



# ANNUAL WATER QUALITY REPORT


REPORTING YEAR 2019

***Presented By***  
**Beaver Municipal Authority**

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

PWS ID#: 5040009

## 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.

## Where Does My Water Come From?

The Beaver Borough Municipal Authority water treatment plant is supplied from five groundwater wells located along the northerly side of the Ohio River. Beaver Borough Municipal Authority draws water from five active wells located on the Authority property. The wells combine into a common header, and water flowing from the common header is injected with gaseous chlorine before it enters an underground wet well. Gaseous chlorine is automatically dosed and continuously monitored. Three vertical turbine pumps are used to distribute water to the Lion Lane storage tank and to the distribution system. The Authority is working hard to identify water leakage in the system and to make repairs to stop these leaks. Daily water production has been greatly reduced by these efforts. We are currently investigating replacement options on developing new water sources and a supplemental water station to help us improve water movement in the system, while also providing a backup water source. This will be a long and costly endeavor, but we are hopeful that in the near future this goal will be reached.

**We remain vigilant in delivering the best-quality drinking water**

## How Long Can I Store Drinking Water?

The disinfectant in drinking water will eventually dissipate, even in a closed container. If that container housed bacteria prior to filling up with the tap water, the bacteria may continue to grow once the disinfectant has dissipated. Some experts believe that water could be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.

## Source Water Assessment

A Source Water Assessment of the groundwater supplying the Beaver Borough Municipal Authority water treatment plant was completed in 2003 by the PA Department of Environmental Protection (PADEP). The assessment has found that our source is potentially most susceptible to accidental spills from roadways, railroads, and a nearby fuel storage facility. Overall, our source has moderate risk of significant contamination. Summary reports are available by writing to Beaver Borough at 469 Third Street, Beaver, PA 15009, and is also available on the PADEP website at [www.dep.state.pa.us](http://www.dep.state.pa.us) (keyword: "DEP source water"). Complete reports were distributed to municipalities, water supplier, local planning agencies, and PADEP offices. Copies of the complete report are available for review at the PADEP Southwest Regional Office, Records Management Unit, at (412) 442-4000.

## What's Your Water Footprint?

You may have some understanding about your carbon footprint, but how much do you know about your water footprint? The water footprint of an individual, community, or business is defined as the total volume of freshwater that is used to produce the goods and services that are consumed by the individual or community or produced by the business. For example, 11 gallons of water are needed to irrigate and wash the fruit in one half-gallon container of orange juice. Thirty-seven gallons of water are used to grow, produce, package, and ship the beans in that morning cup of coffee. Two-hundred sixty-four gallons of water are required to produce one quart of milk, and 4,200 gallons of water are required to produce two pounds of beef.

According to the U.S. EPA, the average American uses over 180 gallons of water daily. In fact, in the developed world, one flush of a toilet uses as much water as the average person in the developing world allocates for an entire day's cooking, washing, cleaning, and drinking. The annual American per capita water footprint is about 8,000 cubic feet; twice the global per capita average. With water use increasing six-fold in the past century, our demands for freshwater are rapidly outstripping what the planet can replenish.

To check out your own water footprint, go to <http://goo.gl/QMoIXT>.

## Community Participation

You are invited to participate in our public forum and ask questions about your drinking water. The Municipal Authority meets the third Wednesday of each month at the Beaver Borough Municipal Building, located at 469 3rd St., Beaver, PA 15009.

# QUESTIONS?

For more information about this report, or for any questions related to your drinking water, please call the Beaver Municipal Authority office at (724) 773-6705 or access our website at <http://beaverboroughwater.us/>.

## Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA and DEP prescribe regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration and DEP 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 storm-water 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 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 may also come from gas stations, urban storm-water 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.

## 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 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).



## Important Health Information

Nitrate 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.



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>.

## 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.

## Tip Top Tap

The most common signs that your faucet or sink is affecting the quality of your drinking water are discolored water, sink or faucet stains, a buildup of particles, unusual odors or tastes, and a reduced flow of water. The solutions to these problems may be in your hands.

### Brown Water

Brown water can occur due to repairs, operations of valves or hydrants, and so forth. Run the water at a laundry sink or similar location until it clears up, or just wait for a while before using the water. Brown water is caused by sediment; usually rust or manganese. Many older plumbing pipes are made of iron, which over time naturally rusts. If a pipe is damaged by rust, then it could cause the water to turn brown. Many homes built before 1960 were plumbed with galvanized steel water lines. As these water lines age, they can collect a rusty sediment that can come out at the tap when you turn on your faucet. If the discolored water is only present at one or several faucets (but not all of them), or if your water is discolored every morning but runs clear once you've had the tap running for a few minutes, chances are good that the problem is with the water lines in your home. Brown water is not a pleasant plumbing situation, and often means there is a more serious plumbing afoot if it is an issue with your own plumbing system. More information can be found on our website.

### Kitchen Sink and Drain

Hand washing, soap scum buildup, and the handling of raw meats and vegetables can contaminate your sink. Clogged drains can lead to unclean sinks and backed up water in which bacteria (i.e., pink- and black-colored slime growth) can grow and contaminate the sink area and faucet, causing a rotten egg odor. Disinfect and clean the sink and drain area regularly. Also, flush regularly with hot water.

### Faucets, Screens, and Aerators

Chemicals and bacteria can splash and accumulate on the faucet screen and aerator, which are located on the tip of faucets, and can collect particles like sediment and minerals, resulting in a decreased flow from the faucet. Clean and disinfect the aerators or screens on a regular basis.

Check with your plumber if you find particles in the faucet screen, as they could be pieces of plastic from the hot water heater dip tube. Faucet gaskets can break down and cause black, oily slime. If you find this slime, replace the faucet gasket with a higher-quality product. White scaling or hard deposits on faucets and showerheads may be caused by hard

water or water with high levels of calcium carbonate. Clean these fixtures with vinegar or use water softening to reduce the calcium carbonate levels for the hot water system.

### Water Filtration/Treatment Devices

A smell of rotten eggs can be a sign of bacteria on the filters or in the treatment system. The system can also become clogged over time, so regular filter replacement is important. (Remember to replace your refrigerator filter!)

### Sewer Smell

Sewer backups in the owner's lateral are the responsibility of the owner; rarely, a mainline backup can occur. We advise the use of a "back-flow prevention" on the sewer lateral to prevent backup into the property. Without back-flow prevention, a sewer backup in the main can cause flooding into a property and is not the responsibility of the Municipal Authority. Floor drains should be checked to ensure they are not dry, and add water routinely to prevent odor problems.

### Low Pressure

It is highly unlikely that you do not have water due to a mainline break. Unless others in the area are experiencing the same conditions, the problem is isolated to your residence, and an internal plumbing issue needs to be addressed with a plumber. Most times, low water pressure is due to a faulty pressure regulator and is the homeowner's responsibility.

### Other Information

The property owner is responsible for water line and shut-off valves from the Municipal Authority's main line to the premises.

The Municipal Authority will assist the property owner in the repair or replacement of the water line to protect the integrity of the public water system and public street. This policy applies to the water service line between the Municipal Authority's main water line and property owner's curb stop (shut-off valve).

The property owner is responsible for maintaining the sanitary sewer service line from the main trunk line to the premises, including street replacement if necessary.

Plumbing services are readily available from a number of reliable local suppliers.

Insurance for water and sewer line repair is available through various companies. The Municipal Authority endorses Service Line Warranties of America. Call (866) 922-9006 for more information.

## Fixtures With Green Stains

A green or blue-green stain on kitchen or bathroom fixtures is caused by tiny amounts of copper that dissolve in your home's copper plumbing system when the water sits unused overnight. Copper staining may be the result of a leaky faucet or a faulty toilet flush valve, so be sure your plumbing is in good working order.

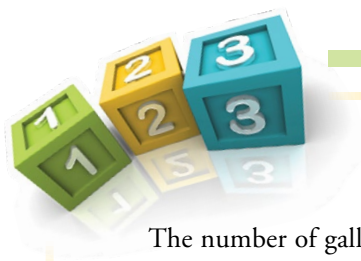
Copper stains may also be caused by overly hot tap water. Generally speaking, you should maintain your water temperature at a maximum of 120 degrees Fahrenheit. You should consult the owner's manual for your heater or check with your plumber to determine your current heat setting. Lowering your water temperature will reduce the staining problem and save you money on your energy bill.

Also keep in mind that a tap that is used often throughout the day usually will not produce copper stains, so if you flush the tap for a minute or so before using the water for cooking or drinking, copper levels will be reduced.

## 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

**93** The number of federally regulated contaminants tested for in drinking water.

## Water Main Flushing

**D**istribution mains (pipes) convey water to homes, businesses, and hydrants in your neighborhood. The water entering distribution mains is of very high quality; however, water quality can deteriorate in areas of the distribution mains over time. Water main flushing is the process of cleaning the interior of water distribution mains by sending a rapid flow of water through the mains.

Flushing maintains water quality in several ways. For example, flushing removes sediments like iron and manganese. Although iron and manganese do not pose health concerns, they can affect the taste, clarity, and color of the water. Additionally, sediments can shield microorganisms from the disinfecting power of chlorine, contributing to the growth of microorganisms within distribution mains. Flushing helps remove stale water and ensures the presence of fresh water with sufficient dissolved oxygen, disinfectant levels, and an acceptable taste and smell.

Some homes are impacted directly as flushing occurs due to the location of the hydrant connection to the water main, but this is only temporary and can not be avoided.

During flushing operations in your neighborhood, some short-term deterioration of water quality, though uncommon, is possible. You should avoid tap water for household uses at that time. If you do use the tap, allow your cold water to run for a few minutes at full velocity before use, and avoid using hot water to prevent sediment accumulation in your hot water tank.

The BBMA has altered hydrant flushing schedules in the past 12 months in an effort to help resolve areas that experience “dirty water.” The required addition of more chlorine has produced an increase in sediments like iron and manganese releasing from the water mains, and this brown material inevitably ends up entering homes as water is drawn from the system. We can assure you that any temporary inconvenience you may experience is ultimately necessary to improve the water quality for all homes connected to the system.

Please contact us if you have any questions or if you would like more information on our water main flushing schedule, and we thank you for your understanding in the need to complete this very important maintenance of our water distribution system.

## Information on the Internet

**T**he U.S. EPA (<https://goo.gl/TFAMKc>) and the Centers for Disease Control and Prevention ([www.cdc.gov](http://www.cdc.gov)) websites provide a substantial amount of information on many issues relating to water resources, water conservation, and public health. Also, the Pennsylvania DEP has a website (<https://goo.gl/S8tGjj>) that provides complete and current information on water issues in Pennsylvania, including valuable information about our watershed.

Also, the BBMA website can be accessed for information; <http://beaverboroughwater.us/>.

## Benefits of Chlorination

**D**isinfection, 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.

We routinely respond to inquiries about the chlorine in our drinking water in Beaver, and at times, some homes experience a higher chlorine content than other homes. We can assure you that this is normal, and in fact is necessary to maintain minimum chlorine levels throughout the entire distribution system. These minimum levels are determined by the EPA/DEP and must be maintained at all times. We have modified procedures for hydrant flushing, as the requirements for minimum chlorine have increased in an effort to help move the water and minimize both low and high chlorine areas in the system.

## Water Treatment Process

**T**he treatment process in Beaver consists of pulling groundwater from our underground aquifer with our well pumps and applying chlorine disinfection to this “raw” water in our Water Works. Continuous monitoring of the disinfection residual is an integral part of our process. Beaver Borough Municipal does not filter this groundwater.



## 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.

## 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;
- Maintaining the distribution system by checking for leaks, repairing and maintaining water mains and valves, and performing hydrant flushing and maintenance.
- 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.



## 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.

In 2019, all water sampling was completed in compliance with DEP/EPA requirements, and all sample results were under the contaminant maximum levels. There was a violation incurred simply due to a late submission of a monthly report that was due by the 10th of the month and was submitted on the 11th. This triggered failure to monitor/report for the groundwater rule and disinfection. There were no problems with the water or disinfection; this was strictly a late report.

### REGULATED SUBSTANCES

| SUBSTANCE<br>(UNIT OF MEASURE)         | YEAR<br>SAMPLED | MCL<br>[MRDL]   | MCLG<br>[MRDLG] | AMOUNT<br>DETECTED | RANGE<br>LOW-HIGH | VIOLATION | TYPICAL SOURCE  |
|--|-----------------|-----------------|-----------------|--------------------|-------------------|-----------|---|
| Barium (ppm)                           | 2018            | 2               | 2               | 0.135              | 0.135–0.135       | No        | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits  |
| Chloramines<br>[Distribution] (ppm)    | 2019            | [4]             | [4]             | NA                 | 0.76–0.99         | No        | Water additive used to control microbes   |
| Chloramines [Entry<br>Point] (ppm)     | 2019            | MinRDL<br>= 0.4 | NA              | NA                 | 0.73–1.34         | No        | Water additive used to control microbes   |
| Chromium (ppb)                         | 2015            | 100             | 100             | 11.4               | 11.4–11.4         | No        | Discharge from steel and pulp mills; Erosion of natural deposits                            |
| Haloacetic Acids [HAAs]<br>(ppb)       | 2019            | 60              | NA              | 2.8                | 2.8–2.8           | No        | By-product of drinking water disinfection   |
| Nitrate (ppm)                          | 2019            | 10              | 10              | 6.51               | 5.57–7.48         | No        | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits |
| TTHMs [Total<br>Trihalomethanes] (ppb) | 2019            | 80              | NA              | 12.6               | 12.6–12.6         | No        | By-product of drinking water disinfection   |
| Tetrachloroethylene (ppb)              | 2019            | 5               | 0               | 0.59               | 0.59–0.59         | No        | Discharge from factories and dry cleaners   |

### Tap Water Samples Collected for Copper and Lead Analyses from Sample Sites throughout the Community

| SUBSTANCE<br>(UNIT OF MEASURE) | YEAR<br>SAMPLED | AL  | MCLG | AMOUNT<br>DETECTED<br>(90TH %ILE) | SITES ABOVE<br>AL/TOTAL<br>SITES | VIOLATION | TYPICAL SOURCE   |
|--------------------------------|-----------------|-----|------|-----------------------------------|----------------------------------|-----------|--|
| Copper (ppm)                   | 2019            | 1.3 | 1.3  | 0.258                             | 0/20                             | No        | Corrosion of household plumbing systems; Erosion of natural deposits |
| Lead <sup>1</sup> (ppb)        | 2019            | 15  | 0    | 12                                | 1/20                             | No        | Corrosion of household plumbing systems; Erosion of natural deposits |

### UNREGULATED SUBSTANCES

| SUBSTANCE<br>(UNIT OF MEASURE) | YEAR<br>SAMPLED | AMOUNT<br>DETECTED | RANGE<br>LOW-HIGH | TYPICAL SOURCE                            |
|--------------------------------|-----------------|--------------------|-------------------|---|
| Bromodichloromethane (ppm)     | 2019            | 1.5                | 1.5–1.5           | By-product of drinking water disinfection |
| Bromoform (ppm)                | 2019            | 6.1                | 6.1–6.1           | By-product of drinking water disinfection |
| Chlorodibromomethane (ppm)     | 2019            | 4.9                | 4.9–4.9           | By-product of drinking water disinfection |

<sup>1</sup> Action level not exceeded.

## 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.

**MinRDL (Minimum Residual Disinfectant Level):** The minimum level of residual disinfectant required at the entry point to the distribution system.

**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.

**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).