

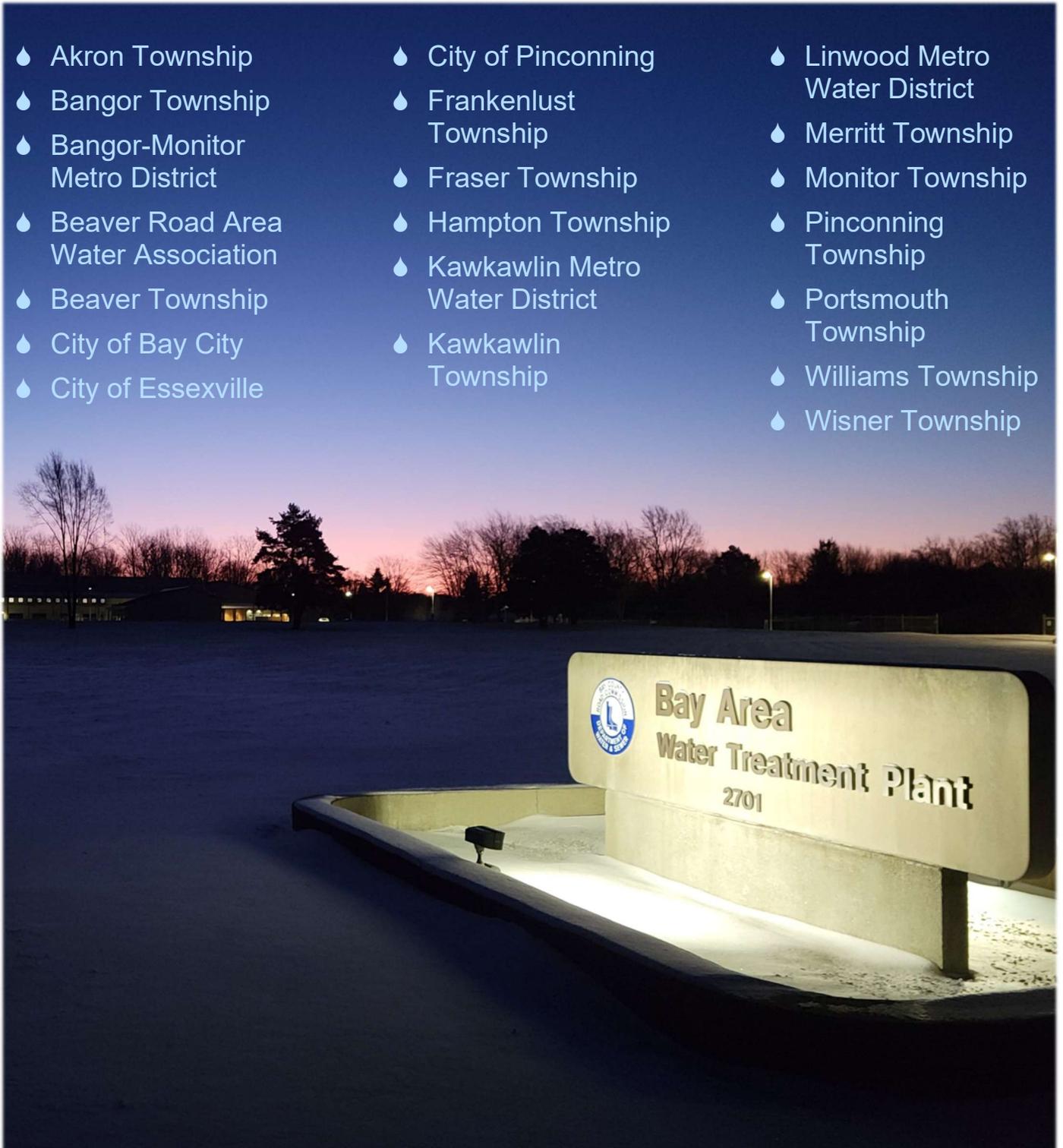
Bay Area Water System

Annual Water Quality Report for 2025



Proudly Serving 20 Local Communities:

- ◆ Akron Township
- ◆ Bangor Township
- ◆ Bangor-Monitor Metro District
- ◆ Beaver Road Area Water Association
- ◆ Beaver Township
- ◆ City of Bay City
- ◆ City of Essexville
- ◆ City of Pinconning
- ◆ Frankenlust Township
- ◆ Fraser Township
- ◆ Hampton Township
- ◆ Kawkawlin Metro Water District
- ◆ Kawkawlin Township
- ◆ Linwood Metro Water District
- ◆ Merritt Township
- ◆ Monitor Township
- ◆ Pinconning Township
- ◆ Portsmouth Township
- ◆ Williams Township
- ◆ Wisner Township



A Message from Your Water Plant Superintendent



Dear Bay Area Water System Water Customers,

The Bay Area Water Treatment Plant has been providing all of you with high-quality drinking water for over 10 years. I have been with the facility since the first gallon went out and have been serving as your Water Plant Superintendent since 2023.

Over the course of 2025, our facility produced 2.71 billion gallons of water and every drop that left our facility met all federal and state requirements. That high-quality drinking water is the end result of the ultrafiltration membrane treatment process our facility uses. It is a technical undertaking that requires both close attention and regular maintenance. Our staff's attention to detail found operational changes that saved 35.7 million gallons of water in 2025. Our culture of asset management drove the completion of a four-year project to replace all 1,920 of our membrane modules. This project not only replaced equipment at the end of its useful life, it intentionally staggered the installation of new modules to ensure only 25% of them age out at a time. These new membrane modules will leave us better prepared for years of continued service.

Producing clean, safe drinking water is one of the most important services we provide. We want you to be as informed as possible about your drinking water. The following is the annual water quality report about your drinking water in 2025. This report is called a Consumer Confidence Report or CCR and is intended to provide peace of mind and confidence in your drinking water. The report will explain where your water comes from, the results of sampling that we have performed, and what we are doing to protect you and your family. If upon reading this report, you have any questions or don't feel peace of mind, please reach out. You may contact us at 989-439-7245 or by emailing us at bawtp@baycountydwsmi.gov

I believe that confidence and peace of mind are the result of knowledge and understanding. Knowledge and understanding don't happen by accident. The staff at the Bay Area Water Treatment Plant made it a priority to increase our public engagement during 2025. Staff attended public events, hosted industry trainings, and piloted plant tours for the public. Staff's efforts were well received and we plan to continue to proactively engage the public in a positive manner.

Sincerely,

A handwritten signature in black ink that reads "Carl J. Overly". The signature is written in a cursive, flowing style.

Carl J. Overly
Bay Area Water Treatment Plant Superintendent
2701 N. Euclid Avenue, Bay City, MI 48706
989-439-7245 or bawtp@baycountydwsmi.gov

About Your Water



Where Your Drinking Water Comes From

Most drinking water in the United States comes from a river, a lake, or an underground well. The water we provide to you comes from Lake Huron through the Saginaw-Midland Municipal Water Supply Corporation (jointly owned by the cities of Saginaw and Midland). SMMWSC's intake is located near Whitestone Point. This location was selected in the 1940s after an engineering study showed that water at this location was high quality. SMMWSC pumps raw water approximately 50 miles to the Bay Area Water Treatment Plant (BAWTP) for filtration and treatment.

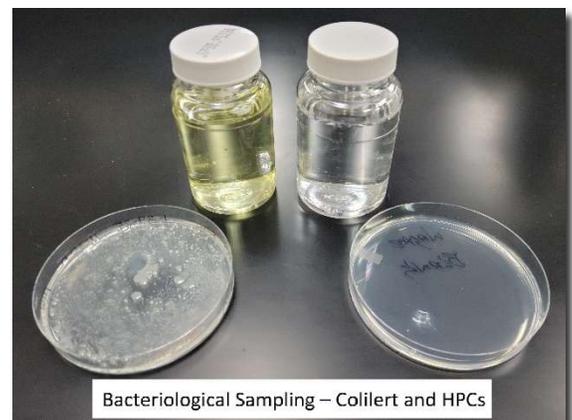
Source Water Assessment and Protection

Safe drinking water starts with the source. SMMWSC employees worked with EGLE (Michigan Department of Environment, Great Lakes, and Energy) scientists to take samples of water at the source. They looked for possible pollutants and determined the potential for contamination. This is called a Source Water Assessment. The susceptibility rating is on a seven-tiered scale from "very low" to "very high" based on geologic sensitivity, water chemistry and contaminant sources. The last EGLE Source Water Assessment report determined that the susceptibility of the Saginaw-Midland raw water source was rated "**Moderately Low**". This rating is the best a surface water source can achieve. In their continued effort to monitor and protect our source water, SMMWSC recently funded a study to create a Surface Water Intake Protection Program or SWIPP. The SWIPP was published in early 2024 and its findings will be used for years to come to help ensure the safety of our source water.

If you would like to know more about these reports or about our water source, please contact us at 989-439-7245 or by emailing us at bawtp@baycountydwsmi.gov.

What Is in Your Drinking Water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. Our water comes from a lake. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants 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, and wildlife.
- **Inorganic contaminants**, such as salts and metals, which can be naturally occurring or 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 can also come from gas stations, urban stormwater runoff, and septic systems.
- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

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 EPA's Safe Drinking Water Hotline at 800-426-4791.

To ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations that limit the levels of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health. In addition to federal regulations, the Michigan Department of Environment, Great Lakes, and Energy (EGLE) prescribe state regulations that limit the levels of certain contaminants in water provided by public water systems.

The drinking water regulations prescribed by the EPA can be categorized into primary and secondary categories. The National Primary Drinking Water Regulations (NPDWR) are legally enforceable primary standards and treatment techniques that apply to public water systems. Primary standards and treatment techniques protect public health by limiting the levels of contaminants in drinking water. The National Secondary Drinking Water Standards (NSDWS) set non-mandatory water quality standards for 15 contaminants. EPA does not enforce "secondary maximum contaminant levels" (SMCLs). They are established as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color, and odor. These contaminants are not considered to present a risk to human health at the SMCL. For more information follow the QR codes on the right.



NPDWR



NSDWS

Your Water Met All Standards

Before diving into the rest of this report, it's worth declaring that the water throughout our system met all Federal and State regulations. The following pages in this report will discuss what was sampled for, what the results were, and any associated health concerns that consumers should be aware of. In the tables starting on page 10, you will find all the substances that we detected in your drinking water. The majority of these substances are tested for monthly or annually. Some substances that we test for, and found not to be a concern, are on monitoring schedules greater than a single year. If any of those substances were previously detected, they would also be included within the proceeding tables with a date of when it was detected. For clarity purposes, substances that were not detected from the most recent round of testing are not included in the tables. Feel free to contact us, bawtp@baycountydwsmi.gov or 989-439-7245, if you'd like to know more about these sample results or our sampling program.

Testing and Sampling

In 2025, tens of thousands of tests were run on the water before it left the Water Treatment Plant. Thousands of additional tests were run on water samples collected from locations throughout the water distribution system. We are constantly looking for bacteria, disinfection residual, disinfection byproducts, metals, and changes in water quality parameters to make sure that the water is safe and continues to be safe to drink.

Bacteriological

Water leaving the treatment plant is tested daily for coliform bacteria. Samples gathered from over 50 locations throughout the distribution system are also tested. Over 100 bacteriological samples are collected every month from these locations. By the end of the year, our lab has processed almost 2,000 bacteriological samples. If coliform bacteria are found in even a small percentage of tests, more thorough testing, evaluation, and action is undertaken. Test results from 2025 did not reveal any concerns regarding coliform bacteria in the water.

Turbidity

Turbidity is the measure of cloudiness in the water and has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. Turbidity is measured in Nephelometric Turbidity Units or NTU. Results can be found on page 14.

Disinfection By-Products (DBPs)

DBPs are compounds that can form in water when that water is exposed to various disinfectants over an extended period of time. Different disinfectants can form different DBPs. Our system uses chlorine as its disinfectant which leads to the formation of various trihalomethanes (THM) and haloacetic acids (HAA). Since there are multiple forms of THMs and HAAs, these are grouped together and referred to as Total THM (TTHM) and HAA5.

Every month we look for these byproducts of the disinfection process. The regulatory limit in drinking water is 80 parts per billion for TTHMs and 60 parts per billion for HAA5s. We test for these compounds at over 30 different locations in the water system. Results can be found on page 13.

Some people who drink water containing trihalomethanes in excess of the Maximum Contaminant Level (MCL) over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer. Similar to trihalomethanes, some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

Lead and Copper

Lead and copper are not naturally present in our source water and are not detected in the tap water leaving the plant. However, low levels of lead are sometimes detected in samples collected from houses in our system. This is because some homes have lead service lines and/or lead-containing plumbing or fixtures. In an effort to keep lead levels low, the water plant is required to implement and maintain an approved corrosion control technique. The water plant feeds phosphoric acid to achieve corrosion control. Phosphoric acid forms a protective film on the inside of service lines and plumbing, reducing the chance of metals dissolving into the drinking water. We take water samples from more than 325 different homes throughout our system every year and test them for lead and copper.

More information about lead and copper can be found on pages 10 through 12.

PFAS

Per- and polyfluoroalkyl substances (PFAS) are a large group of manmade chemicals that are resistant to heat, water, and oil. For decades, they have been used in many industrial applications and consumer products such as carpeting, waterproof clothing, upholstery, food paper wrappings, personal care products, fire-fighting foams, and metal plating. PFAS compounds are prevalent and have been found in the environment all over the world.

In compliance with EGGLE's Monitoring Schedule requirements, our system's water was tested for PFAS in March of 2025. The sample was tested for 18 different PFAS related compounds, 7 of which are regulated by EGGLE. Testing had a reporting limit down to 2 PPT (parts per trillion). Parts per trillion is a size so small, it's often difficult to comprehend. 2 PPT is comparable to 1 second in 15,855 years. Results from this testing showed non-detectable levels for all 18 PFAS related compounds.

Radioactive Contaminants

Through consistent testing, our source water has shown that it doesn't contain radioactive contaminants. The historical data and lack of potential sources of contamination reduces our need to test for these contaminants on an annual basis. The testing cycle is currently set for every 9 years and in 2024, the Bay Area Water System completed this testing. Testing in 2024 looked for Gross Alpha, Radium-226, Radium-228, and Uranium. We are happy to report that all four contaminants came back as non-detectable. Even though testing has shown that the radioactive contaminants aren't in our water, it is worth highlighting their health concerns. Some people who drink water containing radioactive contaminants in excess of their MCLs over many years may have an increased risk of getting cancer and kidney toxicity.

Water Rates

Putting out high quality water that meets today's regulations comes at a cost. Pumping water, filtering it, treating it, testing it, and having the professional staff on hand 24/7 to keep the process running are everyday expenses for the Bay Area Water System.

Beyond the regular daily expenses, we also need to plan for the future. Preventative maintenance, emergency repairs, customer service calls, and capital improvements are additional expenses that need to be considered when setting rates to ensure the functionality, reliability, and longevity of our system. Our goal is to keep our water rates as low as possible without sacrificing the quality of our water or level of service you have come to expect from our system.

The rate you see and how billing is accomplished is different in each community throughout our system. It is common practice to have a readiness to service fee or a fixed charge and usage fee or a variable charge. To fund other system improvements, communities often add small additional fees. The water you receive is only half of the water cycle, similar charges for sewer often apply to water bills. These charges are often equal to if not more than the charges for water. If you have any questions or would like to know more about how water rates are set, please contact us at bawtp@baycountydwsmi.gov



Stay Informed About Your Water

Monthly Board Meetings

We need your understanding and support to be successful, so we hope you will get involved with us in all the ways you can. You are welcome to attend any of the board meetings listed below. We always make time to hear from guests and answer questions so please join us to learn more about what we're working on. We value your input!

Community	Board Meeting Monthly Schedule	Time	Location of Meeting
Akron Township	3 rd Thursday	7:00 PM	Township Hall, 4280 Bay City Forestville Rd.
Bangor Township	2 nd Tuesday	6:00 PM	Township Admin. Office, 180 State Park Dr.
Bangor-Monitor Metro. Water District	2 nd Wednesday	9:00 AM	Bangor-Monitor Hall, 2523 E. Midland Rd.
Beaver Township	2 nd Monday (typically)	6:30 PM	Township Hall, 1850 S. Garfield Rd.
Bay County Road Commission/DWS	1 st & 3 rd Wednesday (typically)	9:00 AM	Road Commission, 2600 E. Beaver Rd.
City of Bay City	1 st & 3 rd Monday	6:00 PM	City Hall, 301 Washington Ave.
City of Essexville	2 nd Tuesday	6:00 PM	City Hall, 1107 Woodside Ave.
City of Pinconning	3 rd Monday	5:30 PM	City Hall, 208 S. Manitou St.
Frankenlust Township	2 nd Tuesday	4:00 PM	Township Hall, 2401 Delta Rd.
Fraser Township	2 nd Monday	7:00 PM	Township Hall, 1474 N. Mackinaw Rd.
Hampton Township	1 st Monday	7:00 PM	Township Hall, 801 W. Center Rd.
Kawkawlin Metro Water District	1 st Tuesday	7:00 PM	405 Old Beaver Road
Kawkawlin Township	2 nd Monday	6:30 PM	Administrative Building, 1836 E. Parish Rd
Linwood Metro Water District	3 rd Tuesday	6:00 PM	201 E. Benjamin St.
Merritt Township	2 nd Tuesday	7:30 PM	Township Hall, 48 E. Munger Rd.
Monitor Township	2 nd Monday (typically)	5:00 PM	Township Hall, 2483 Midland Rd.
Pinconning Township	2 nd Tuesday	4:00 PM	Township Hall, 1751 E. Cody Estey Rd
Portsmouth Township	3 rd Monday	6:00 PM	Township Hall, 1711 W. Cass Ave.
Williams Township	2 nd Tuesday	3:00 PM	Township Hall, 1080 W. Midland Rd.
Wisner Township	3 rd Monday	7:00 PM	Township Hall, 7894 Bay City Forestville Rd.

Your Role in Water Quality

Get To Know Your Plumbing System

Our staff is constantly attending too and monitoring the water being produced and distributed throughout the system. As the consumers, you too play an important role in water quality. Homes and businesses are filled with a wide variety of electrical and mechanical systems. Power distribution, communication networks, heat and cooling, fire suppression, plumbing, irrigation, dewatering, and sewer are some of the most common systems we encounter every day. All of these systems require some form of regular attention and maintenance to keep them in good working condition. Water quality and plumbing system conditions are often closely related.

When was the last time you really looked at your plumbing system? Keeping your plumbing system in good working order, starts with knowing your system. The water service line to your home or business starts with a connection to your community's water distribution system at a control valve often referred to as a Curb Stop. From the Curb Stop, your service line enters your home or business and quickly makes a connection to a main shutoff valve and service meter. From the service meter, the plumbing begins to branch out towards desired points of use like the water heater, humidifier, ice maker, hose bibbs, dishwashers, sinks, showers, toilets, and washing machines.

Each of these point of use requires a different amount and type of attention. Water heaters often accumulate scales and sediment caused by heating cycles, humidifiers can build up scale due to evaporation, ice makers in fridges often have inline filters, hose bibbs are prone to freezing and need backflow prevention devices, shower heads often have small openings and can scale over time, washing machines have inline screens on their water connections, and sinks often have aerators that can accumulate debris. When neglected for long enough, these points of use can start to impact the way your water looks, smells, and tastes. Pay close attention to these points of use and provide the level of attention and maintenance you're comfortable with performing. For everything else seek the help of a professional plumber.

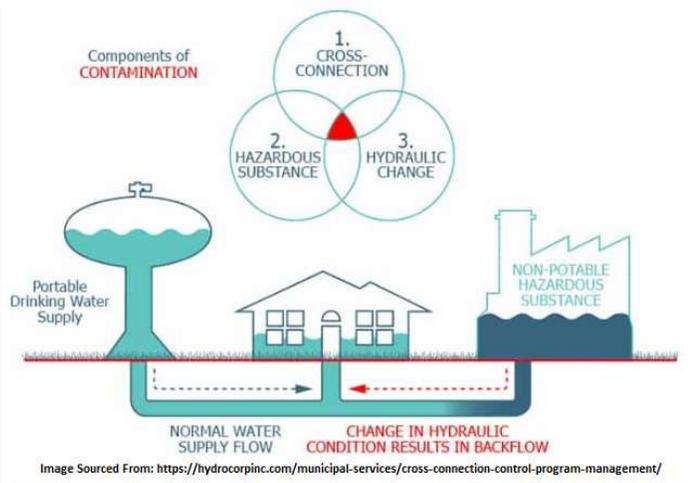
Stagnant Water and Flushing

Even when you're giving your plumbing system all the attention it needs, there are other conditions to keep an eye out for. Stagnant water can cause multiple water quality issues. Water is constantly trying to dissolve everything it comes in contact with. When left sitting in certain pipes and plumbing fixtures for extended periods of time, 6 hours or longer, the water can start accumulating those materials.



This is especially worrisome if your plumbing system contains any sort of lead. Lead service lines are found in portions of our systems, but lead can also be found in other places too. Some older solders, certain brass fittings, and even older plumbing fixtures have all been found to contain traces of lead.

While this is concerning, it's an easy issue to help address. Allowing your water to flush out your plumbing system before consuming it, reduces most of the risk. Once flowing, allow your water to run until it is cool to the touch with a stabilized temp. This should only take a minute or two. If you know your service line is lead, letting it run for an extra couple of minutes is recommended. If you have any water quality concerns or would like to know more, please contact us at bawtp@baycountydwsmi.gov



Potential for Contamination

Another factor that can influence water quality in your home are connections to sources of potential contamination. These sources can include connections to equipment like boilers or water driven sump pumps. Even outdoor spigots for hoses can be potential entry points for contaminants. In the event that the water supply system experiences a large drop in pressure, like those potentially seen during main breaks or extensive firefighting efforts, these connections can act like siphons and pull contaminants into the water system.

Due to the serious health risk that improper plumbing connections can pose to the public, it's a regulatory requirement that commercial and residential plumbing systems throughout the water distribution system get regularly inspected. This inspection process is called a Cross Connection Program. With over 38,000 different service connections, it is a sizable undertaking. To ensure inspections get done in a timely fashion, portions of the program are contracted out to third party companies like HydroCorp, <https://hydrocorpinc.com/>

HydroCorp has already completed a five year cycle and was recently re-contracted to begin another round of inspections throughout our distribution system. The Cross Connection Program is a constantly running program and is currently on pace to cycle every five to seven years. If you have any questions about our Cross Connection Program or would like to know more, please contact us at bawtp@baycountydwsmi.gov

Look Out for Special Populations

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 healthcare providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the EPA Safe Drinking Water Hotline at 1-800-426-4791.



Additional Resources

- CDC drinking water page: <https://www.cdc.gov/drinking-water/index.html>
- Bay County Health Department: 989-895-4009 | www.baycountymi.gov/health
- More information about your water, including water FAQs: <https://baycountydwsmi.gov/water/>
- The Safe Drinking Water Act: www.epa.gov/sdwa
- CDC Guide to Understanding your CCR: <https://www.cdc.gov/drinking-water/about/how-to-read-drinking-water-quality-reports.html>
- American Water Works Association: <http://www.awwa.org>

Water Quality Data for 2025

The data tables over the next few pages list all the drinking water contaminants that we detected during the 2025 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in these tables is from testing done January 1 through December 31, 2025. The State allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. All the data is representative of the water quality, but some are more than one year old.

Before diving into the data tables, some definitions need to be established. When confined to just a sheet of paper, space becomes a challenging boundary. In an effort to help everything fit and improve readability, abbreviations will be used. Below are the definitions of the abbreviations that you will encounter throughout the data tables.

Terms and Abbreviations	DEFINITIONS
AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
LRAA	Locational Running Annual Average: The average of sample results taken at a particular monitoring location during the previous four calendar quarters, calculated quarterly.
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 at testing limit
NTU	Nephelometric Turbidity Units: Turbidity is measured with an instrument called a nephelometer. Measurements are given in nephelometric turbidity units.
PPB	Part Per Billion or nanograms per liter. Equal to 1 second in 31.7 years
PPM	Part Per Million or milligrams per liter. Equal to 1 second in 11.57 days.
RAA	Running Annual Average: The average of sample results during the previous four calendar quarters, calculated quarterly.
Bay County Supply #1	Frankenlust, Monitor, and Portsmouth Township
TT	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

Lead and Copper – Tested throughout the Bay Area Water System.

Lead and copper are normally not detected in our source water. These metals are often leached into drinking water from the plumbing system that carry it. Type of service line materials, corrosion of household plumbing including fittings and fixtures, and erosion of natural deposits are common sources for both lead and copper.

Samples gathered from the distribution system are used to test for both Lead and Copper. When, how many, and how often these samples are gathered are unique to each of our communities. Communities with historically low-test results can be eligible for reduced monitoring, while other communities may be required to test once or twice per year. In 2025, the majority of our communities went to reduced monitoring and won't need to sample again until 2027. Six communities sampled in 2025. In the table below, the date range and year of when the last required sampling was done is provided.

Community	Last Sampling Period	Lead			Copper		
		Action Level (AL) = 12 ppb MCLG = 0 ppb			Action Level (AL) = 1.3 ppm MCLG = 1.3 ppm		
		Results ^a in ppb	Range of Results in ppb	Number of Samples Above AL	Results ^a in ppm	Range of Results in ppm	Number of Samples Above AL
Akron Township	June 1st to Sept 30th, 2024	0	0 - 0	0	0.1	0.1 - 0.2	0
Bangor Township	June 1st to Sept 30th, 2025	1	0 - 3	0	0.2	0.0 - 0.3	0
Bangor Monitor	June 1st to Sept 30th, 2024	0	0 - 0	0	0.1	0.0 - 0.2	0
City of Bay City	January 1st to June 30th, 2025	10	0 - 40	6	0.2	0.0 - 0.5	0
Bay County Supply #1	June 1st to Sept 30th, 2025	4	0 - 6	0	0.1	0.0 - 0.2	0
Beaver Rd. Association	June 1st to Sept 30th, 2024	0	0 - 0	0	0.2	0.0 - 0.2	0
Beaver Township	June 1st to Sept 30th, 2024	0	0 - 1	0	0.1	0.0 - 0.1	0
City of Essexville	June 1st to Sept 30th, 2025	0	0 - 0	0	0.2	0.0 - 0.2	0
Fraser Township	June 1st to Sept 30th, 2024	0	0 - 0	0	0.1	0.1 - 0.1	0
Hampton Township	June 1st to Sept 30th, 2025	0	0 - 2	0	0.1	0.0 - 0.3	0
Kawkawlin Metro.	June 1st to Sept 30th, 2024	0	0 - 0	0	0.1	0.0 - 0.1	0
Kawkawlin Township	June 1st to Sept 30th, 2024	0	0 - 0	0	0.2	0.1 - 0.2	0
Linwood Metro	June 1st to Sept 30th 2025	0	0 - 0	0	0.2	0.0 - 0.2	0
Merritt Township	June 1st to Sept 30th, 2024	0	0 - 0	0	0.2	0.1 - 0.3	0
Monitor Township	June 1st to Sept 30th, 2024	0	0 - 0	0	0.2	0.0 - 0.2	0
City of Pinconning	June 1st to Sept 30th, 2024	0	0 - 0	0	0.1	0.1 - 0.2	0
Pinconning Township	June 1st to Sept 30th, 2024	0	0 - 3	0	0.1	0.0 - 0.2	0
Portsmouth Township	June 1st to Sept 30th, 2024	0	0 - 0	0	0.2	0.0 - 0.2	0
Williams Township	June 1st to Sept 30th, 2024	0	0 - 0	0	0.1	0.1 - 0.2	0
Wisner Township	June 1st to Sept 30th, 2024	0	0 - 0	0	0.2	0.0 - 0.2	0

a) Ninety (90) percent of the samples collected were at or below the level reported for our water.

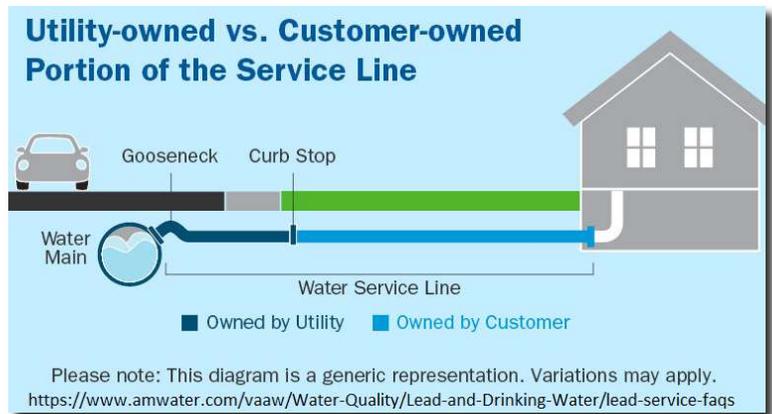
Water Service Lines

A service line is the pipe that connects a house or business to a water main. The city or township that supplies the water owns the line from the water main to a water shutoff valve called a curb stop, and the homeowner owns the section of service line between the curb stop and the house.

In 2024 each community had to submit a Complete Distribution System Material Inventory (CDSMI). This required each community to verify customer service line materials and document the findings in a report. The table to the right shows the results of those efforts and details of the service lines found in each community. A service line is listed as being a lead service if any part of the line is lead. The communities that have lead services are working hard to remove them. Bay City has been consistently working hard on getting the lead out. In 2024, they replaced 680 lead service lines and did another 656 in 2025. Bay City is currently removing 15 to 20% of the lead services each year and they are on track to keep that pace in 2026.

If a community was not absolutely certain what every section of the service was made of, it is listed as an unknown service line. Since an unknown service line has the potential to contain lead materials, they are treated like lead service lines.

One of the goals of the CDSMI process was to identify service line materials so accurate lead service line removal plans could be created. These plans require that a certain percentage of lead services are pulled every year. Those communities with lead service lines continue to test and monitor their systems and are working hard towards removal.



Community	Total Service Lines	Known Lead Service Lines	Unknown Service Lines
Akron Township	104	0	0
Bangor Township	4,761	24	0
Bangor Monitor Metro. Water District	1,249	0	0
City of Bay City	14,234	2,586	0
Bay County Supply #1	3,074	16	0
Beaver Rd. Water Association	285	0	0
Beaver Township	423	0	0
City of Essexville	1,568	0	0
Fraser Township	543	0	0
Hampton Township	3,073	0	0
Kawkawlin Metro.	429	0	0
Kawkawlin Township	1,261	0	0
Linwood Metro Water District	383	0	0
Merritt Township	585	0	0
Monitor Township	2,251	0	0
City of Pinconning	639	1	336
Pinconning Township	628	0	0
Portsmouth Township	226	0	0
Williams Township	2,129	0	0
Wisner Township	266	0	0

Lead Advisory

Adverse Health Effect from Lead

Lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula-fed and breastfed), and young children. Lead in drinking water is primarily from materials and parts used in service lines and in home plumbing. Your Community Water System is responsible for providing high quality drinking water and removing lead pipes but cannot control the variety of materials used in the plumbing in your home. Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time. You can help protect yourself and your family by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Using a filter, certified by an American National Standards Institute accredited certifier to reduce lead, is effective in reducing lead exposures. Follow the instructions provided with the filter to ensure the filter is used properly. Use only cold water for drinking, cooking, and making baby formula. Boiling water does not remove lead from water. Before using tap water for drinking, cooking, or making baby formula, flush your pipes for several minutes. You can do this by running your tap, taking a shower, doing laundry or a load of dishes. If you have a lead service line or galvanized requiring replacement service line, you may need to flush your pipes for at least 5 minutes to flush water from both your home plumbing and the lead service line. If you are concerned about lead in your water and wish to have your water tested, contact Bay Area Water System at bawtp@baycountydwsmi.gov or call 989-439-7245. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <https://www.epa.gov/safewater/lead>.



Homes with Action Level Exceedances

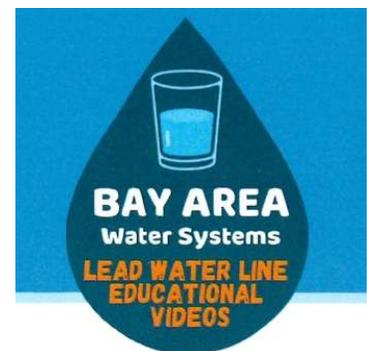
There is no safe level of lead in drinking water. Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of persons who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney, or nervous system problems.

Communities with Lead Service Lines

Some of the communities in our water supply system have lead service lines and or service lines of unknown material. The table on page 11 shows the total number of each and how they relate to the total of service lines. If you would like to know more about this report, please contact the Bay Area Water System at bawtp@baycountydwsmi.gov or call 989-439-7245.

Lead Educational Videos

Through grant funding from EGLE and support from Bay City and the Water System Advisory Council, the Bay Area Water System was able to create a 5 part mini-video series supporting lead education in our area. Follow the QR code to learn more by viewing those videos.



Disinfection Byproducts (DBPs) – Tested throughout the Bay Area Water System

With our water system using chlorine for its disinfectant, our system is susceptible to the formation of TTHMs and HAA5s. When, how many, and how often these samples are gathered are unique to each of our communities. Most communities in our system are on a quarterly sampling schedule. Samples are pulled from areas within each community that are prone to DBP formation.

Community	Total Trihalomethanes			Total Haloacetic Acids (HAA5)		
	TTHM MCL = 80 ppb			HAA5 MCL = 60 ppb		
	Highest LRAA in ppb	Range of Results in ppb	Violation	Highest LRAA in ppb	Range of Results in ppb	Violation
Akron Township	68	68	No	17	17	No
Bangor Township	55	16 - 61	No	20	0 - 26	No
Bangor Monitor	40	40	No	19	19	No
City of Bay City	35	15-61	No	16	9.2 - 19	No
Bay County Supply #1	50	24 - 79	No	20	7.8 - 27	No
Beaver Rd. Association	64	39 - 78	No	16	7.5 - 25	No
Beaver Township	56	36 - 82	No	21	14 -29	No
City of Essexville	62	62	No	20	20	No
Fraser Township	51	51	No	26	26	No
Hampton Township	44	19 - 60	No	19	14 - 21	No
Kawkawlin Metro.	56	56	No	20	20	No
Kawkawlin Township	53	53	No	26	26	No
Linwood Metro Water District	50	15 - 85	No	19	9.9 - 22	No
Merritt Township	53	23 - 83	No	20	10 - 27	No
Monitor Township	62	62	No	24	24	No
City of Pinconning	47	18 - 67	No	22	11 - 24	No
Pinconning Township	57	32 - 83	No	20	12 - 29	No
Portsmouth Township	52	27 - 86	No	19	8.4 - 24	No
Williams Township	65	65	No	17	17	No
Wisner Township	55	55	No	17	17	No

Free Chlorine Residual – Tested at multiple sites in each Community

Every month, each community is required to monitor for bacterial contamination. The number of required samples depends on the population in each community. When these samples are gathered, the water is also tested to ensure it has a detectable free chlorine residual. To safe guard against bacterial contamination, it is a regulatory requirement that these samples have a detectable free chlorine residual. As a precaution, additional bacteriological testing is performed on any sample with a free chlorine residual lower than 0.1 ppm.

These results are also one of the easiest ways to help characterize the quality of the water. As water spends time in the distribution system, its chlorine residual begins to fall. A low residual could be an indicator that the water is aging or something in the water is using up the chlorine. Low residuals often spur additional lab testing and system maintenance like flushing.

The free chlorine residual table to the right shows the highest running annual average (RAA) and range for each community. The RAA is an annual average that is calculated on a quarterly basis. This calculation requires data from 2024 and 2025. The range results are gathered just from 2025.

Community	Free Chlorine Residual		
	MCL, MRDL, and MRDLG = 4 ppm		
	Max RAA in ppm	Range of Results in ppm	Violation
Akron Township	0.32	0.01 - 0.58	no
Bangor Township	0.66	0.10 - 1.24	no
Bangor Monitor	0.89	0.38 - 1.24	no
City of Bay City	0.75	0.20 - 1.20	no
Bay County Supply #1	0.74	0.31 - 1.06	no
Beaver Rd. Association	0.82	0.37 - 1.05	no
Beaver Township	0.36	0.06 - 0.56	no
City of Essexville	1.00	0.80 - 1.23	no
Fraser Township	0.65	0.30 - 0.89	no
Hampton Township	0.50	0.08 - 0.91	no
Kawkawlin Metro.	0.72	0.41 - 0.83	no
Kawkawlin Township	0.85	0.49 - 1.13	no
Linwood Metro Water District	0.69	0.08 - 0.79	no
Merritt Township	0.50	0.25 - 0.80	no
Monitor Township	0.75	0.26 - 1.20	no
City of Pinconning	0.49	0.21 - 0.59	no
Pinconning Township	0.58	0.30 - 0.79	no
Portsmouth Township	0.56	0.30 - 0.76	no
Williams Township	0.60	0.18 - 0.84	no
Wisner Township	0.41	0.26 - 0.67	no

Turbidity – Tested at the Bay Area Water Treatment Plant Combined Filter Effluent

Turbidity is carefully monitored throughout every stage of the treatment process at the Bay Area Water Treatment Plant. Most importantly are the individual effluents from each filter and the combination of all the filter effluents. Online analyzers allow turbidity to be monitored in almost real time. The table below shows the results of over 35,000 samples, 96 daily samples over the course of a whole year.

Treatment Technique Requirement:	MCLG	Average	Range of Test Results in NTU	Violation	Source of Turbidity
100% of samples must be at or below 1 NTU; 95% must be below 0.3 NTU	0 NTU	0.026 NTU	0.021 - 0.094	no	Soil runoff

Inorganic Chemicals – Tested at the Bay Area Water Treatment Plant Tap

Chemicals Detected	MCL	MCLG	Result	Range of Test Results	Violation	Source of Inorganic Chemicals
Barium ^a	2 ppm	2 ppm	0.02 ppm	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride ^b	4.0 ppm	4.0 ppm	0.63 ppm	NA	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Sodium ^c	NA	NA	5.4 ppm	NA	No	Erosion of natural deposits

- a) Barium falls under Complete Metals testing which has a sampling interval of every 9 years. The last round of testing was on July 11th, 2023. Previous results were 0.016 ppm in 2021 and 0.01 in 2017.
- b) Fluoride level reported is from annual regulatory sampling pulled on March 12th, 2025. In addition, the plant also performs daily sampling. Results for 2025 averaged 0.698 mg/L, with a range of 0.64 mg/L to 0.76 mg/L. Fluoride is also found naturally in our source water. In 2025, that averaged 0.087 mg/L, with a range of 0.07 mg/L to 0.11 mg/L. Over the course of 2025, source water fluoride made up, on average, 12.46% of the final fluoride residual.
- c) Sodium is not a regulated contaminant but is required to be reported annually. This sample was pulled on March 12th, 2025.

Additional Water Quality Testing – Tested at Bay Area Water Treatment Plant

Analyte	Average	Range	Definition of Substance
pH	7.57	7.08 - 7.88	A measure of acidity and alkalinity
Hardness (as CaCO ₃) ^a	103.5 ppm	96 ppm - 120 ppm	A measure of the total concentration of calcium and magnesium ions
Alkalinity (as CaCO ₃)	78.1 ppm	60 ppm - 90 ppm	A measure of the capacity of water to neutralize an acid
Calcium (as CaCO ₃)	76.8 ppm	70ppm - 104 ppm	Inorganic substances often found in water
Sulfates	10.7 ppm	7 ppm – 17 ppm	
Chloride	11.3 ppm	8 ppm - 17 ppm	
Conductivity (µS/cm) ^b	239 µS/cm	199 - 291 µS/cm	A measure of the ability to carry an electrical current
Orthophosphate - PO ₄	3.35 ppm	3.22 ppm – 3.45 ppm	Corrosion inhibitor added to water to prevent corrosion of plumbing materials

- a) CaCO₃ is the chemical abbreviation for Calcium Carbonate
- b) µS/cm is a unit of measurement that stands for Microsiemens Per Centimeter

Bay Area Water System Flow Data – Finished Water Production

2025	Bay Area Water Treatment Plant Production in Millions of Gallons											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Minimum Day	6.3	6.1	6.3	6.3	6.3	7.5	5.1	7.9	7.3	5.7	5.3	5.8
Average Day	6.8	6.9	6.7	6.7	7.2	8.9	9.1	9.0	7.9	6.8	6.5	6.6
Maximum Day	8.5	7.4	7.5	7.6	8.5	10.9	10.7	11.0	9.1	8.3	7.2	7.4
Monthly Total	211.4	192.9	206.2	201.0	222.7	267.6	282.0	278.4	236.9	212.2	194.2	204.9
Yearly Total	2,710.2											