



Middletown Water Department

19 W. Green Street
Middletown, DE 19709
PWSID: DE0000614
Report Created: May 2019



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The Town of Middletown Water Department is pleased to provide this Water Quality Report for the year 2018. Please notice that substances such as iron, chloride, and sodium are commonly found in drinking water. They occur naturally at trace levels, and the United States Environmental Protection Agency (EPA) has deemed that these substances pose no health hazard from consumption in drinking water. This report indicates the concentrations of these and many other substances obtained during analyses performed from January 1, 2018 – December 31, 2018, unless otherwise specified. If you have any questions about this report or the quality of your tap water, please call the Middletown Water Department at (302) 378-5142.

A Safe Water Source

The water serving your home comes from the Upper Potomac and Magothy aquifers via four (4) wells ranging in depth from 285 feet to 846 feet. These aquifers are confined and protected from the influence of past farming activities and saltwater intrusion.

Source Water Assessment Plan

The Division of Public Health, in conjunction with the Department of Natural Resources and Environmental Control, has conducted source water assessments for nearly all community water systems in the state of Delaware. The Source Water Assessment report for Middletown can be obtained by contacting the Middletown Water Department at (302) 378-5142 or by visiting the Source Water Assessment Program website at: <http://delawaresourcewater.org/assessments/>.

Expected Substances in 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 the EPA's Safe Drinking Water Hotline (1-800-426-4791).

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, 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 byproducts 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.

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. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Definition of Terms

The following table contains these terms and abbreviations.

90th Percentile

The ninth highest (out of a total of 10) lead and copper readings. This value is used to determine compliance with the Lead & Copper Rule.

Action Level

The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a public water system must follow.

Maximum Contaminant Level (MCL)

The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (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.

Nephelometric Turbidity Unit (NTU)

A measure of the clarity of the water. Turbidity in excess of 5 NTU is barely noticeable to the average person.

Non-detect (nd)

Laboratory analyses using the state-approved methods indicate that the contaminant is not present.

Not regulated (n/r)

No MCL is identified because the substance is unregulated.

Parts per billion (ppb)

One part of the named substance in a billion parts of the drinking water. Equivalent relationships are one minute in 2,000 years or one penny in \$10,000,000.

Parts per million (ppm)

One part of the named substance in a million parts of the drinking water. Equivalent relationships are one minute in 2 years or one penny in \$10,000. (1 ppm equals 1,000 ppb.)

picoCuries per liter (pCi/l)

A measure of radioactivity in drinking water.

Treatment Technique (tt)

A required process intended to reduce the level of a contaminant in drinking water.

Public Meeting Information

For the opportunity to ask more questions or participate in decisions that may affect your drinking water quality, a public meeting is held the first Monday of each month at 7:30 p.m. at Town Hall.

If You Have Special Health Concerns

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

Radon

Radon is a radioactive gas found in nearly all soils. It typically moves up through the ground to the air and into homes through the foundation. Drinking water from a ground water source can also add radon to the home air. The EPA indicates that, compared to radon entering the home through soil, radon entering the home through water will in most cases be a small source of risk. The EPA and the State of Delaware have not yet set standards for monitoring radon in drinking water, although we do expect sampling to become mandatory in the near future. We are keeping a close eye on the situation and will be sure to comply with any new regulations as required.

Lead In Drinking Water

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. We are 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. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the EPA Safe Drinking Water Hotline at 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>.

The Unregulated Contaminant Monitoring Rule

The 1996 amendments to the Safe Drinking Water Act (SDWA) require that once every five years, the U.S. EPA issues a new list of no more than 30 unregulated contaminants to be monitored by public water systems.

The Unregulated Contaminant Monitoring Rule (UCMR) provides EPA and other interested parties with scientifically valid data on the occurrence of contaminants in drinking water. These data serve as a primary source of occurrence and exposure information that the agency uses to develop regulatory decisions. Local monitoring took place from 2016-2018, and includes monitoring for 28 chemicals and two viruses.

Table of Regulated Contaminants

Delaware Secondary Drinking Water Standards

Lead and Copper	Units	MCLG	AL	90 th Percentile	# sites over AL	Sample Date	Violation	Typical Source of Contamination
Lead	ppb	0	15	0.533	0	2018	No	Corrosion of household plumbing systems; erosion of natural deposits
Copper	ppm	1.3	1.3	0.219	0	2018	No	Erosion of natural deposits; leaching from wood preservatives; corrosion of household plumbing system.
Regulated Contaminants	Units	MCLG	MCL	Highest Level	Range	Sample Date	Violation	Typical Source of Contamination
Haloacetic acids (HAA5)	ppb	n/a	60	3	0-8.015	2018	no	By-product of drinking water chlorination
Total Trihalomethanes (TTHM)	ppb	n/a	80	7	1.03-16.05	2018	no	By-product of drinking water disinfection
Chlorine	ppm	MRDLG 4	MRDL 4	1	1 - 1.1	2018	no	Water additive to control microbes.
Fluoride	ppm	2	2	1.1	0 - 1.1	2018	no	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Barium	ppm	2	2	0.1075	0.052-0.1075	2016	no	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium	ppb	100	100	0.7	0.6 - 0.7	2016	no	Discharge from steel and pulp mills; erosion of natural deposits
Combined Radium 226/223	pCi/l	0	5	1.27	0.81 - 1.27	2018	no	Erosion of natural deposits
Gross alpha excluding radon and uranium	pCi/l	0	15	5.1	3.6 - 5.1	2018	no	Erosion of natural deposits

Contaminants	State SMCL	Average	Range
Alkalinity	n/a	89	74 - 104
Chloride	250 ppm	5.49	3.7- 5.3
Iron	300 ppb	0.11	0.01 -0.26
Manganese	50 ppb	0.0003	0 – 0.0006
pH	6.5 – 8.5	7.17	6.8 – 7.7
Sodium	n/a	36.6	30.6 -42.6
Sulfate	250 ppm	8.75	7.1 -10.2