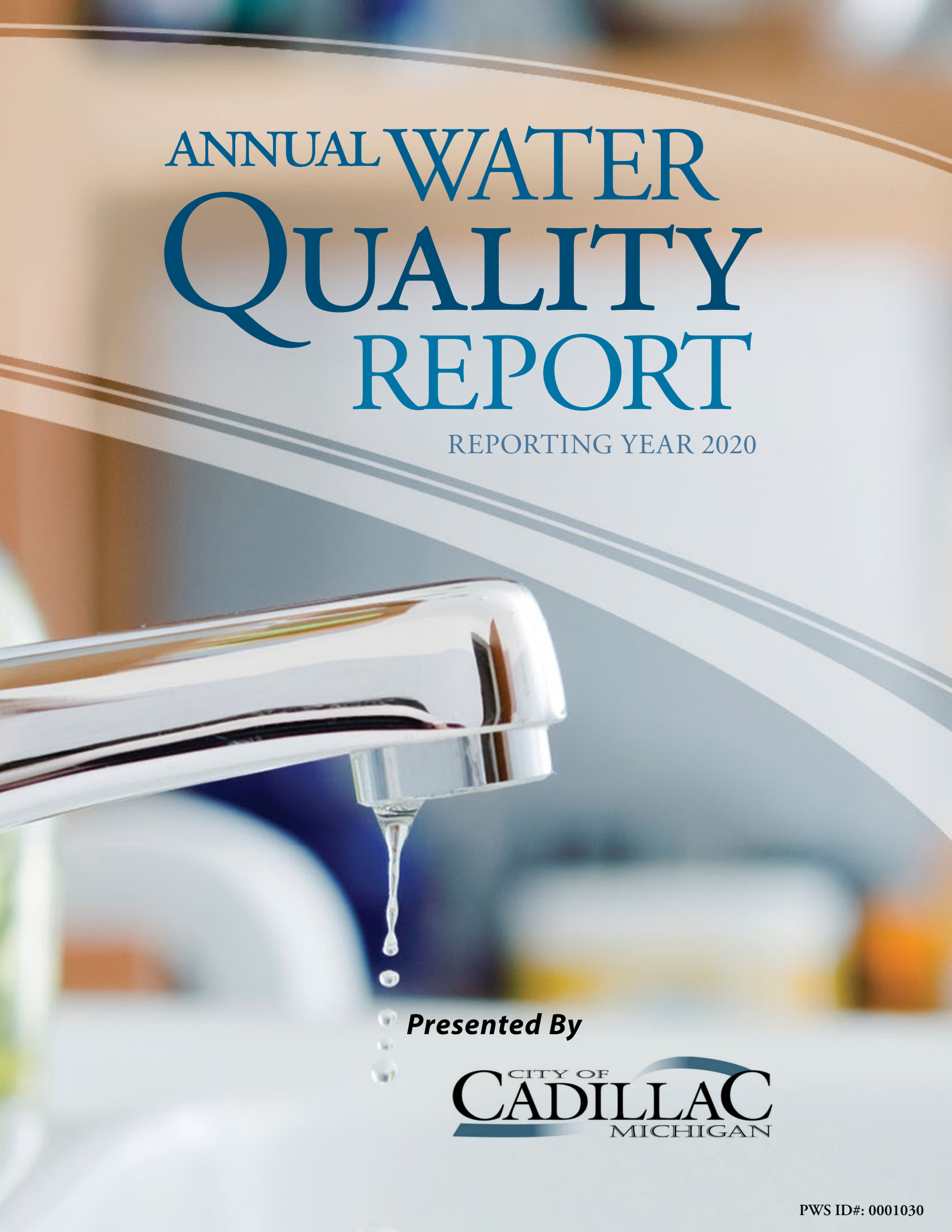


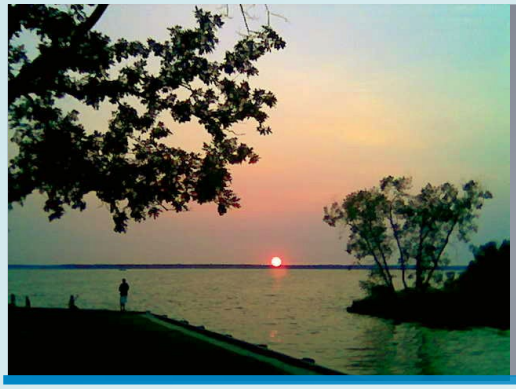
# ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2020

***Presented By***

CITY OF CADILLAC MICHIGAN

PWS ID#: 0001030



## Quality First

Once again, we are pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2020. As in years past, we are committed to delivering the best-quality drinking water possible. To that end, we remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and community outreach and education while continuing to serve the needs of all our water users. Thank you for allowing us the opportunity to serve you and your family or business.

## Where Does My Water Come From?

Cadillac's water comes from seven water wells owned by the city. Our wells draw groundwater from aquifers 300 and 400 feet below ground. The city's older well field and million-gallon water tower were constructed in 1960, ending our reliance on surface water from Lake Cadillac. The current well field, consisting of three wells, was completed and put online in August 2012.

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

Because well water contains varying amounts of inorganic contaminants (such as iron, manganese, and calcium), a blended solution of ortho- and polyphosphates is added at each well to sequester these. In addition, phosphates ensure we maintain the highest water quality by inhibiting corrosion, scale, and biofilm and reducing lead and copper levels in the distribution system. Chlorine is added to our system to disinfect the water supply.

## Source Water Assessment

The 1996 amendments to the Safe Drinking Water Act require that source water assessments be completed for all public water supplies in the United States. The Michigan Department of Environmental, Great Lakes and Energy (EGLE) developed a program to (1) identify areas that supply public drinking water, (2) assess the susceptibility of that supply to actual and potential contamination, and (3) inform the public of the assessment results.

Cadillac was reevaluated in 2005 based on our approved Wellhead Protection Program. EGLE's revised assessment lists the wells with a high to very high susceptibility (based on geology), well construction, well water chemistry, source isolation, and potential sources of contamination. Copies of the complete source water assessment are available at Cadillac's Municipal Complex and local EGLE office. To learn more about Cadillac's Wellhead Protection Program please visit our website at www.cadillac-mi.net.

## Per- and Polyfluoroalkyl Substances (PFAS)

Per- and polyfluoroalkyl substances (PFAS) are a group of chemicals that are resistant to heat, water, and oil. PFAS have been classified by the U.S. EPA as emerging contaminants on the national landscape. For decades they have been used in many industrial applications and consumer products such as carpeting, waterproof clothing, upholstery, food paper wrappings, firefighting foams, and metal plating. They are still used today. PFAS have been found at low levels both in the environment and in blood samples from the general U.S. population.

In samples collected in 2020 from the City of Cadillac's water supply entry points, no PFAS were detected. For information on PFOA, PFOS, and other PFAS, including possible health outcomes, you may visit these websites: https://www.epa.gov/pfas, https://www.atsdr.cdc.gov/pfas/, or http://www.michigan.gov/pfasresponse.

## Information on the Internet

The U.S. EPA (https://goo.gl/TFAMKc) and the Centers for Disease Control and Prevention (www.cdc.gov) Web sites provide a substantial amount of information on many issues relating to water resources, water conservation, and public health. Also, the Michigan Department of Environmental Quality has a Web site (https://goo.gl/m3Scbr) that provides complete and current information on water issues in Michigan, including valuable information about our watershed.

## Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (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, which must 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 these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases radioactive material, and substances resulting from the presence of animals or from human activity. 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.

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

## Community Participation

We want to inform our customers about their water utility. Copies of our operation budget and capital improvement plan are available at the municipal complex and at Cadillac-mi.net. If you would like to tour a facility or learn more about our operations, please call our office to make arrangements.

City council meetings are another good public forum for community participation; feel free to attend one of our regularly scheduled city council meetings on the first and third Mondays of each month, beginning at 7:00 p.m. at the Municipal Complex, 200 Lake Street, Cadillac.

## Important Health Information

The susceptible vulnerable subpopulation for lead exposure is infants and children. Infants and children who drink water containing lead 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.

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 relating to your drinking water, please call the Utilities Director, Jeff Dietlin, at (231) 775-0181.

## 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.

## Lead Service Lines

Our preliminary distribution system materials inventory (DSMI) indicates 3,996 total service lines in the Cadillac Community Water Supply, with no known lead service lines. In compliance with the recently updated Michigan Lead and Copper Rule, we will continue to evaluate and update our DSMI prior to the January 2025 final inventory deadline.

## 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 have a service line that is lead, galvanized previously connected to lead, or unknown but likely to be lead, it is recommended that you run your water for at least five minutes to flush water from both your home plumbing and the lead service line. 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 on the U.S. EPA's website at http://water.epa.gov/drink/info/lead.

## Test Results

Our water is monitored for many kinds of substances on a very strict sampling schedule. The information in the data tables shows only those substances which were detected. Our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

We participated in the fourth stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR4) program by performing additional tests on our drinking water. Unregulated contaminants are those for which the U.S. EPA has not established drinking water standards. 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 Contaminant Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

### REGULATED SUBSTANCES

| SUBSTANCE (UNIT OF MEASURE) | YEAR SAMPLED | MCL [MRDL] | MCLG [MRDLG] | AMOUNT DETECTED | RANGE LOW-HIGH | VIOLATION | TYPICAL SOURCE |
|---|---|---|---|---|---|---|---|
| **Arsenic** (ppb) | 2016 | 10 | 0 | 2.40 | ND–2.40 | No | Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes |
| **Barium** (ppm) | 2016 | 2 | 2 | 0.046 | 0.0065–0.046 | No | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits |
| **Chlorine** (ppm) | 2020 | [4] | [4] | 1.06 | ND–1.62 | No | Water additive used to control microbes |
| **Chromium** (ppb) | 2016 | 100 | 100 | 1.2 | ND–1.2 | No | Discharge from steel and pulp mills; Erosion of natural deposits |
| **Fluoride** (ppm) | 2020 | 4 | 4 | 0.15 | ND–0.15 | No | Erosion of natural deposits; Discharge from fertilizer and aluminum factories |
| **Haloacetic Acids [HAAs]** (ppb) | 2020 | 60 | NA | 1.5 | ND–1.5 | No | By-product of drinking water disinfection |
| **TTHMs [Total Trihalomethanes]** (ppb) | 2020 | 80 | NA | 8.1 | ND–21 | 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 | MCLG | AMOUNT DETECTED (90TH %ILE) | RANGE LOW-HIGH | SITES ABOVE AL/TOTAL SITES | VIOLATION | TYPICAL SOURCE |
|---|---|---|---|---|---|---|---|---|
| **Copper** (ppm) | 2019 | 1.3 | 1.3 | 0.5 | ND–0.9 | 0/30 | No | Corrosion of household plumbing systems; Erosion of natural deposits |
| **Lead** (ppb) | 2019 | 15 | 0 | 3 | ND–24 | 1/30 | No | Corrosion of household plumbing systems; Erosion of natural deposits |

### SECONDARY SUBSTANCES

| SUBSTANCE (UNIT OF MEASURE) | YEAR SAMPLED | SMCL | MCLG | AMOUNT DETECTED | RANGE LOW-HIGH | VIOLATION | TYPICAL SOURCE |
|---|---|---|---|---|---|---|---|
| **Chloride** (ppm) | 2020 | 250 | NA | 11 | 7–11 | No | Runoff/leaching from natural deposits |
| **Iron** (ppb) | 2020 | 300 | NA | 120 | ND–120 | No | Leaching from natural deposits; Industrial wastes |
| **Sulfate** (ppm) | 2020 | 250 | NA | 11 | ND–11 | No | Runoff/leaching from natural deposits; Industrial wastes |

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

**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.

**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.

**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).

**RAA (Running Annual Average):** The average of sample analytical results for samples taken throughout the distribution system during the previous four calendar quarters. The Amount Detected value for chlorine is reported as the highest RAA.

**SMCL (Secondary Maximum Contaminant Level):** These standards are developed to protect aesthetic qualities of drinking water and are not health based.

## UNREGULATED SUBSTANCES

| SUBSTANCE (UNIT OF MEASURE) | YEAR SAMPLED | AMOUNT DETECTED | RANGE LOW-HIGH | TYPICAL SOURCE |
|---|---|---|---|---|
| **Hardness** (ppm) | 2020 | 133 | 125–133 | Erosion of natural deposits |
| **Nickel** (ppb) | 2016 | 1.1 | ND–1.1 | Industrial discharge; Erosion of natural deposits |
| **Sodium** (ppm) | 2020 | 4.4 | 4.1–4.4 | Erosion of natural deposits |

## UNREGULATED CONTAMINANT MONITORING RULE - PART 4 (UCMR4)

| SUBSTANCE (UNIT OF MEASURE) | YEAR SAMPLED | AMOUNT DETECTED | RANGE LOW-HIGH |
|---|---|---|---|
| **Bromide** (ppb) | 2020 | 44.2 | 6.7–113 |
| **Bromochloroacetic Acid** (ppb) | 2020 | 0.48 | 0.40–0.56 |
| **Chlorodibromoacetic Acid** (ppb) | 2020 | 0.34 | 0.32–0.35 |
| **Dibromoacetic Acid** (ppb) | 2020 | 0.53 | 0.52–0.54 |
| **Manganese** (ppb) | 2020 | 12.1 | 1.7–22.5 |
| **Total Organic Carbon [TOC]** (ppb) | 2020 | 555 | ND–1,310 |