Moon Township Municipal Authority

Public Water Supply

Water Quality Report 2024

This report is designed to inform you about the quality of water and the service we deliver to you every day. Our constant goal is to provide you with a dependable supply of excellent quality drinking water that meets or exceeds all federal and state requirements.

The Moon Township Municipal Authority (MTMA) water supply is obtained from an alluvium deposit of sand and gravel in the flood plain of and beneath the Ohio River and also from the Ohio River itself. A radial well, two vertical wells and a surface water intake are located along the southern bank of the Ohio River. The treatment facility is operated to provide very reliable treatment of a blend of groundwater and surface water.

We encourage public interest and participation in our community's decisions affecting drinking water. Regular Municipal Authority meetings occur on the third Wednesday of each month, at 5:00 p.m. in the second-floor meeting room at the Moon Township Community Service Center 1700 Beaver Grade Road. The public is welcome.

We are pleased to report that our drinking water meets or exceeds all federal and state requirements. MTMA (Public Water Supply #5020011) routinely monitors for contaminants in your drinking water according to Federal and State laws. The tables on the following pages show the results of monitoring for the period of January 1st to December 31st 2024. As you can see by the data table, our system had no water quality violations for 2024.

All sources of drinking water are subject to potential contamination, either naturally occurring or manmade. Contamination of a ground water supply may occur as a result of a transportation or industrial spill on land near the area of the wells. Wellhead protection practices are in place to reduce the potential for groundwater contamination. Surface water contamination may result from a spill reaching the Ohio River or one of its tributaries. In the event of surface water contamination, the MTMA WTP can utilize 100% well water until the river contamination has cleared. The MTMA has tremendous flexibility to provide excellent drinking water with a blend of well and surface water or with 100% of either well or surface water.

Spanish: Este informe contiene información muy importante. Tradúscalo ó hable con alguien que lo entienda bien. (This report contains very important information. Translate it, or speak with someone who understands it.)

If you have any questions concerning this report or your water utility, please contact Deborah Walker, MTMA General Manager, at 412-264-4300 ext. 124 between the hours 8:00 AM and 4:45 PM.

John J. Wink
President

Is my water safe?

We are pleased to present this year's Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. This report is a snapshot of last year's water quality. We are committed to providing you with information because informed customers are our best allies.

Do I need to take special precautions?

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 health care providers. The United States Environmental Protection Agency (EPA) and Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Water Drinking Hotline at 1-800-426-4791 or at https://www.epa.gov/ground-water-and-drinking-water.

Why are there contaminants in my drinking 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 Safe Water Drinking Hotline at 1-800-426-4791 or by visiting https://www.epa.gov/ground-water-and-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 human activity. Microbial contaminants, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife. Inorganic contaminants, such as salts and metals, 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 may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses. Organic chemical contaminants, including synthetic and volatile organic chemicals are by-products of industrial processes and petroleum production. Organic contaminants can also come from gas stations, urban storm water runoff, and septic systems. Radioactive contaminants can be naturally occurring or be the result of oil and gas production and mining activities.

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

Source Water Protection Tips

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides. They contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain your system to reduce leaching to water sources. If you have both well water and septic systems, consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use EPA's Adopt Your Watershed to locate groups in your community, or visit the Watershed Information Network's How to Start a Watershed Team.
- Organize a storm drain stenciling project with your local government or water supplier. Stencil a message next to the street drain reminding people "Dump No Waste - Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.
- To Report any spills, illegal dumping or suspicious activity to the Pennsylvania Department of Environmental Protection (PA DEP), call 1-866-255-5158 or go to https://www.pa.gov/agencies/dep/report-incidents-and-complaints.html.

Source Water Assessment and its Availability

In 2009, the Pennsylvania Department of Environmental Protection (PA DEP) approved the Source Water Protection Plan for our three (3) groundwater wells and surface water supply. These provide water to the MTMA Water Filtration Plant. The assessment has found that our sources are potentially susceptible to a spill from the CSX Railroad and PA Route 51 as the primary sources of contamination risk. Copies of the complete report are available for review at the PA DEP Pittsburgh Regional Office or on the PA DEP website at www.depgreenport.state.pa.us/elibrary/GetFolder?FolderID=4490.

Water Conservation Tips

Did you know that the average Moon Township household uses approximately 140 gallons of water per day or 55 gallons per person per day? Luckily, there are many low-cost and no-cost ways to

conserve water. Small changes can make a big difference. Try one today and soon it will become second nature.

- Take short showers. A 5-minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They are inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Water plants only when necessary.
- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month. A leaking toilet losing just a ¼ gallons per minute equals 360 gallons per day or 131,400 gallons per year and is a significant cost to you!
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!
- Visit www.epa.gov/watersense for more information.

Important Drinking Water Definitions

AL	Action Level – The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Entry Point	Where potable water first enters the distribution system.
HAA	Haloacetic Acids – A group of disinfection byproducts that form when chlorine compounds that are used to disinfect water react with other naturally-occurring chemicals in the water. There are five significant HAA potentially found in disinfected drinking water and their combined concentration is referred to as total HAA5.
LRAA	Locational Running Annual Average – Based on four quarters of sampling for each site.
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.
MDL	Method Detection Limit – "Defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MPL	Maximum Permissible Level – State Assigned
MRDL	Maximum Residual Disinfectant Level – The highest level of a disinfectant allowed in drinking water.
MRDLG	Maximum Residual Disinfection Level Goal – The level of a drinking water disinfectant below which there is no known or expected risk to health.
NA	Not Applicable
ND	Not detected or below or the method detection limit (MDL)
NR	Not Required – Monitoring not required, but recommended.
NTU	Nephelometric Turbidity Units – Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.
90^{th} Percentile	The highest concentration of lead or copper in tap water that is exceeded by 10% of the sites sampled during the monitoring period. This value is compared to the lead and copper ALs (action levels) to determine whether an AL has been exceeded.
% positive samples/month	Percent of samples taken monthly that were positive for microbes.
ppb	Parts per Billion – Equivalent to micrograms per liter (µg/L). One part per billion corresponds to about one minute in 2,000 years or a single penny in $10,000,000.
ppm	Parts per Million – Equivalent to milligrams per liter (mg/L). One part per million corresponds to about one minute in 2 years or a single penny in $10,000.
ppt	Parts per Trillion – Equivalent to nanograms per liter (ng/L). One part per trillion corresponds to about one second in 32,000 years or one grain of sand in an Olympic size swimming pool.
RL	Reporting Limit
TT	Treatment Technique – A required process intended to reduce the level of a contaminant in drinking water.
TTHM	Total Trihalomethanes – Byproduct of the disinfection of water. Some people who drink water containing THM in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems and may have an increased risk of cancer.

Water Quality Data Table

In order to ensure that tap water is safe to drink, the EPA prescribes regulations which limit the amounts of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water.

All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels.

Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the PA DEP requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old.

In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, refer to the Important Drinking Water Definitions.

Disinfectant	**MRDLG**	**MRDL**	**Average**	**Low**	**High**	**Sample Date**	**Violation**	**Typical Source**
Free Chlorine [Daily Lowest Level Detected at Entry Point] (ppm)	4.0 (minimum of 0.2)	4.0 (minimum of 0.2)	1.08	0.40	1.67	daily	No	Water additive used to control microbes.
Free Chlorine [Distribution][a] (ppm)	4.0 (minimum of 0.2)	4.0 (minimum of 0.2)	0.99	0.23	1.82	40 per month	No	Water additive used to control microbes.
Disinfection By-Products	**MCLG**	**MCL**	**Average**	**Low**	**High**	**Sample Date**	**Violation**	**Typical Source**
Haloacetic Acids [HAA5] (ppb)	NA	60	21.2	6.65	23.8	quarterly	No	By-product of drinking water disinfection.
Total Trihalomethanes [TTHM] (ppb)	NA	80	73	18.9	115	quarterly	No	By-product of drinking water disinfection.
Total Organic Carbon (TOC)	**MCLG**	**MCL**	**Average**	**Low**	**High**	**Sample Date**	**Violation**	**Typical Source**
TOC (% removal)	NA	TT[b]	27	14	39	quarterly	No	Naturally present in the environment.

[a] Free Chlorine in the distribution system is the monthly average of 40 samples. (There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants).

[b] The TOC quarterly monitoring samples meet the Alternative Compliance Criteria (ACC) requirement of 25-35% removal. The removal occurs at the WTP and is calculated from the difference between the Raw and Finish water.

Inorganics Chemicals (IOC)	MCLG	MCL	Average	Low	High	Sample Date	Violation	Typical Source
Barium (ppm)	2	2	0.0702	-	-	June 19, 2024	No	Discharge from drilling waste.
Nitrate[c] [measured as Nitrogen] (ppm)	0	10	0.73	-	-	July 7, 2024	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Sodium[d] (ppm)	20	NA	31.3	-	-	Aug. 23, 2024	No	Food additive.
Microbial	**MCLG**	**MCL**	**Average**	**Low**	**High**	**Sample Date**	**Violation**	**Typical Source**
Total Coliform (positive samples/month)	NA	TT[e]	NA	0	1	40 per month	No	Naturally present in the environment
Turbidity [Entry Point] (NTU)	NA	TT[f]	0.05	0.03	0.10	every 15 minutes	No	Soil runoff.

[c] Nitrates in drinking water at levels above 10 ppm is a health risk to infants of less than 6 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 agriculture activity. If you are caring for an infant, you should ask advice from your health care provider.

[d] Analytical results for the finished water sample collected by the PA DEP showed a level of sodium (an unregulated contaminant) of 31.3 mg/L, above the recommended level of 20 mg/L. This is not usually a concern for the average person due to the amount of sodium consumed in the average diet except for people on low sodium restricted diets.

[e] There are 40 Total Coliform samples taken per month throughout the distribution system. A violation occurs if less than 40 samples are taken or if there is more than 1 positive result.

[f] 95% of all NTU samples taken at the entry point to the distribution system must be below 0.3. A value less than 95% is a TT violation. Any measurement in excess of 1 NTU is a TT violation.

Lead and Copper Testing

Lead and Copper testing for the Moon Township Municipal Authority occurred in the summer of 2022. The PA DEP required testing of homes built after 1982 thru December 1988. There were 37 homes tested for Lead and Copper, seven more than the required minimum of 30. Results shown below are the 90th percentile detection.

Lead in drinking water is primarily from materials and components associated with home plumbing. Moon Township Municipal Authority is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. There are no lead service lines going to any of the homes, schools or businesses served by the Moon Township Municipal Authority.

If present, elevated levels of lead can cause serious health problems, especially for pregnant woman and young children.

If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Water Drinking Hotline at 1-800-426-4791 or at https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water.

When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking.

Contaminant	MCLG	Action Level	Average	Sample Date	# Samples Exceeding AL	Exceeds AL	Typical Source
Lead [action level at consumer taps] (ppb)	0	15	1.97	2022	0	No	Corrosion of household plumbing systems.
Copper [action level at consumer taps] (ppm)	1.3	1.3	0.12	2022	0	No	Corrosion of household plumbing systems.

Unregulated Contaminant Monitoring Rule

The tables shown below are the Unregulated Contaminants that were tested in 2019 and 2020 (UCMR4) and starting in October 2024 (UCMR5) as directed by the United States Environmental Protection Agency (EPA).

The Moon Township Municipal Authority water system has sampled for a series of unregulated contaminants. Unregulated contaminants are those that do not have a drinking water standard set by the EPA. The purpose of monitoring for these contaminants is to help the EPA decide, by using sound science, whether the contaminants should have a standard.

As our customers, you have the right to know the results of sampling. If you are interested in examining the results, please contact the MTMA office at 412-264-4300, or visit our office at 1700 Beaver Grade Road, Suite 200, Moon Twp.

For more information on the EPA UCMR Program, go to www.epa.gov/dwucmr.

UCMR4 Contaminant	Sample Year	Average	Low	High
Bromide [Source Water] (ppb)	2020	59.1	28.7	88.9
Total Organic Carbon (TOC) [Source Water] (ppb)	2020	1777	1470	1960
Manganese (ppb)	2020	0.573	<0.05	1.04
Haloacetic Acids [HAA5] (ppb)	2020	12.09	7.66	20.91
Haloacetic Acids [HAA9] (ppb)	2020	23.81	14.41	37.48
Haloacetic Acids [HAA6Br] (ppb)	2020	13.68	8.94	23.07
UCMR5 Contaminant	**Sample Year**	**Average**	**Low**	**High**
Perfluorohexanesulfonic Acid [PFHxS] (ppt)	2024	3.9	-	-
Perfluorooctanesulfonic Acid [PFOS] (ppt)	2024	6.5	-	-

PFOA and PFOS Health Advisory and PFAS MCL Rule

On May 19, 2016, the United States Environmental Protection Agency (EPA) established a Health Advisory for PFOA and PFOS. Health Advisories provide information on contaminants that can cause human health effects and are known or anticipated to occur in drinking water. EPA Health Advisories are non-enforceable and non-regulatory and provide technical information to state agencies and other public health officials on health effects, analytical methodologies, and treatment technologies associated with drinking water contamination.

The EPA has established a Health Advisory level for PFOA and PFOS of 70 parts per trillion (ppt). When both PFOA and PFOS are found in drinking water, the combined concentrations of PFOA and PFOS should not exceed 70 ppt. The EPA Health Advisory level for PFOA and PFOS offers a margin of protection for all Americans, including the most sensitive populations, throughout their lives from adverse health effects resulting from exposure to PFOA and PFOS in drinking water. For more information, go to https://www.epa.gov/sdwa/past-pfoa-and-pfos-health-effects-science-documents.

The Pennsylvania PFAS MCL Rule was published in the PA Bulletin on January 14, 2023 and established enforceable standards in Pennsylvania for PFOA and PFOS in drinking water. The PFAS MCL Rule establishes maximum contaminant levels (MCLs) and maximum contaminant level goals (MCLGs) for PFOA and PFOS. The rule also establishes MCL compliance provisions, including monitoring and reporting requirements, analytical methods, acceptable treatment technologies, and public notification. The MCLs and MCLGs, established by 25 Pa. Code § 109.202(a)(4)(ii), are effective immediately and are applicable to all public water systems in Pennsylvania.

Starting January 2024, the Pennsylvania Department of Environmental Protection (PA DEP) requires that PFOA and PFOS are to be sampled quarterly at the entry points from water treatment plants with a PFOA MCL of 14 ppt and a PFOS MCL of 18 ppt using Running Annual Average (RAA) for each.

The MTMA Fern Hollow WTP uses the proven method of Granular Activated Carbon Filtration to reduce and remove PFOA and PFOS contamination from water.

Contaminant	MCLG	MCL	Average	Low	High	Violation	Sample Date	Typical Source
PFOA[g] (ppt)	8	14	1.1	ND	2.3	No	quarterly	Synthetic Chemicals found in industrial and consumer products.
PFOS[h] (ppt)	14	18	6.6	5.2	8.2	No	quarterly	Synthetic Chemicals found in industrial and consumer products.

[g] Perfluorooctanoic acid (PFOA) is linked to adverse developmental effects including neurobehavioral and skeletal.

[h] Perflurooctanesulfonic acid (PFOS) is linked to adverse immune system effects including immune suppression.