sampling was required by WDNR.

WATER CONSERVATION TIP

Don't flush money down the toilet

If your toilet is running after you flush it, you could be wasting about 26 gallons of water a day, which means hard-earned money is going right down the old toilet. Check your toilet for leaks by adding food coloring to the tank and seeing if color appears in the bowl within 15 minutes. If so, you have a leak and it needs to be fixed.

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. The La Crosse Water Utility is responsible for providing high-quality drinking water, but we cannot control the variety of materials used in plumbing components within your home. 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 are concerned about lead in your water, you may wish to pay 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/safewater/lead.

Cross Connection Control: Did you know...

Your water can become contaminated if connections to your plumbing system are not properly protected?

To avoid contamination, backflow preventers are required by state plumbing codes wherever there is an actual or potential hazard for a cross connection. The Wisconsin Department of Natural Resources requires all public water suppliers to maintain an on-going Cross Connection Control Program involving public education, onsite inspections, and possible corrective actions by building owners.

WHAT IS CROSS CONNECTION?

A cross connection is an actual or potential connection between the safe drinking water (potable) supply and source of contamination or pollution. State plumbing codes require approved backflow prevention devices, assemblies, or the methods to be installed at every point of potable water connection and use. Cross Connections must be properly protected or eliminated.

HOW DOES CONTAMINATION OCCUR?

When you turn on a faucet, you expect the water to be as safe as when it left the water reservoir. However, certain hydraulic conditions left unprotected within your plumbing system may allow hazardous substances to enter and contaminate the drinking water in your home, or even the public water supply. Water normally flows in one direction to your faucet. However, under conditions known as back-siphonage and back pressure, water can actually flow backwards.

BACK-SIPHONAGE:
May occur due to a loss of pressure in the municipal water supply such as from a water main break.

BACK PRESSURE:
May occur when a source (such as a boiler) creates a greater pressure than the incoming water pressure.

The La Crosse Water Utility's Cross-Connection Control (CCC) Program is designed to safeguard public health. The Utility has contracted with HydroCorp, Inc. of New Berlin, WI to assist with managing this mandated program.

Every residential property must be inspected a minimum of once every 20 years in coordination with our meter exchange program, therefore approximately 750 households will be inspected each year. When your property is due, you will be notified by letter and required to schedule an appointment to complete the inspection and meter exchange. Once you receive the notice, we ask for your cooperation in scheduling your appointment within the timeframe outlined.

The Property Owner's responsibilities related to the meter and meter setting:

- ***Keeping the meter clear and accessible***
- ***Ensuring the meter and meter setting is protected from damage due to bumping or freezing.***
- ***Ensuring that the inside water shut-off valves by the meter and surrounding piping are in good working condition. It is recommended that you exercise your valves every few months to make sure that is operating as it should be.***

Should the meter be damaged or valves break during a meter exchange , the property owner is responsible for the repair or replacement.

LA CROSSE SERVICE LINE AND METERING REQUIREMENTS

Pursuant to PSC 185.52 (2)(b) and PSC La Crosse Water Utility Operating Rules, there can be only one connection (meter) downstream from a utility's shut-off valve (typically a Curb Stop). Furthermore, no division of water service can be made for the extension of the supply to an adjoining lot or parcel of land.

If a property is found to be non-compliant with the policy, such as having one water service feeding two parcels of land, or one service line feeding two meters in separate locations on one parcel, then the property owner will be provided the options and timeline to bring the properties into compliance.

When remodeling or building, please confirm the plans meet each of these necessary requirements in addition to the plumbing and building codes. Further details of the Service Line and Metering Requirements and the Policy for replacement of non-compliant private service lines are available online at www.cityoflacrosse.org.

Use of City fire hydrants is allowed **only** with a completed Fire Hydrant Use Application under the conditions of the Water Utility's Hydrant Use Policy. The application and policy are available on the City of La Crosse web page or by contacting the La Crosse Utilities office. If you observe ANY suspicious activity involving a fire hydrant or any part of the water system, please report this immediately to the Water Utility or to the Police Department.

Water Quality Data Table Insert for La Crosse Water Utility 2019 Annual Water Quality Report

The Water Quality Data Table that follows lists all drinking water contaminants detected and the most recent sample date. The EPA or the DNR allows the Water Utility to monitor for certain contaminants less than once per year because concentrations of these contaminants do not change frequently. Testing frequencies are outlined below, but could be more frequently if a detect is above a certain level.

Contaminants (units)	Ideal Goal (MCLG)	Highest Level Allowed (MCL)	Level Found	Range of Results (low –high)	Viola-tion (Yes/No)	Sample Date	Typical Source of Substance
Inorganic Contaminants ("Level Found" represents the highest single sample result from all monitoring wells or sites with levels detected) - tested once every 3 years, except for Nitrates which are tested annually							
Antimony (ppb)	6	6	0.0	n/d - n/d	No	2017	Refineries discharge; solder; fire retardants; ceramic; electronics.
Arsenic (ppb)	0	10	3.0	n/d - 3.0	No	2017	Erosion of natural deposits; Runoff from orchards; glass and electronics pro-duction wastes.
Barium (ppm)	2	2	0.118	024 - 0.118	No	2017	Discharge from metal refineries; Erosion of natural deposits.
Cadmium (ppb)	5	5	0.001	n/d - 0.001	No	2017	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints.
Total Chromium (ppb)	100	100	2.12	n/d - 2.12	No	2017	Discharge from steel and pulp mills; Erosion of natural deposits; Corrosion of household plumbing systems.
Fluoride (ppm)	4	4	1.77	.09 - 1.77	No	2017	Erosion of natural deposits; Water additive which promotes strong teeth.
Mercury (ppb)	2	2	0.3	n/d - 0.3	No	2017	Erosion of natural deposits; discharge of refineries and factories; runoff from landfills; runoff from cropland.
Nickel (ppb)	100	100	14.6	n/d - 14.6	No	2017	Nickel occurs naturally in soils, groundwater and surface waters and is often used in electroplating, stainless steel and alloy products.
Nitrate [measured as Nitrogen] (ppm)	10	10	4.52	n/d - 4.52	No	2017	Fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits Highest Average from any individual sample site.
Nitrite [measured as Nitrogen] (ppm)	1	1	0.0	n/d - n/d (average)	No	2017	Fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppb)	50	50	2.0	n/d - 2.0	No	2017	Erosion of natural deposits; Petroleum and metal refineries
Sodium (ppm)	NR	NR	75.8	5.91 - 75.8	No	2017	Erosion of natural deposits; leaching; road salt application .
Sulfate (ppm)	NR	NR	29.6	6.30 - 29.6	No	2017	Erosion of natural deposits
Thallium (ppb)	.5	2.0	0.1	n/d - 0.1	No	2017	Ore processing sites; Electronics, glass and drug factories
Volatile Organic Contaminants ("Level Found" represents the highest result from an individual sample site) —Tested quarterly if have detects, but tested once every 3 years if have no detects for 3 straight years.							
Tetrachloroethylene (ppb)	0	5	n/d	n/d	No	2019	Discharge from factories, dry cleaners and auto shops.
Trichloroethylene (ppb)	0	5	n/d	n/d	No	2019	Discharge from metal degreasing sites and other factories.
Disinfection By-Products ("Level Found" represents the average of the highest single sample result from the 2 sites specified—Tested only one time per year so there is no "range") - tested annually							
Haloacetic Acids [HAA5] (ppb)	0	60	9.60	5.4 & 13.8	No	2019	By-product of drinking water chlorination. Results from 2 distribution sites LSE91 & LSE117, given as average and result of both.
Total Trihalomethanes [TTHM] (ppb)	0	80	10.42	6.44 & 14.4	No	2019	By-product of drinking water chlorination. Results from 2 distribution sites LSE91 & LSE117, given as average and result of both.
Bromoform (ppb)	0	80	n/d	n/d	No	2019	By-product of drinking water chlorination. Results from 2 distribution sites LSE91 & LSE117, given as average and result of both.
Bromodichloromethane (ppb)	0	80	3.77	2.85 & 4.97	No	2019	By-product of drinking water chlorination. Results from 2 distribution sites LSE91 & LSE117, given as average and result of both.
Chloroform (ppb)	0	80	3.52	3.17 & 3.87	No	2019	By-product of drinking water chlorination. Results from 2 distribution sites LSE91 & LSE117, given as average and result of both.
Chlorodibromomethane(ppb)	0	80	3.13	n/d & 6.25	No	2019	By-product of drinking water chlorination. Results from 2 distribution sites LSE91 & LSE117, given as average and result of both.
Radioactivity ("Level Found" represents the highest single sample result from all monitoring wells or sites with levels detected) —tested only once every five to seven years so there is no "range")							
Combined Uranium (µg/l)	0	15	0.6	0.6	No	2017	Erosion of natural deposits
Gross Alpha Incl R & U (n/a)	NR	NR	1.1	1.1	No	2017	Erosion of natural deposits
Radium, 226 + 228 (pCi/l)	0	5	0.9	0.9	No	2017	Erosion of natural deposits

Synthetic organic chemicals – Source water samples taken in 2017 showed no detectable synthetic organic chemicals. These samples are currently required to be taken once every six years.

Volatile Organic Chemicals – Water system samples taken in 2019 produced No Detects for these chemicals: Benzene, Bromobenzene , Bromomethane, Carbon Tetrachloride, Chloroethane, Chloromethane, o-Chlorotoluene, p-Chlorotoluene, Dibromochloromethane, Dibromomethane,1,2-Dichlorobenzene (O-), 1,3-Dichlorobenzene (M-), 1,4-Dichlorobenzene (P-), 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, 1,2-Dichloroethylene, cis-1,1-Dichloroethylene, Dichloromethane, 1,2-Dichloropropane, 1,3-Dichloropropane, 2,2-Dichloropropane, 1,1-Dichloropropene, 1,3-Dichloropropene, Ethyl Benzene, Chlorobenzene, Styrene, 1,1,1,2-Tetrachloroethane, 1,1,2,2-Tetrachloroethane, Toluene, 1,2,4-Trichlorobenzene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,2,3-Trichloropropane, Vinyl Chloride, Xylene Total. *(tested quarterly if there are detects, but tested once every three years if have no detects for three straight years)*

UCMR4 Additional Sampling Program Data Table -La Crosse Water Utility 2019 Annual Water Quality Report

(*See Reverse side for Annual Water Quality Data Table)*

The La Crosse Water Utility was selected to participate in the 4th cycle of sampling required by USEPA's Unregulated Contaminant Monitoring Rule (UCMR4). This sampling program is in addition to annual sampling required by the Wisconsin DNR. The purpose of this additional sampling is to monitory currently unregulated contaminants in drinking water and to provide data to the USEPS to support decisions concerning whether future regulations of these contaminants is required to protect public health. UCMR4 samples were taken at all City wells and from the water distribution system, starting in 2018 and finishing in 2019. Please contact Bernard Lenz, Utilities Manager, at the La Crosse Utilities Office, 400 La Crosse Street, La Crosse, WI 54601 or at (608) 789-7536, with any questions.

The following data represents the results of the Water Utility's participation in EPA's third round of samples under the Unregulated Contaminant Monitoring Rule (UCMR4).

Contaminants (units)	Minimum Reporting Level (MRL)	Median Level Found	Highest Single Sample	Range of Results (low –high)	Sample Date	Violation (Yes/No)	Source and sampling information	Notes
Samples Taken from Wells								
Germanium (ppb)	0.300	n/d	n/d	n/d - n/d	2018-2019	No	Samples from all 13 active city wells	1,2,3
Manganese (ppb)	0.400	90.08	482	n/d - 482	2018-2019	No	Samples from all 13 active city wells	1,2,3
Alpha-Hexachlorocyclohexane (ppb)	0.010	n/d	n/d	n/d - n/d	2018-2019	No	Samples from all 13 active city wells	1,2,3
Chlorpyrifos (ppb)	0.030	n/d	n/d	n/d - n/d	2018-2019	No	Samples from all 13 active city wells	1,2,3
Dimethipin (ppb)	0.200	n/d	n/d	n/d - n/d	2018-2019	No	Samples from all 13 active city wells	1,2,3
Ethoprop (ppb)	0.030	n/d	n/d	n/d - n/d	2018-2019	No	Samples from all 13 active city wells	1,2,3
Oxyfluorfen (ppb)	0.050	n/d	n/d	n/d - n/d	2018-2019	No	Samples from all 13 active city wells	1,2,3
Profenofos (ppb)	0.300	n/d	n/d	n/d - n/d	2018-2019	No	Samples from all 13 active city wells	1,2,3
Tebuconazole (ppb)	0.200	n/d	n/d	n/d - n/d	2018-2019	No	Samples from all 13 active city wells	1,2,3
Permethrin, CIS & TRANS (ppb)	0.040	n/d	n/d	n/d - n/d	2018-2019	No	Samples from all 13 active city wells	1,2,3
Tribufos (ppb)	0.070	n/d	n/d	n/d - n/d	2018-2019	No	Samples from all 13 active city wells	1,2,3
Butyated Hydroxyanisole (ppb)	0.030	n/d	n/d	n/d - n/d	2018-2019	No	Samples from all 13 active city wells	1,2,3
O-Toluidine (ppb)	0.007	.0008	.0222	n/d - .0222	2018-2019	No	Samples from all 13 active city wells	1,2,3
Quinoline (ppb)	0.020	n/d	n/d	n/d - n/d	2018-2019	No	Samples from all 13 active city wells	1,2,3
1-Butanol (ppb)	2.000	n/d	n/d	n/d - n/d	2018-2019	No	Samples from all 13 active city wells	1,2,3
2-Methoxyethanol (ppb)	0.400	n/d	n/d	n/d - n/d	2018-2019	No	Samples from all 13 active city wells	1,2,3
2-Propen-1-OL (ppb)	0.500	n/d	n/d	n/d - n/d	2018-2019	No	Samples from all 13 active city wells	1,2,3
Bromide (ppb)	20.0	42.5	82.4	20.8 - 82.4	2018-2019	No	Samples from all 13 active city wells	1,2,3
Total Organic Carbon (TOC) (ppb)	1000	568.85	2020	n/d - 2020	2018-2019	No	Samples from all 13 active city wells	1,2,3
Samples taken from Distribution System								
Bromochloroacetic Acid (ppb)	0.300	1.22	2.75	n/d - 2.75	2018-2019	No	Samples from 4 distribution system locations	1,2,3
Bromodichloroacetic Acid (ppb)	0.500	0.823	1.74	n/d - 1.74	2018-2019	No	Samples from 4 distribution system locations	1,2,3
Chlorodibromoacetic Acid(ppb)	0.300	1.19	1.90	0.493 - 1.90	2018-2019	No	Samples from 4 distribution system locations	1,2,3
Dibromoacetic Acid(ppb)	0.300	1.30	2.81	0.302 - 2.81	2018-2019	No	Samples from 4 distribution system locations	1,2,3
Dichloroacetic Acid (ppb)	0.200	0.687	1.28	n/d - 1.28	2018-2019	No	Samples from 4 distribution system locations	1,2,3
Monobromoacetic Acid (ppb)	0.300	n/d	n/d	n/d - n/d	2018-2019	No	Samples from 4 distribution system locations	1,2,3
Monochloroacetic Acid (ppb)	2.000	n/d	n/d	n/d - n/d	2018-2019	No	Samples from 4 distribution system locations	1,2,3
Tribromoacetic Acid (ppb)	2.000	n/d	n/d	n/d - n/d	2018-2019	No	Samples from 4 distribution system locations	1,2,3
Trichloroacetic Acid (ppb)	0.500	0.450	1.09	n/d - 1.09	2018-2019	No	Samples from 4 distribution system locations	1,2,3

Notes:

1. "Range" reflects results from all monitoring sites or distribution system locations.
2. "Highest Single Sample" reflects highest single sample result from all monitoring well sites or distribution system locations.
3. "Average" value reflects calculated average of all sample units.
4. The USEPA has issued a Drinking Water Health Advisory for Perfluoro Octanesulfonic Acid (PFOAs), at an advisory level of 70 ng/l (parts per trillion.) One City well (Well 23) had one sample result over the advisory level and was removed from operation in 2016. Note, that all samples from the water distribution system, taken concurrently with samples from Well 23, had no reportable levels of PFOAs.