MICHIGAN STATE UNIVERSITY

PUBLISHED JUNE 2025

WATER QUALITY ANNUAL REPORT

INFRASTRUCTURE PLANNING AND FACILITIES
ipf.msu.edu

THIS REPORT COVERS ASSESSMENTS AND ACTIONS RELATED TO MICHIGAN STATE UNIVERSITY'S WATER SUPPLY SYSTEM FOR THE 2024 CALENDAR YEAR.

This report compares campus water quality to federal Environmental Protection Agency (EPA) and Michigan Department of Environment, Great Lakes and Energy (EGLE) standards and regulations. MSU facilities operate 24 hours a day, seven days a week and are monitored by qualified, trained and licensed personnel.

MSU is pleased to report our drinking water meets or surpasses all federal and state regulatory requirements.

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OUR COMMITMENT TO SAFE WATER

MSU is committed to providing our campus community with safe and reliable water.

To ensure that tap water is safe to drink, EPA regulations limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) establishes limits for contaminants in bottled water, which provide the same protection for public health.

The state and EPA require MSU to test our water on a regular basis to ensure its safety. MSU meets all monitoring and reporting requirements for both state and federal regulations.

The MSU community continues to be concerned about its water quality. Infrastructure Planning and Facilities has a highly qualified staff of water utility professionals who understand the importance of the water quality for our community. We are dedicated to providing the highest quality drinking water, and continue to meet or exceed all state and federal regulatory requirements.

There is no detectable lead in MSU drinking water when it enters the distribution system. Water supplied to MSU comes from a consistent source of groundwater, drawn from wells located deep within the Saginaw Aquifer. If small amounts of lead are present in existing plumbing materials and water is allowed to set for several hours, lead may enter into drinking water since it is naturally corrosive.

To prevent this, MSU employs a comprehensive corrosion protection regimen, consisting of the use of phosphate additives. MSU has been testing for lead and other contaminants since 1992. Water testing results consistently show lead levels below the action level of 15 parts per billion (ppb).

Sources of drinking water

MSU's water system uses more than a dozen groundwater wells, each with pumping capacities ranging from 400 to 850 gallons per minute. Source water is closely monitored to ensure a high level of quality.

WHERE DOES MSU WATER COME FROM?

The water source for most of Michigan State University's East Lansing campus is groundwater drawn from the Saginaw Aquifer. These underground water-bearing formations are continually replenished with water through the normal hydrologic cycle.

In Michigan and the Great Lakes Basin, we are fortunate to have an abundant supply of fresh water as compared with other areas of the world. The Great Lakes Basin contains 20 percent of the world's fresh water.

MSU's water system uses more than a dozen groundwater wells, each with pumping capacities ranging from 400 to 850 gallons per minute. MSU closely monitors the source water and the treated drinking water to ensure a high level of quality and safety is maintained. Once treated, the water is distributed to campus through a network of water mains, consisting of about 74 miles of pipes that range from 6 to 16 inches in diameter.

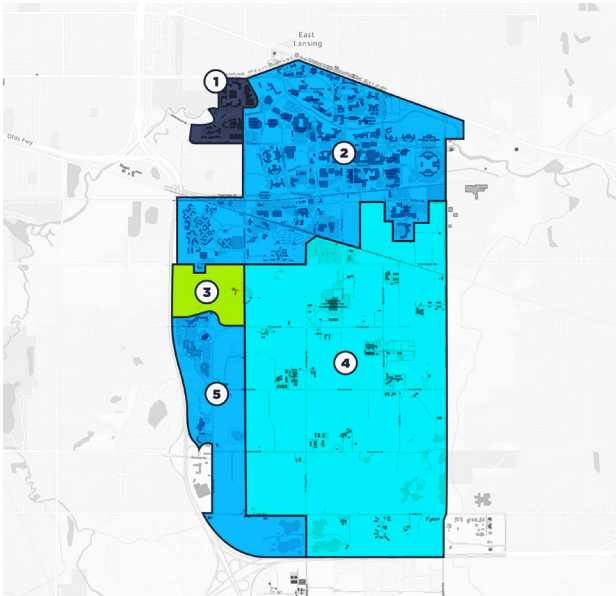
1855 Place, Jack Breslin Student Events Center, Brody Neighborhood, University Village and the Kellogg Hotel & Conference Center are supplied water by the East Lansing-Meridian Water and Sewer Authority.

For more information, refer to East Lansing-Meridian Water and Sewer Authority water quality report online:

https://www.cityofeastlansing.com/600/Annual-Water-Quality-Report

Facilities along the southwest border of campus at Forest and Collins roads, including the Henry Center for Executive Development, are supplied water by the Lansing Board of Water and Light. For more information, refer to the Lansing Board of Water and Light water quality report online:

https://www.lbwl.com/WaterQualityReport



MSU East Lansing Water Distribution Systems

[1]City of East Lansing Distribution System
[2]Campus Distribution System
[3]Forest Akers West
[4]Wells Distribution System
[5]Board of Water and Light Distribution System

CAMPUS DISTRIBUTION SYSTEM

JAN 1 - DEC 31, 2024

This table shows test results for substances that were found in MSU's drinking water. Results are not shown for substances that were tested for but not detected at or above the Maximum Contaminant Level (MCL).

CONSTITUENT/UNITS OF MEASUREMENTS	MCL	MCLG	AMOUNT IN MSU WATER	YEAR[1]	LIKELY SOURCES
Biological Constituents					
Total Coliform (% Positive Samples)	N/A	N/A	Number Detected: 0 Violation: None	2024	Naturally present in the environment
Inorganic					
Copper (ppm)[3]	AL= 1.3	1.3 ppm	0.9 90th percentile value Range: ND-1.0 ppm Zero samples exceeded the Action Level[4]	2024	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)[3]	AL=15	0 ppb	2 90th percentile value Range: ND-11 ppb Zero samples exceeded the Action Level[4]	2024	Corrosion of household plumbing systems; erosion of natural deposits.
Number of Lead Services	N/A	N/A	0 Lead Service Leads	N/A	N/A
Fluoride (Tap) (ppm)	4	4	0.56 RANGE: 0.34-0.9	2024	Naturally occurring and hydrofluorosilicic acid. Numbers shown averaged over 2024. Current recommended level at 0.7 per EPA and EGLE recommended dosage goal.
Barium (ppm)	2	2	0.14 RANGE: 0.12-0.20	2020	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Disinfectants					
Chlorine (ppm)[4]	4	4	Highest RAA: 1.44 Range: 0.36-2.8	2024	Water additive used to control microbes
Disinfectants By-Products					
Stage 2 Total Trihalomethanes (THMs) (ppb)	80	N/A	23.7 Range: 20.8-26.6	2024	By-product of disinfection
Stage 2 Total Haloacetic Acid (HAA5) (ppb)	60	N/A	17 Range: 16-18	2024	By-product of disinfection
Radionuclides					
Gross Alpha (pCi/L)	15	0	3.8875 RANGE: 2.47-5.08	2024	Erosion of natural deposits
Radium 226 (pCi/L)	5	0	1.005 RANGE: 0.7-1.53	2024	Erosion of natural deposits
Radium 228 (pCi/L)	5	0	0.3105 RANGE: 0 - 0.452	2024	Erosion of natural deposits
Unregulated Substance[2]					
Sodium (ppm)	N/A	N/A	18.79 Range: 14-25	2024	Erosion of natural deposits and runoff

[1]Water quality regulations allow the monitoring of some substances less often than once a year because their concentrations are not expected to vary significantly from year to year.

[2]Unregulated substances are those for which the EPA has not established drinking water standards. The purpose of monitoring these substances is to assist the EPA in determining the occurrence of unregulated substances in drinking water and whether future regulation is warranted.

[3]90 percent of samples were at or below this level.

[4]Chlorine does not have an associated MCL or MCLG. It is limited by a MRDLG which is defined on page 13. The levels shown are the MRDLG limit.

Additional parameters

While not mandatory for State of Michigan reporting, we've compiled additional campus water quality parameters of interest for researchers, faculty, staff and students.

NORTH CAMPUS

MSU WATER REPORT: Additional water parameters of interest for researchers, faculty, staff and students.			
PARAMETER	UNITS	YOUR WATER RESULTS	
		AVG. LEVEL DETECTED	RANGE
Chloride	ppm	33.95	25-43
Hardness (calcium carbonate)	ppm	471.35	411-531
Iron	ppm	0.09	0-2.8
Nitrate as N	ppm	ND	ND
Nitrite as N	ppm	ND	ND
Sodium	ppm	18.79	14-25
Sulfate	ppm	111.856	84-165

[1]May differ at tap due to residence time

REGULATED CONTAMINANT MONITORING DISINFECTION BY PRODUCTS

CONTAMINANT	AVG.	RANGE	MRL	YEAR
BROMOCHLOROACETIC ACID (PPM)	0.002	0.002	0.001	2024
DICHLOROACETIC ACID (PPM)	0.0065	0.006 - 0.007	0.001	2024
TRICHLOROACETIC ACID (PPM)	0.0105	0.010 - 0.011	0.001	2024
TOTAL HALOACETIC ACIDS (FIVE) (PPM)	0.017	0.016-0.018	NA	2024
BROMODICHLOROMETHANE (PPM)	0.0063	0.0056 - 0.0070	0.005	2024
CHLORODIBROMOMETHANE (PPM)	0.0014	0.0012 - 0.0016	0.005	2024
CHLOROFORM (PPM)	0.0016	0.0014-0.0018	0.005	2024
TOTAL TRIHALOMETHANES (PPM)	0.0237	0.0208-0.0266	0.005	2024

WELL DISTRIBUTION SYSTEM

JAN 1 - DEC 31, 2024

This table shows test results for substances that were found in MSU's drinking water. Results are not shown for substances that were tested for but not detected at or above the Maximum Contaminant Level (MCL).

CONSTITUENT/UNITS OF MEASUREMENTS	MCL	MCLG	AMOUNT IN MSU WATER	YEAR[1]	LIKELY SOURCES
Biological Constituents					
Total Coliform (% Positive Samples)	N/A	N/A	Number Detected: 2 Violation: one level 1 one level 2	2024	Naturally present in the environment. (see below)
Inorganic					
Number of Lead Services	N/A	N/A	0 Lead Service Leads		N/A
Fluoride (Natural) (ppm)	4	4	0.22 Range: 0 - 0.45	2024	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nickel (ppm)	0.1	0.1	ND Range: ND	2023	Erosion of natural deposits
Barium (ppm)	2	2	0.14 Range: 0.11 - 0.2	2023	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Arsenic (ppb)	10	10	1.5 Range: 0 - 5	2023	Erosion of natural deposits; discharge from wood treatment; discharge from glass production[5]
Isopropylbenzene (ppm)	None	N/A	ND Range: ND	2024	Runoff from petroleum products, paint, and rust preventatives
Nitrite as N (ppm)	1	0	0.00081 Range: 0-0.09	2024	Nitrogen in the environment, both natural and human-made
CONSTITUENT/UNITS OF MEASUREMENTS	**MCL**	**MCLG**		**YEAR[1]**	**LIKELY SOURCES**
Radionuclides					
Radium 226[9]	5	0	2.732 Range: 2.08-3.77	2024	Erosion of natural deposits[6]
Radium 228[9]	15	0	1.736 Range: 0.18-4.17	2024	Erosion of natural deposits[6]
Gross Alpha (pCi/L)[7]	15	0	8.971 Range: 4.8-13.3	2024	Erosion of natural deposits[6]
Unregulated Substance[2]					
Sodium (ppm)	N/A	N/A	15.68 RANGE: 7-80	2024	Erosion of natural deposits
Lithium (ug/L)	N/A	Reporting limit 9.00	11.46 Range 9.00 -16.50	2023	Erosion of natural deposits

[1]Water quality regulations allow us to monitor some substances less often than once a year because their concentrations are not expected to vary significantly from year to year.

[2]Unregulated substances are those for which the EPA has not established drinking water standards. The purpose of monitoring these substances is to assist the EPA in determining the occurrence of unregulated substances in drinking water and whether future regulation is warranted.

[3]MSU tests lead and copper twice per year as required by MI EGLE.

[4]90th percentile testing results were at or below the MCL level in accordance with regulations.

[5]While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

[6]Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.

[7]Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

[9] Radium 226 and 228 testing done at some individual entry points to the Well Distribution System are sampled on quarterly basis. These sample test results are calculated on a running annual average basis. Some individual sample results of the quarterly samples may be over the MCL however when calculated into the running annual average, the average is below the MCL. Therefore no violation of the MCL.

WELL DISTRIBUTION SYSTEM

JAN 1 - DEC 31, 2024

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1ST ROUND JAN-JUNE

MSU WELL DISTRIBUTION SYSTEM - TABLE OF DETECTS					
Inorganic					
Copper (ppm)	AL = 1.3	1.3ppm	"0.2 90th percentile value Range: ND-0.3 Zero samples exceeded the Action Level4"	2024	Corrosion of household plumbing systems; Erosion of natural deposits.
Lead (ppb)3	AL = 15	0 ppb	"2 90th percentile value Range: ND-3 Zero samples exceeded the Action Level4"	2024	Corrosion of household plumbing systems; Erosion of natural deposits.

2ND ROUND JULY - DEC

MSU WELL DISTRIBUTION SYSTEM - TABLE OF DETECTS					
Inorganic					
Copper (ppm)	AL = 1.3	1.3ppm	"0.1 90th percentile value Range: ND-0.3 Zero samples exceeded the Action Level4"	2024	Corrosion of household plumbing systems; Erosion of natural deposits.
Lead (ppb)3	AL = 15	0 ppb	"2 90th percentile value Range: ND-3 Zero samples exceeded the Action Level4"	2024	Corrosion of household plumbing systems; Erosion of natural deposits.

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[5]While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

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[9] Radium 226 and 228 testing done at some individual entry points to the Well Distribution System are sampled on quarterly basis. These sample test results are calculated on a running annual average basis. Some individual sample results of the quarterly samples may be over the MCL however when calculated into the running annual average, the average is below the MCL. Therefore no violation of the MCL.

IMPORTANT WATER QUALITY NOTICES

Vulnerability of sub-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 people, and infants can be particularly at risk from infections.

These people should seek advice about drinking water from their health care providers. EPA (Evironmental Protection Agency)/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 EPA's Safe Drinking Water Hotline (800-426-4791) or at www.epa.gov/safewater.

Contaminants and their presence in water - 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 (800-426-4791) or at www.epa.gov/safewater.

Sources of drinking water - 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 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 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 farming, urban storm water runoff, residential or business.
- **Organic Chemical Contaminants**, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and can 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.

To ensure that tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems.

The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

Lead can cause serious health effects in people of all

IMPORTANT WATER QUALITY NOTICES

Information about 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. Michigan State University 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.

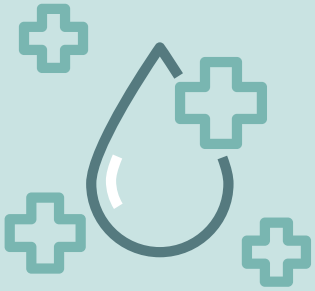
- Use only cold water for drinking, cooking, and making baby formula. Boiling water does not remove lead from water.
- Before using tap water for drinking, cooking, or making baby formula, flush your pipes for several minutes. You can do this by running your tap, taking a shower, doing laundry or a load 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 Michigan State University's Tom Silsby (silsbyth@msu.edu or 517-884-7109) for available resources.

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.**

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

Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson’s Disease should consult their personal doctor.



2024 LEVEL 1 AND LEVEL 2 ASSESSMENT NOTICE

Testing Date: December 11, 2024
Corrective Action Completion Date: December 20, 2024

During the past year we were required to conduct one Level 1 assessment. One Level 1 assessment was completed. In addition, we were required to take one corrective action and we completed one corrective action.

During the past year one Level 2 Assessments were required to be completed for our water supply. One Level 2 Assessments were completed. In addition, we were required to take four corrective actions and completed four of these actions.

Explanation:

Two sample sites tested positive for total coliform, which triggered the Level 1 assessment.

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct the problems that were found during these assessments.

MSU remains committed to providing safe drinking water to all users. Following the detection of total coliform in two samples, a Level 1 assessment of the Wells South Distribution System was initiated. However, due to an administrative omission—specifically, the failure to indicate "a.m." or "p.m." on the chain of custody form—one of the follow-up samples could not be tested within the 24-hour protocol window. This sample was one of several collected from the wells operating during the previous 72 hours, including upstream and downstream of the original positive sample sites.

As a result of this procedural oversight, a Level 2 assessment was triggered. An onsite visit by the EGLE District Engineer was conducted, which included a physical inspection of the relevant sample sites.

Following the Level 2 assessment, EGLE recommended the following corrective actions:

- Provide training to staff on proper sampling procedures, including chain of custody documentation and other administrative paperwork. Deadline: Provide evidence of training by January 12, 2025.
- Submit an updated Sample Site Plan to EGLE. Deadline: January 12, 2025.
- Remove the hose from the F2 sample location and provide photo documentation. Deadline: January 12, 2025.
- Update MSU's standard construction specifications to require all new hydrant weep holes to be plugged. Submit updated specifications to EGLE. Deadline: January 12, 2025.

Corrective Actions Taken:

MSU conducted staff training on January 8, 2025, covering proper sampling procedures, including:

- A review of the posted SOP for sampling protocol
- Chain of custody documentation and administrative processes
- Establishment of a check-and-balance system to ensure accuracy in documentation
- The Sample Site Plan was reviewed and updated as required.
- The hose at the F2 sample location was removed during the EGLE site visit.
- MSU's Construction Standard Specifications were revised to require that weep holes in new hydrants be plugged, in accordance with EGLE and Ten State Standards.

MSU believes there was no actual contamination within the Wells South Distribution System. Based on pre- and post-incident sampling, it is strongly believed that the positive test results were due to sampling process errors. Had there been a true contamination issue, additional positive results would likely have been observed in routine total coliform testing conducted at various locations throughout the system and at the source.

To date, there have been 41 total coliform non-detect results from the Wells South Distribution System and 6 non-detect results from the Dairy Facility construction site since the incident.

This situation illustrates how EGLE testing provides an essential system of checks and balances to ensure the integrity of MSU's water supply. The process is working as designed to monitor, detect, and resolve issues in order to maintain the safety of our campus drinking water.

SOURCE WATER ASSESSMENT

The 1996 amendments to the federal Safe Drinking Water Act required states to assess the susceptibility of all public water supplies to potential sources of contamination. The susceptibility rating is determined using a scale ranging from "very low" to "very high" based primarily on geologic sensitivity, water chemistry and locations of contaminant sources. MSU's Source Water Assessment was completed in 2003. The susceptibility of the campus water supply was deemed to be "moderately high."

Potential sources of contamination include: above-ground storage tanks, liquid manure spreading, chemical and waste storage areas, biowaste holding tanks, wet labs, equipment storage areas, farming operations, chemical storage, pesticide storage, equipment washing pads, paint storage, mixing and cleaning operations, a biotechnology facility, and a number of sites that generate, use and dispose of hazardous waste and other chemicals.

To protect our groundwater from these potential sources of contamination, MSU developed a Wellhead Protection Program (WHPP) in 2000. The program is updated regularly, with the latest revision approved by EGLE in 2022.

The goal of MSU's WHPP is to manage the land area that surrounds our water supply wells to minimize the potential for contamination.

Information about the WHPP can be found online:
https://www.michigan.gov/egle/about/organization/drinking-water-and-environmental-health/source-water-assessment

We will update this report annually and will keep you informed of any problems that may occur throughout the year, as they happen. Copies are available at **https://ipf.msu.edu/campus-water-quality**. This report will not be sent to you.

For more information about your water, or the contents of this report, contact Tom Silsby (silsbyth@msu.edu or 517-884-7109). For more information about safe drinking water, visit the U.S. EPA at **http://www.epa.gov/safewater.**

COMMON ABBREVIATIONS

AL (Action Level) – The concentration of a contaminant which, if exceeded, requires a water system to initiate a treatment process or other action.

ALG (Action Level Goal) – The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.

AVG (Average) – Regulatory compliance with some MCLs are based on a running annual average of monthly samples.

LRAA (Location Running Annual Average) – The average of sample analytical results from samples taken at a particular monitoring location during the previous four calendar quarters.

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 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.

MRL (Minimum Reporting Level) - The smallest measured cincentration of a substance that can be reliably measured and reported by a laboratory using a given analytical method.

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 Goals) - The level of 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.

COMMON ABBREVIATIONS

ND (Non-Detect) - Below analytical method detection limit.

NTU (Nephelometric Turbidity Units) - Unit of measurement for water clarity.

pCi/L (picocuries per liter or nanograms per liter ng/L) - A measure of radioactivity.

ppb (parts per billion or micrograms per liter mcg/L) - One ounce in 7,350,000 gallons of water.

ppm (parts per million or nanograms per liter ng/L) - One ounce in 7,350 gallons of water

ppt (parts per trillion or nanograms per liter ng/L) - One ounce in 7,350,000,000 gallons of water.

RAA (Running Annual Average) - A continuous averaging of four quarters of sampling.

SDWA (Safe Drinking Water Act) - A set of federally mandated regulations that ensures the quality and safety of water provided by public water systems.

TT (Treatment Technique) - A required process intended to reduce the level of contaminants in drinking water.

> - A symbol meaning "more than."

< - A symbol meaning "less than."

MICHIGAN STATE UNIVERSITY

PUBLISHED JUNE 2025

WATER QUALITY ANNUAL REPORT

INFRASTRUCTURE PLANNING & FACILITIES

ipf.msu.edu