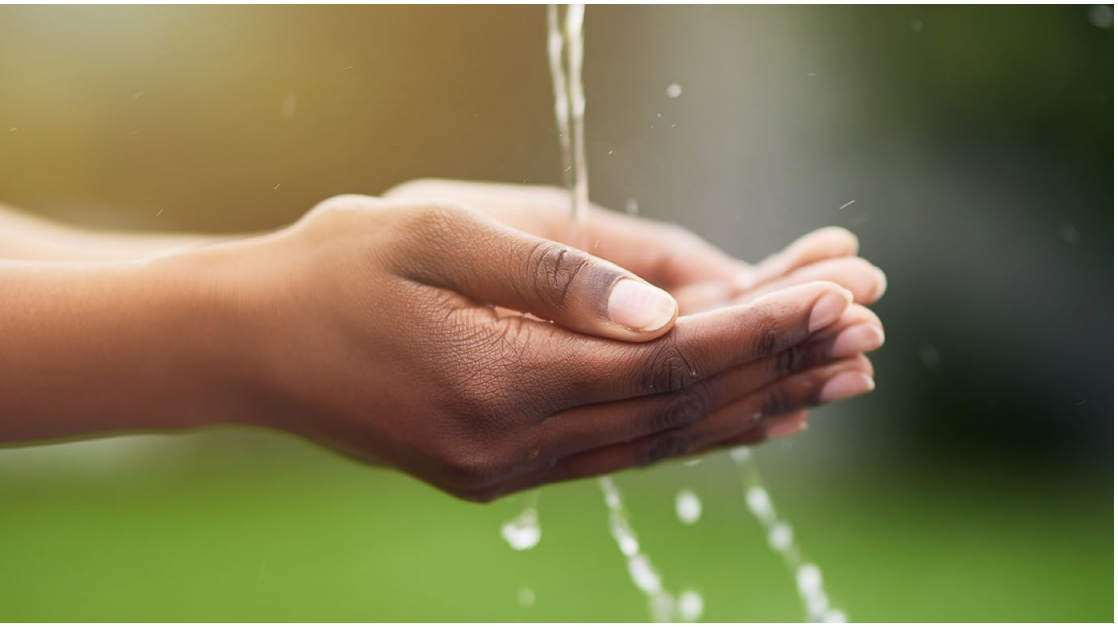
ANNUAL WATER QUALITY REPORT

Reporting Year 2025



Presented By

BEAVER
Beaver Borough Municipal Authority
Beaver, PA

PWS ID#: 5040009

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

Our Commitment

We are pleased to present to you this year's annual water quality report. This report is a snapshot of last year's water quality covering all testing performed between January 1 and December 31, 2025. Included are details about your source of water, what it contains, and how it compares to standards set by regulatory agencies. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water and providing you with this information because informed customers are our best allies.

Where Does My Water Come From?

The Beaver Borough Municipal Authority (BBMA) water treatment plant is supplied from four groundwater wells located along the northerly side of the Ohio River. Beaver Borough Municipal Authority draws water from four active wells located on its property. The wells combine into a common header, and water flowing from the common header is treated with liquid chlorine before it enters an underground wet well. Liquid chlorine is automatically dosed and continuously monitored. Three vertical turbine pumps are used to distribute water to the Lion Lane storage tank and the distribution system.

BBMA is working hard to identify water leakage in the system and make repairs to stop any leaks. Daily water production is continuously monitored and helps identify problems in the system. Keeping an older system such as ours free of leaks is an ongoing battle! If you notice water in streets, yards, alleys, etc. please call our office at (724) 773-6700 to report it. We thank you for your assistance in identifying these leaks.

Source Water Assessment

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

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 can be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.

Why We Test So Often

Drinking water is one of the most closely monitored resources in the United States. Water systems regularly test for bacteria, disinfectants, metals, organic chemicals, radioactive substances, and many other contaminants. Some tests are performed daily, while others are conducted weekly, monthly, quarterly, or annually, depending on regulatory requirements and system size. Microbiological testing for bacteria, such as coliforms, ensures that disinfection is working properly. Turbidity monitoring confirms effective filtration. Chemical testing verifies that treatment processes remain optimized. All certified laboratories must meet strict quality assurance requirements to ensure accurate results. When results approach regulatory limits, corrective actions are taken immediately.

Important Health Information

Nitrate in drinking water at levels above 10 parts per million (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 and detected nitrate levels are above 5 ppm, 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 can be particularly at risk from infections. These people should seek advice about drinking water from their health-care providers. U.S. Environmental Protection Agency (U.S. EPA)/Centers for Disease Control and Prevention (CDC) 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 on U.S. EPA's website epa.gov/safewater.

Questions?

For more information about this report, or for any questions relating to your drinking water, please call the Beaver Municipal Authority office at (724) 773-6700 or visit beaverboroughwater.us/.

Community Participation

You are invited to participate in our public forum and ask questions about your drinking water. The municipal authority meets the first Tuesday and third Wednesday of each month at the Beaver Borough Municipal Building, 469 Third Street.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA and Pennsylvania Department of Environmental Protection (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 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; and

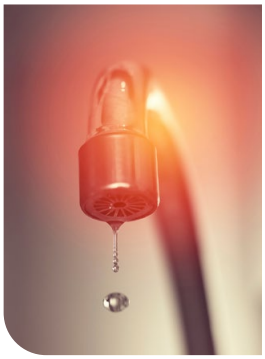
Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

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

Additional Monitoring

BBMA has been monitoring a level of chloride in the drinking water that is higher than normal. Chloride does not have adverse health effects. If you would like more information, please contact us at (724) 773-6700.

Water Treatment Process



The 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 Authority does not currently filter this groundwater; however, we are investigating the installation of a reverse osmosis system at our drinking water plant. This system would improve water quality by filtering out some of the hardness that is present in the groundwater. This is an ongoing process, but we are hopeful to complete this analysis in 2026. Any changes to the treatment process will increase the cost of producing water and could result in a restructuring of rates within the borough. For this reason, implementing a treatment such as reverse osmosis requires a multifaceted analysis.

Lead in Home Plumbing

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. BBMA is responsible for providing high-quality drinking water and working to help remove customer-owned lead and galvanized pipes. In Beaver, property owners own the water service line from the property to the connection at the water main. BBMA cannot control the variety of materials used in plumbing components in your home, which can also contribute to the presence of lead in drinking water. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, or doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute-accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have it tested, contact BBMA at (724) 773-6700. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at epa.gov/safewater/lead.

To address lead in drinking water, public water systems were required to develop and maintain an inventory of service line materials by October 16, 2024. Developing an inventory and identifying the location of lead service lines (LSL) is the first step for beginning LSL replacement and protecting public health. The lead service inventory may be accessed at beaverboroughwater.us/consumer-notification-of-a-lead-service-line/. Please contact us if you would like more information about the inventory or any lead sampling that has been done.

To the Last Drop

The National Oceanic and Atmospheric Administration (NOAA) defines drought as a deficiency in precipitation over an extended period of time, usually a season or more, resulting in a water shortage causing adverse impacts on vegetation, animals, and people. Drought strikes in virtually all climate zones, from very wet to very dry.

There are primarily three types of drought: Meteorological Drought refers to the lack of precipitation, or the degree of dryness and the duration of the dry period; Agricultural Drought refers to the agricultural impact of drought, focusing on precipitation shortages, soil water deficits, and reduced groundwater or reservoir levels needed for irrigation; and Hydrological Drought usually occurs following periods of extended precipitation shortfalls that can impact water supply (i.e., stream flow, reservoir and lake levels, groundwater).

Drought is a temporary aberration from normal climatic conditions; thus, it can vary significantly from one region to another. Although normally occurring, human factors such as water demand can exacerbate the duration and impact that drought has on a region. By following simple water conservation measures, you can help significantly reduce the lasting effects of extended drought.

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.
- 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.

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 perfluorooctanesulfonic 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 bit.ly/3Z5AMm8.

Disinfection By-Products Explained

Disinfection by-products, commonly called DBPs, form when disinfectants such as chlorine react with naturally occurring organic matter in water. Two of the most commonly monitored DBPs are total trihalomethanes (TTHMs) and haloacetic acids (HAA5). While disinfectants play a vital role in protecting public health by killing harmful bacteria and viruses, these reactions can produce small amounts of DBPs. Long-term exposure to elevated levels of DBPs has been associated with increased health risks, which is why strict federal standards regulate these substances.

We carefully balance the need for effective disinfection with the control of DBP formation. This includes optimizing treatment processes, managing natural organic matter, maintaining proper disinfectant levels, and adjusting system operations seasonally. Customers can help reduce DBP exposure at home by allowing tap water to run briefly before use, using certified carbon filters, and refrigerating drinking water to allow some DBPs to dissipate.

Disinfection remains one of the most important public health achievements in modern history. Water utilities continuously work to ensure that water is both microbiologically safe and compliant with DBP regulations.

BY THE NUMBERS

82 The average number of gallons of water an American uses per day.

27% The percent of household water use attributable to toilets.

700 The average number of gallons that a household can save each year with water-efficient fixtures.

50-100 The typical design lifespan of underground drinking water pipes, in years.

<1% The percent of Earth's water that is readily available as fresh drinking water.

Water Main Flushing

Distribution 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 them.

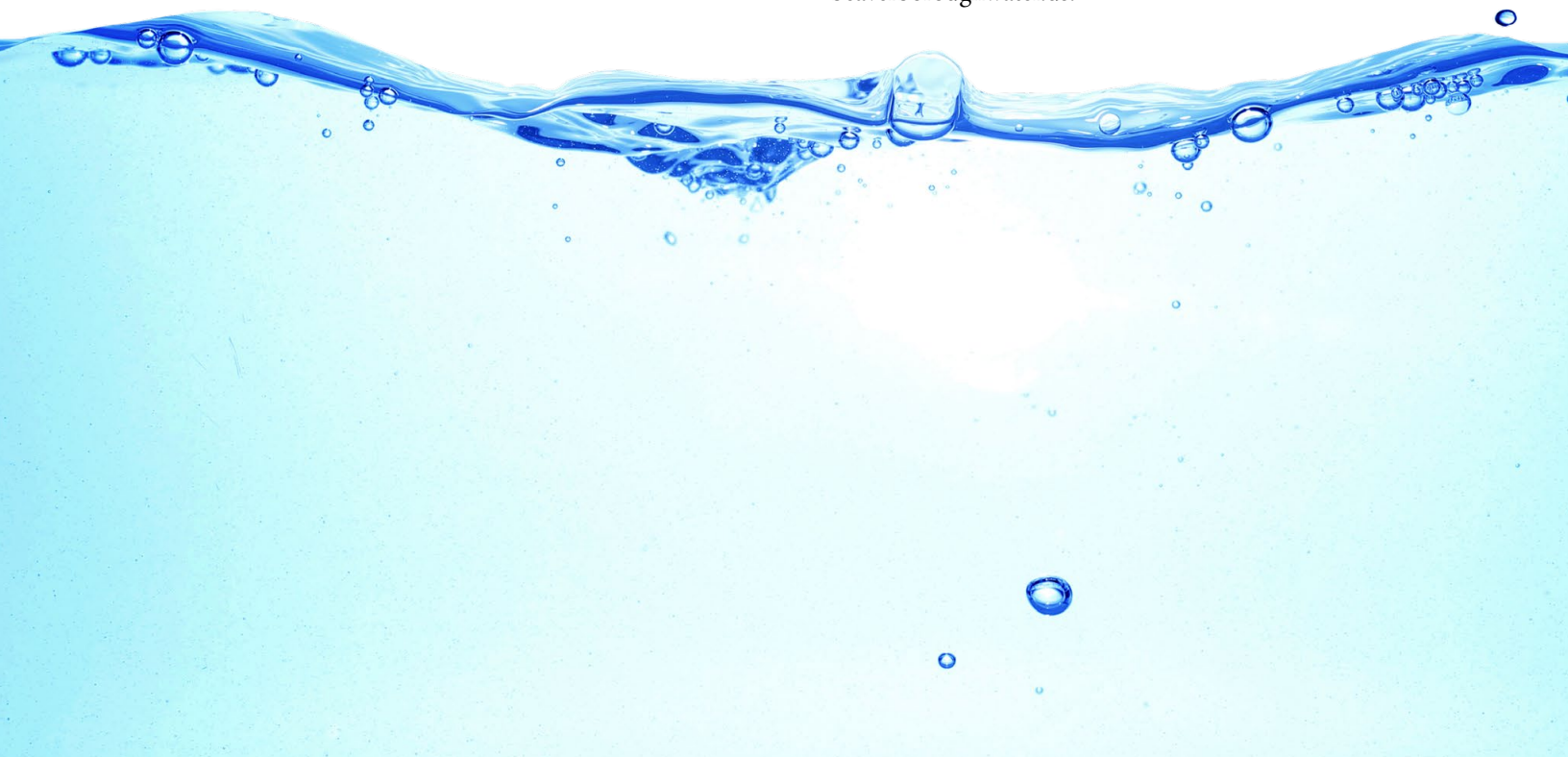
Flushing maintains water quality in several ways. For example, flushing removes sediments like iron and manganese. Although iron and manganese do not pose health concerns, they can affect the taste, clarity, and color of the water. Additionally, sediments can shield microorganisms from the disinfecting 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 and disinfectant levels and an acceptable taste and smell.

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.

Please contact us if you have any questions or if you would like more information on our water main flushing schedule.

Residential Water Service Line Insurance

Starting in October 2024, BBMA implemented a residential water service line insurance program. This insurance was added without additional rate implementation. Since implementation of this insurance program, there have been many successful service line replacements at no cost to the homeowners. If you would like more information, please visit beaverboroughwater.us.



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 is included, along with the year in which the sample was taken.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Barium (ppm)	2024	2	2	0.118	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chloramines [distribution] (ppm)	2025	[4]	[4]	NA	0.71–1.03	No	Water additive used to control microbes
Chloramines [entry point] (ppm)	2025	MinRDL: SW=0.2/ GW=0.4	NA	NA	0.39–1.2	No	Water additive used to control microbes
Chromium (ppb)	2021	100	100	ND	NA	No	Discharge from steel and pulp mills; Erosion of natural deposits
Haloacetic Acids [HAA5] (ppb)	2025	60	NA	1.75	NA	No	By-product of drinking water disinfection
Nitrate (ppm)	2025	10	10	5.28	4.5–6.24	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Perfluorooctanesulfonic Acid [PFOS] (ppt)	2025	18	NA	3.9	2.72–5.51	No	Used in the production of Teflon, firefighting foams, cleaners, cosmetics, greases and lubricants, paints, polishes, adhesives, and photographic films
Perfluorooctanoic Acid [PFOA] (ppt)	2025	14	NA	5.08	3.36–6.5	No	Used in the production of Teflon, firefighting foams, cleaners, cosmetics, greases and lubricants, paints, polishes, adhesives, and photographic films
Tetrachloroethylene (ppb)	2025	5	0	ND	NA	No	Discharge from factories and dry cleaners

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 that a water system must follow.

GW: Groundwater source.

Herbicide: Any chemical(s) used to control undesirable vegetation.

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.

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

Pesticide: Generally, any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest.

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).

SW: Surface water source.

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)	2025	1.3	1.3	0.22	NA	0/20	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2025	15	0	2.6[1]	NA	1/20	No	Corrosion of household plumbing systems; Erosion of natural deposits

UNREGULATED SUBSTANCES				
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromodichloromethane (ppm)	2025	0.00227	NA	NA
Bromoform (ppm)	2025	0.00632	NA	NA
Chlorodibromomethane (ppm)	2025	0.0063	NA	NA

[1] Action level not exceeded.

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 FOG down the house or storm drains.
- Dispose of food scraps by flushing them.
- Use the toilet as a wastebasket.

ALWAYS:

- Scrape and collect FOG into a waste container such as an empty coffee can, and dispose of it with your garbage.
- Place food scraps in waste containers or garbage bags for disposal with solid wastes.
- Place a wastebasket in each bathroom for solid wastes like disposable diapers, creams and lotions, and personal hygiene products, including nonbiodegradable wipes.

> **“Water is the driving force of all nature.”**
>
> *–Leonardo da Vinci*