



Water Filtration Plant

PWSID 1090037

Morrisville Borough MMA

2018 Water-Quality Report

The Morrisville Municipal Authority Water Filtration Plant is committed to providing residents with a safe and reliable supply of high-quality drinking water. We test our water using sophisticated equipment and advanced procedures. The Morrisville Municipal Authority Water Filtration Plant water meets all state and federal standards for both appearance and safety. This annual "Consumer Confidence Report," required by the Safe Drinking Water Act (SDWA), tells you where your water comes from, what our tests show about it, and other things you should know about drinking water.

We are proud to report that the water provided by the Morrisville Municipal Authority Water Filtration Plant meets or exceeds established water-quality standards.

Este informe contiene información importante acerca de agua potable . Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda. (This report contains important information about your drinking water. Have someone translate it for you, or speak with someone who understands it.)

We encourage public interest and participation in our community's decisions affecting drinking water. Regular monthly board meetings occur on the third Thursday of each month, at the Morrisville Borough Municipal building at 7:30 P.M.. The public is welcome. More information is available on the World Wide Web at <http://www.mmawatersewer.com>.

Overview

The Morrisville Water Filtration Plant is located at River Road and Ferry Road. This plant has been in operation since August, 1968. We presently employ 13 people to operate this facility 24 hours a day 7 days a week. The Morrisville Municipal Authority currently operates a DEP certified microbiology laboratory for weekly testing of your drinking water. We presently have eleven employees who hold PA. D.E.P. certifications to operate our Class A water plant.

Emergency Contact Information

Please contact (215) 295-8181 or visit www.mmawatersewer.org to provide emergency contact information.

Water Source

The Morrisville Municipal Authority Water Filtration Plant is supplied by surface water from the non-tidal section of the Delaware River, which is managed by the Delaware River Basin Commission. A *Source Water Assessment* of our source was completed in June 2002, by the PA Department of Environmental Protection (Pa DEP). The assessment found that our source is potentially susceptible to contamination from treated and untreated sewage, urban, residential and agricultural runoff, industrial facilities, storage tanks, landfills, spills and accidents. A summary report is available on the Source Water Assessment & Protection Web Page at (<http://www.dep.state.pa/dep/deputate/watermgmt/wc/Subjects/SrceProt/SourceAssessment/default.htm>).

Complete reports were distributed to municipalities, water suppliers, local planning agencies and PADEP offices. Copies of the complete report are available for review at the Pa. DEP Southeast Regional Office, Records Management Unit at (484) 250-5900.

How Do I Read This Chart?

The table below shows the results of our water-quality analyses. Every regulated contaminant that we detected in the water, even in the most minute traces, is listed here. The table contains the name of each substance, the highest level allowed by regulation (MCL), the ideal goals for public health, the amount detected, the usual sources of such contamination, footnotes explaining our findings, and a key to units of measurement. Definitions of MCL and MCLG are important.

Maximum Contaminant Level or MCL: 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.

Maximum Contaminant Level Goal or MCLG: 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.

Maximum Residual Disinfectant Level or MRDL: The highest level of a disinfectant that is allowed in drinking water. There is convincing evidence that the addition of disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal or MRDLG: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of disinfectants to control microbial contaminants.

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Key to Table

AL = Action Level CCR = Consumer Confidence Report CDC = Center for Disease Control MCL = Maximum Contaminant Level NA = Not Applicable
RAA = Running Annual Average MCLG = Maximum Contaminant Level Goal MRDL = Maximum Residual Disinfectant Level
MRDLG = Maximum Residual Disinfectant Goal MFL = million fibers per liter NTU = Nephelometric Turbidity Units (Measure of clarity of water)
MRLR = Minimum Residual Level Required mrem/year = millirems per year (a measure of radiation absorbed by the body)
pci/l = picocuries per liter (a measure of radioactivity) ppm = parts per million, or milligrams per liter (mg/l) TT = Treatment Technique
ppb = parts per billion, or micrograms per liter (or nanograms per liter) ppq = parts per quadrillion, or picograms per liter µg/l ppt = parts per trillion,

DETECTED SAMPLE RESULTS:

Chemical Contaminants								
Contaminant	MCL in CCR Units	MCLG/MRDL	Level Detected	Range of Detections	CCR Units	Sample Date	Violation Y/N	Sources of Contamination
TTHM Sample Site 704	80 RAA	NA	58.19	12.9-111	ppb	2018	N	By-product of drinking water chlorination
TTHM Sample Site 705	80 RAA	NA	59.91	22.7-120.6	ppb	2018	N	By-product of drinking water chlorination
TTHM Sample Site 730	80 RAA	NA	75.65	24.3-141.1	ppb	2018	N	By-product of drinking water chlorination
TTHM Sample Site 791	80 RAA	NA	69.84	27.2-139	ppb	2018	N	By-product of drinking water chlorination
HAA5 Sample Site 704	60 RAA	NA	114.05	33.7-243	ppb	2018	Y	By-product of drinking water disinfection
HAA5 Sample Site 705	60 RAA	NA	112.13	41.5-262	ppb	2018	Y	By-product of drinking water disinfection
HAA5 Sample Site 730	60 RAA	NA	125.05	39.9-278	ppb	2018	Y	By-product of drinking water disinfection
HAA5 Sample Site 791	60 RAA	NA	63.55	33.8-139	ppb	2018	Y	By-product of drinking water disinfection
Chloroform (THM)	NA	NA	18	18	ppb	1/15/2018	N	By-product of drinking water chlorination
Bromodichloromethane	NA	NA	3.6	3.6	ppb	1/15/2018	N	By-product of drinking water chlorination
Barium (IOC)	2.0	2.0	0.016	xxx	ppm	4/9/2018	N	Discharge of drilling wastes, discharge from metal refineries; Erosion of natural deposits
Nitrate	10	10	1	xxx	ppm	1/15/2018	N	Runoff from fertilizer use

Disinfection Results								
Chlorine (Entry Point)	MRLR=0.2	4	1.0	1.0 -2.4	ppm	10/15/2018	N	Water additive used to control microbes
Chlorine (Distribution)	NA	4	1.96	0.08-1.96	ppm	10/16/2018	N	Water additive used to control microbes
Radionuclides								
Combined Uranium	30	0	0.146	xxx	ppb	3/11/14	N	Erosion of natural deposits
Gross Alpha	15	0	0.123	xxx	pci/l	3/11/14	N	Erosion of natural deposits
Radium-226	5	0	0.0531	xxx	pci/l	3/11/14	N	Erosion of natural deposits
Radium-228	5	0	0.318	xxx	pci/l	3/11/14	N	Erosion of natural deposits

Lead and Copper Sample results from 2016							
Contaminant	Action Level (AL)	MCLG	90 th Percentile Value	Units	# of Sites Above AL of Total Sites	Violation Y/N	Sources of Contamination
Lead	15	0	8.2	ppb	2	N	Corrosion of household plumbing.
Copper	1.3	1.3	0.225	ppm	0	N	Corrosion of household plumbing.

Microbial Total Routine Samples Taken 199					
Contaminants	MCL	MCLG	Highest # or % of Positive Samples	Violation Y/N	Sources of Contamination
Total Coliform Bacteria	For systems that collect <40 samples/month: • More than 1 positive monthly sample	0	1 or 6.25%	N	Naturally present in the environment.
Fecal Coliform Bacteria or <i>E. coli</i>	0	0	0	N	Human and animal fecal waste.

Turbidity						
Contaminant	MCL	MCLG	Result	Sample Date	Violation Y/N	Source of Contamination
Turbidity	TT=1 NTU for a single measurement	0	0.13	7/30/18 & 10/14/18	N	Soil runoff.
	TT= at least 95% of monthly samples ≤0.3 NTU		100 %	2018	N	

Total Organic Carbon (TOC)					
Contaminant	Range of % Removal Required	Range of percent removal achieved	Number of quarters out of compliance	Violation Y/N	Sources of Contamination
TOC	35 - 45%	37.5 % - 57.7 %	0	N	Naturally present in the environment.

Violations: MCL Violations for HAA5 (Haloacetic Acids).

We generated mcl violations for sample sites 704, 705, and 730 for the 3rd & 4th quarters of 2018 and 1st and 2nd quarters of 2019. Site 791 generated violations for the 4th quarter of 2018 and 1st quarter of 2019. Surface water (in this case, from the Delaware River) varies in turbidity (a measure of cloudiness, or how “dirty” the water appears). Treatment levels are constantly monitored and changed accordingly. Highly turbid water treated over the last several months created higher-than-normal Haloacetic Acid 5 levels in our system. This was a temporary result of increasing disinfection (chlorine) as a matter of safety. We also had a temporary shutdown of our potassium permanganate feeder from July 16 thru July 18, 2018, for construction. Potassium permanganate is used to oxidize organics in the raw water before treatment. Due to replacement of raw water gates and debris screen, and extreme weather conditions, we had been keeping water storage tanks full which contributed to water age and additional Haloacetic Acid 5 formation. We have been making changes in treatment and have reduced storage time in our system to help reduce the formation of Haloacetic Acid 5. Please note that this is a summary report of past events. Public notifications were previously distributed for these violations.

Health Effects: People who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

To ensure that tap water is safe to drink, EPA prescribes limits on the amount of certain contaminants in water provided by public water systems. FDA regulates EPA's established contaminant levels for bottled water the same as public water systems. 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 Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

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 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:

(A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

(B) Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm runoff, industrial or domestic

wastewater discharges, oil and gas production, mining, or farming.

(C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, stormwater runoff, and residential uses.

(D) 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 stormwater runoff and septic systems.

(E) Radioactive contaminants, which 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 which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health as EPA established regulations. Some people may be more vulnerable to contaminants in drinking water than is 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. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the Safe Drinking Water Hotline (800-426-4791).

Information about Lead

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. **The**

Morrisville Municipal Authority is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at

<http://www.epa.gov/safewater/lead>.