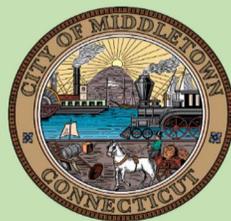




Middletown Water Department 2023 Consumer Confidence Report



This report contains important information about your drinking water.
Este informe contiene información muy importante sobre su agua beber.

Introduction

Dear Consumer: The City of Middletown is proud of the fine drinking water it provides to the residents of Middletown and to our neighboring communities. We are pleased to present a summary of the quality of the water provided to you during the calendar year 2023. The USEPA 1996 Safe Drinking Water Act (SDWA) requires that all utilities across the country issue an annual “Consumer Confidence Report” to their customers in addition to other notices that may be required by law. This report details where our water comes from, what it contains, and the possible risks to the health of certain segments of the population. Water quality is extremely important because we cannot survive without a clean and reliable source of it. The City of Middletown, along with our water supporters, the Connecticut Department of Public Health (CTDPH) and the United States Environmental Protection Agency (USEPA) are all working simultaneously to ensure that we provide the highest quality water. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all of our water users. Please remember that we are always available to assist you, should you ever have any questions or concerns about your water.

Cross Connection

The State of Connecticut and the Middletown Water Department (MWD) regulations require that the MWD conduct periodic inspections of properties for potential cross connection situations. A cross connection exists if there is a physical connection between a public water system and a contaminant source. A potential cross connection can occur when you use your garden hose to fill a swimming pool, apply pesticides or operate your irrigation system at the same time as the water system experiences a significant pressure drop, such as a water main break. This can pose a significant health threat to you and your family. The MWD conducted over 445 cross connection inspections and surveys, and tested over 881 backflow prevention devices in 2023. Safeguard your water: keep the end of a hose clear of possible contaminants and don’t submerge it in sinks, tubs, buckets or pools; buy and install inexpensive backflow prevention devices for all threaded faucets around your home; and don’t use spray attachments without a backflow prevention device.

Is my water safe?

To ensure that your tap water is of the highest quality, the USEPA and the Connecticut Department of Public Health have established regulations that limit the amount of certain contaminants in drinking water provided by public-water systems. A review of 2023 water quality data shows that your drinking water is within the standards set by both regulatory agencies. In 2023, we performed over 16,000 tests on water samples from various locations throughout the water supply system testing for no less than 100 different regulated contaminants. The regulated contaminants that were detected are identified in this report. Those that were detected were present in amounts that are allowed by state and federal regulations established under the Federal Safe Drinking Water Act. The MWD is not required to test for all regulated contaminants every year. State and federal regulations establish time tables for which contaminants need to be tested and when.

Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/ 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 Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.

Our Water Sources

Your drinking water comes from four reservoirs and one ground water aquifer. The reservoirs are filled from their watershed and the aquifer is a natural sand, gravel, and bedrock formation below the surface of the ground that is saturated with water. Over 70 percent of the tap water that the Middletown Water Department produces comes from the aquifer located along the Connecticut River. The map provided on the following page depicts the areas served by our two sources. The water is distributed to the two regions through a network of pipes, pumps stations, and tanks. Our distribution system is interconnected, water from both sources may be delivered to some neighborhoods. This blending of water permits us to not only meet your water demands, especially during a heat wave, but readily assures that water is available for firefighting or other emergencies. In 2023, the water department produced a total of 1.46 billion gallons of water with an average day demand of 3.98 million gallons. The water quality data on the following pages show the test results for the water that originates from the reservoirs and from the aquifer. Please note that the water coming from your tap could be from reservoirs, the aquifer, or a combination of both during the various times of the year.

What we do to assure your drinking water complies with federal and state standards. The drinking water that reaches your tap goes through a multi-step treatment and filtration process.



Source Water Assessment Program

A source water assessment of our water supplies was completed by the Connecticut Department of Public Health Drinking Water Division. The assessment program identifies potential risk of contamination that might affect the quality of our water sources. Middletown's overall susceptibility to potential sources of contamination was considered to be low for its surface water supplies because more than eighty percent of the watershed is owned by the City and is preserved as open space. The overall susceptibility to potential sources of contamination for the groundwater supplies was also considered to be low. The complete report can be found on the Department of Public Health's website: <http://www.ct.gov/dph/publicdrinkingwater>

Reservoirs & Aquifers

Our source water protection program focuses on pollution prevention and watershed management. We protect over 1,400 acres of land in our watershed and manage it carefully. We vigilantly monitor the quality of the water and all activity on the surrounding land, constantly watching for potential activities that could contaminate the reservoirs and aquifer that are used as the sources of your tap water. In addition, the City of Middletown has created zoning requirements that establish an aquifer protection area for the wellfield and watershed protection areas for the reservoirs. These regulations restrict certain activities that could potentially pose a risk to the aquifer and the reservoirs.

Treatment

Aquifer water is naturally filtered underground and then filtered once more in our John S. Roth water treatment plant. Reservoir water is treated at our Charles B. Bacon water treatment plant. The treatment process is comprised of coagulation, flocculation, sedimentation, and filtration to remove impurities. Both aquifer water and reservoir water are disinfected with chlorine to kill microbes that can cause illness. We also add fluoride to prevent dental decay and phosphate to control corrosion of pipes.

Distribution

The treated or finished water is delivered to you through a 180-mile-long network of pipes, pumping stations, and storage tanks. We carefully maintain our extensive distribution system to insure that high quality water is available when you turn on your tap.

Continue to Serve

The City of Middletown is committed to provide the highest water quality while meeting or exceeding all regulatory requirements as economically possible and in an environmentally-sound manner, for the growing residential, commercial and industrial needs. Our commitment goes far beyond our core function. The department has instituted the following core values to ensure that we meet our commitments.

Integrity: We are honest and ethical in all of our dealings with each other and with the public.

Respect: We serve our customers and one another with courtesy and dignity, recognizing the impact our actions have on the economic development and quality of life in our community, now and in the future. We value the diversity throughout our organization and community.

Safety and Welfare: We strive to protect the safety and welfare of our employees and the customers we serve.

Excellent Service: We strive to address customer and stakeholder needs with courtesy, compassion, timeliness, efficiency and commitment.

Accountability: In the performance of our duties, we are individually and collectively accountable to customers and management, as well as our community and the environment in which we work. We are competent, responsible, and dedicated to providing high quality water to all customers.



Substances That Could Be in Water

To ensure that tap water is safe to drink, the Department of Energy and Environmental Protection (DEEP) and (U.S. EPA) prescribe regulations limiting the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) and the Connecticut Department of Public Health regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

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. Substances that may be present in source water include:

Barium -Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.

Inorganic Compounds such as salts and metals can be naturally occurring or a result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining and/or farming.

Pesticides and Herbicides may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

Microbial Contaminants such as bacteria and viruses may come from the sewage-treatment plants, septic systems, agricultural livestock operations, wildlife or other natural sources.

Organic Chemical Compounds including both synthetic and volatile organic chemicals are by-products of industrial processes, coatings, petroleum production, gas station operations, urban storm water runoff, or septic systems. Trihalomethanes and Haloacetic acids are disinfection by-products that result from the use of chlorine as a disinfectant in water treatment.

Radioactive Contaminants can be naturally occurring or may be the result of oil and gas production.

Radon is a naturally occurring radioactive gas that you cannot see, taste or smell. It is found throughout the United States. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water during showers, washing dishes, and other household activities. In most cases, however, radon entering the home through tap water is only a small portion of all the radon in indoor air. Radon is a known human carcinogen. Breathing air-containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air. Testing is inexpensive and easy. If the level of radon in your air is four Pico Curies per liter of air

(pCi/l) or higher, you need to take steps to reduce it. For additional information, contact the Middletown Health Department (860-638-4960), call your Connecticut State radon program, or contact EPA's Radon Hotline (1-800-767-7236).

Total Organic Carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the maximum contaminant level (MCL) may lead to adverse health effects, liver, or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.

Information on Unregulated Contaminants

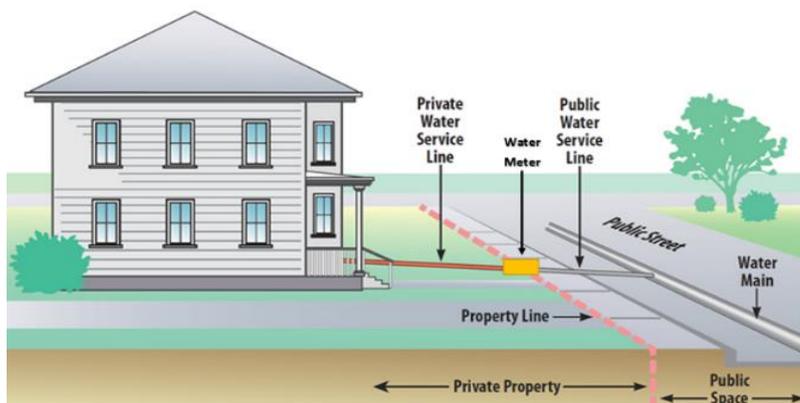
The MWD participated in the fourth phase of the Unregulated Contaminant Monitoring Rule List 4 (UCMR4). Unregulated contaminants are those for which the EPA has not established drinking water standards. Monitoring assists the EPA in determining the occurrence of these compounds and whether or not regulation is warranted. Detections are summarized in the following tables, along with typical sources. For general information on UCMR, visit <https://www.epa.gov/dwucmr> or contact EPA's Safe Drinking Water Hotline at (1-800-426-4791).

Lead and Copper in Drinking Water

The EPA developed the Lead and Copper Rule (LCR) to protect public health by minimizing lead and copper levels in drinking water. The most common source of lead and copper in drinking water is corrosion of plumbing materials. 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 physicians.

What you can do to reduce lead exposure in your home

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. Infants and children who drink water containing lead in excess of the action level 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 in excess of the action level over many years could develop kidney problems or high blood pressure. The lead and copper



rule established an action level of 15 ppb (parts per billion) for lead and 1.3 ppm (parts per million) for copper based on the 90th percentile level of tap water samples. This means that no more than 10 percent of the samples can be above either action level. The Maximum Contaminant Level Goal (MCLG) for copper is 1.3 ppm, the MCLG for lead is zero (MCLG=0). The test frequency for lead and copper is determined by state and federal regulatory agencies with sampling conducted at the consumer's tap. The MWD is currently 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 3 to 5 minutes before using the 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>.

Cryptosporidium

Cryptosporidium is a microscopic organism commonly found in the environment. Cryptosporidium can contaminate surface waters, including drinking water sources, via runoff from within the watershed. Ingestion of a small amount of Cryptosporidium from contaminated water can cause Cryptosporidiosis, a gastrointestinal illness that typically lasts 10 to 14 days. In 2019, the MWD completed a second two year monitoring program for Cryptosporidium as required by the EPA's Long Term Enhanced Surface Water Treatment Rule (LT2). Samples of untreated source water from our Higby Reservoir were collected monthly. To date, Cryptosporidium has not been detected in any of the samples that have been collected and analyzed under this program. If this trend continues throughout the program, the MWD will be able to comply with the LT2 treatment requirements without the need to install any additional treatment processes.

Sodium

Sodium is an essential nutrient in your diet. It helps maintain the correct balance of fluids in your body and transmit nerve impulses to your muscles. Sodium in drinking water normally presents no health risks, as about 99 percent of your daily salt intake is from food and only about one percent is from water. For comparison, whole milk has a sodium content of 530 milligrams per liter.

How Middletown Protects Your Drinking Water

Middletown is committed to providing the highest quality water to our customers. We regularly inspect business, farms homes and other sites that could affect the water. In addition to the inspections the City of Middletown is continuously monitoring our water supply by performing various analytical testing for pollutants.

Listed below are examples of pollutants that may wash into surface water or seep into groundwater:

- Microbial contaminants from septic systems
- Inorganic contaminants such as road salts or metals
- Pesticides and herbicides from residential and farm use
- Organic chemicals from various industrial businesses



You Can Protect Water Too

We ask that everyone helps in this effort to protect the water we have and you can help to by following the steps below:

- Ensure that your septic system operates correctly
- Use chemicals and pesticides sparingly
- Never flush medication down the toilet
- Dispose of waste chemicals and used motor oil properly
- Report illegal dumping, chemical spills or other polluting activities to the state Department of Energy and Environmental Protection's 24-hour hotline at (860-424-3338), or call your local police.
- Do not dump anything down a storm drain as it may lead directly to a water source.
- Properly dispose of pet waste and litter
- Pick up after your pet.
- Never dump anything in streams, lakes or storm drains.
- Compost yard waste and use natural fertilizers.
- Check vehicle fluid levels and repair leaks.
- Properly dispose of household hazardous waste; The City of Middletown works with the Lower Connecticut River Valley Council of Governments to offer opportunities for residents to dispose of household hazardous waste. Collection days are usually held in the spring, summer and fall. Middletown residents can attend these events at no charge.

Wise water use for conservation

We are constantly looking for ways to ensure water is available for future generations. Part of that commitment includes helping our customers understand what they can do to help. Here are a few tips you can follow to help conserve water:

Outside your home

- Lawn watering uses a lot of water. Water your lawn only when it needs it. An easy way to tell if your lawn needs water is to simply walk across the grass. If you leave footprints, your lawn may be thirsty!
- Making the most of your watering by watering in the early morning.
- Set your lawn mower one notch higher to make your lawn more drought-tolerant.
- Use drip irrigation hoses to water plants, and water in the early morning or evening.
- Use a broom instead of a hose to clean your sidewalk, driveway, or patio.
- Plant appropriately for your local climate. Check with local nurseries for non-invasive, drought-tolerant plants.
- Use a layer of organic mulch around plants to reduce evaporation and save hundreds of gallons of water a year.
- Direct downspouts and other runoff towards shrubs and trees, or collect and use for your garden.

Make your Own Rain Barrel

How much rainwater comes off of your house's roof in a year? Consider a roof with a surface area of 1,000 square feet. One inch of rain, running off a 1,000 square foot surface, amounts to 625 gallons of rainwater. In our area, our average annual rainfall is 52.4 inches of rain. Therefore, in a year's time, a 1,000 square foot roof will catch approximately 32,750 gallons of water that is free and which can be captured and used for watering your plants or lawn during the drier periods.

Calculate the runoff for your own roof. Take the area of your roof (assume 1,500 sqft for this example). $1,500 \times 625 / 1,000 = 938$ gallons per inch of rain. $938 \text{ gallons} \times 52.4 \text{ inches of rain in a year} = 49,151$ gallons of rainwater in a year.

Rain barrels can be purchased commercially, over the Internet, or you can make your own. Use a plastic trash can or other type of barrel that can be covered or screened (to prevent mosquitoes). Add one or two $\frac{3}{4}$ " hose adapters, install with silicone adhesive to seal the openings, and you are capturing water that otherwise would be wasted. For thin wall barrels, such as trash cans, it is suggested that silicone caulk be used to seal the openings where hoses would be attached. A spigot can be added about 18" up for filling water cans.

If your home is not surrounded by trees, you can simply hook in a downspout. If there are trees, you may wish to install a

screened opening for the downspout to empty into. This allows cleaning of the debris normally associated with trees, particularly in the spring. Barbed hose connector with hose shutoff valve added, Connect the overflow to a hose or tubing and drain it away from your house's foundation. The hose connector can be hooked to a normal or soaker hose for watering your lawn and plants during dry periods.

Rain barrels have been used for several decades in areas in which there are limited water supplies. Here in New England water is abundant; however we must look to conserve for the future generations. As

the population continues to grow the need for water has expanded and we want to make sure that there will be enough for everyone.

Inside your home

- Run dishwashers and clothes washers only when they are full. If you have a water-saver cycle, use it.
- When washing dishes by hand, don't let the water run while rinsing. Fill one sink with wash water and the other with rinse water.
- Steam vegetables rather than boil them.
- Soak pots and pans overnight rather than rinsing them.
- Take quick showers rather than baths
- Turn the faucet off while brush as you brush your teeth
- Regularly check your toilet, faucets, and pipes for leaks. If you find a leak, have it fixed as soon as possible.
- Insulate exposed water pipes with pre-slit foam insulation. You'll enjoy hot water faster and avoid wasting water while it heats up.

The MWD continues to make Water Conservation Kits available to our customers. Each kit contains leak detector tablets, a toilet bladder for reducing usage from older toilets, faucet flow restrictors, and a low flow showerhead. There is no cost for the kit. They may be picked up at our office at 82 Berlin Street, Mon-Fri 8:30am-4:30pm, limit two kits per residence. For more tips on how to use water wisely, call (866) WTR-SENS (987-7367) toll-free WaterSense Helpline.

Helpful Drinking Water Quality Definitions

The following definitions will help you better understand the water quality results presented in this report.

Abbreviations, Definitions, and Water Quality Measurement Units Listed In This Report

AL = Action Level	<i>The concentration of a contaminant, which if exceeded, triggers treatment or other requirements that a water system must follow.</i>
BDL = Below Detection Limit	<i>The calculated result is below the detection limit.</i>
MCL = Maximum Contaminant Level	<i>The highest level of a contaminant allowed in drinking water. Maximum Contaminant Levels are set as close to the Maximum Contaminant Level Goals as feasible using the best available treatment technology.</i>
MCLG = Max. Contaminant Level Goal	<i>The level of a contaminant in drinking water below which there is no known or expected risk to health. Maximum Contaminant Level Goals allow for a margin of safety.</i>
MRDL = Max. Residual Disinfectant Level	<i>The level a disinfectant added for water treatment that may not be exceeded at consumer's tap without adverse health effects.</i>
MRDLG = Max. Residual Disinfectant Level Goal	<i>The level a disinfectant added for water treatment that may not be exceeded at consumer's tap without adverse health effects.</i>
TT = Treatment Techniques	<i>A required process intended to reduce the level of contaminant in drinking water.</i>
MRR = Minimum Removal Ratio	<i>The calculated value derived for Total Organic Carbon (TOC) percent removal.</i>
NTU = Nephelometric Turbidity Units	<i>A measure of clarity of water. Turbidity more than five NTU is just noticeable to the average person.</i>
ND = Not Detected	<i>Not Detected.</i>
N/A = No MCL or MCLG	<i>No MCL or MCLG established.</i>
ppm = Parts per million	<i>A measure of the concentration of a substance, analogous to one (1) penny in \$10,000 dollars.</i>
ppb = Parts per billion	<i>Parts per billion. A measure of the concentration of a substance, analogous to one (1) penny in \$10,000,000 dollars.</i>

Charles B. Bacon Water Treatment Plant at Higby Reservoir

Water Ready For Consumption

Levels of regulated contaminants

Parameter	MCL	MCLG	Highest Level and Range Detected During 2023	Potential Sources of Contaminant	Compliance
Turbidity	TT=0.3 NTU	0 NTU	0.15 NTU (Range 0.06 - 0.15) 0.08 Average (e)	Soil runoff	Yes
Turbidity	TT= Percent of samples <0.3 NTU	N/A	100% (e)		Yes
Parameter	MCL	MCLG	Minimum Removal Ratio During 2023	Potential Sources of Contaminant	Compliance
Total Organic Carbon	TT = 1 ratio min.	N/A	1.0 November	Naturally present in the environment	Yes
Parameter	MRDL	MRDLG	Average Level and Range Detected During 2023	Potential Sources of Contaminant	Compliance
Chlorine	4 ppm	4 ppm	1.31 ppm (Range 0.70 – 2.07)	Water additive used to control microbes	Yes
Fluoride	4 ppm	4 ppm	0.67 ppm (Range 0.56 - 0.85)	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories	Yes
Parameter	MCL	MCLG	Level Detected During 2023	Potential Sources of Contaminant	Compliance
Barium	2 ppm	2 ppm	0.005 ppm	Discharge of drilling waste; discharge from metal refineries; erosion of natural deposits	Yes
Chloride	250 ppm	N/A	21.5 ppm	Naturally present in the environment	Yes
Nitrate	10 ppm	10 ppm	0.011 ppm	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits	Yes

Disinfection byproducts

Parameter	MCL	Level Detected During 2023	Potential Sources of Contaminant	Compliance
Total Trihalomethanes (TTHM)	80 ppb	32.0 ppb (a)	By-product of drinking water chlorination	Yes

Surface water region-unregulated components of disinfection byproducts

Parameter	MCL	Level Detected During 2023	Potential Sources of Contaminant	Compliance
Bromodichloromethane	N/A	4.7 ppb	By-product of drinking water chlorination	N/A
Chloroform	N/A	27.3 ppb	By-product of drinking water chlorination	N/A

Surface water region-levels of unregulated contaminants

Parameter	MCL	Highest Level and/or Range Detected During 2023	Potential Sources of Contaminant	Compliance
Sodium	Notification Level 28 ppm	14.4 ppm (g)	Naturally present in the environment; sources such as road salt storage and application, industrial waste, sewage and fertilizers are usually the cause of elevated levels in drinking water supplies	N/A
Sulfate	N/A	4.5 ppm	Naturally present in the environment	N/A

John S. Roth Wellfield and Treatment Plant

Water Ready For Consumption

Levels of regulated contaminants

Parameter	MCL	MCLG	Highest Level and Range Detected During 2023	Potential Sources of Contaminant	Compliance
Turbidity	TT= 5 NTU	0	0.51 NTU (Range 0.07 - 0.51), 0.13 Average	Soil runoff	Yes
Microbial Pathogens	TT=100% 4 log removal based on	N/A	100 % Achieved (h)		Yes
Parameter	MRDL	MRDLG	Average Level and Range Detected During 2023	Potential Sources of Contaminant	Compliance
Chlorine	4 ppm	4 ppm	1.42 ppm (Range 1.02 – 1.89)	Water additive used to control microbes	Yes
Fluoride	4 ppm	4 ppm	0.66 ppm (Range 0.56 - 0.80)	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories	Yes

Ground water region-levels of regulated contaminants

Parameter	MCL	MCLG	Level Detected During 2023	Potential Sources of Contaminant	Compliance
Barium	2 ppm	2 ppm	0.027 ppm	Discharge of drilling waste; discharge from metal refineries; erosion of natural deposits	Yes
Chloride	250 ppm	N/A	27.3 ppm	Naturally present in the environment	Yes
Nitrate (as Nitrogen)	10 ppm	10 ppm	0.28	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits	Yes

Disinfection byproducts

Parameter	MCL	Level Detected During 2023	Potential Sources of Contaminant	Compliance
Total Trihalomethanes (TTHM)	80 ppb	12.4 ppb (a)	By-product of drinking water chlorination	Yes

Ground water region-unregulated components of disinfection byproducts

Parameter	MCL	Level Detected During 2023	Potential Sources of Contaminant	Compliance
Bromodichloromethane	N/A	3.6 ppb	By-product of drinking water chlorination	N/A
Dibromochloromethane	N/A	0.7 ppb	By-product of drinking water chlorination	N/A
Chloroform	N/A	8.1 ppb	By-product of drinking water chlorination	N/A

Ground water region-levels of unregulated contaminants

Parameter	MCL	Highest Level Detected During 2023	Potential Sources of Contaminant	Compliance
Sodium	Notification Level 28 ppm	23.1 ppm (g)	Naturally present in the environment; sources such as road salt storage and application, industrial waste, sewage and fertilizers are usually the cause of elevated levels in drinking water supplies	N/A
Sulfate	N/A	7.7 ppm	Naturally present in the environment	N/A

Ground water levels for UCMR4 (Unregulated Contaminant Monitoring Rule 4)

Parameter	MCL	Highest Level and/or Range Detected During 2020 (i)	Compliance	Compliance
Manganese	N/A	1.1 ppb (Range ND –1.1)	Naturally-occurring element; commercially available in combination with other elements and minerals; used in steel production, fertilizer,	N/A

Distribution System (System Wide Service Area)

Levels of regulated contaminants for reservoir and aquifer service areas.

Parameter	MCL	MCLG	Highest Level and Range Detected During 2023		Compliance
Total Coliform Bacteria	Presence of coliform bacteria not to exceed 5.00% of monthly samples	0%	1.8% (Range ND-1.8%) July	<i>Naturally present in the environment</i>	Yes
Turbidity	TT= 5.0 NTU	0 NTU	0.51 NTU (Range 0.07 - 0.51) 0.13 Average	<i>Soil runoff</i>	Yes
Parameter	MCL	MCLG	Level at 90th Percentile 2022 (b)		Compliance
Lead	AL=15 ppb (c)	0 ppb	<1.0 ppb at 90th Percentile, Analyzed 2021 (d)	<i>Corrosion of household plumbing systems; erosion of natural deposits</i>	Yes
Copper	AL=1.3 ppm (c)	1.3 ppm	0.15 ppm at 90th Percentile, Analyzed 2021 (d)	<i>Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives</i>	Yes
Parameter	MCL	MCLG	Average Level and Range Detected During 2023		Compliance
Total Trihalomethanes (TTHM)	80 ppb Average	N/A	49.4 ppb (Range 25.3 –103.7(a))	<i>By-product of drinking water chlorination</i>	Yes
Total Haloacetic Acids (THAA)	60 ppb Average	N/A	33.0 ppb (Range 26.9 – 40.1 (a))	<i>By-product of drinking water chlorination</i>	Yes

System wide unregulated components of disinfection byproducts.

Parameter	MCL	Highest Level and/or Range Detected During 2023		Compliance
Bromodichloromethane	N/A	7.1 ppb (Range 4.7 – 11.9)	<i>By-product of drinking water chlorination</i>	N/A
Chloroform	N/A	41.5 ppb (Range 20.0 – 90.6)	<i>By-product of drinking water chlorination</i>	N/A
Dibromochloromethane	N/A	0.8 ppb (Range 0.5 – 1.3)	<i>By-product of drinking water chlorination</i>	N/A
Dichloroacetic Acid	N/A	14.3 ppb (Range 9.8 – 19.4)	<i>By-product of drinking water chlorination</i>	N/A
Monochloroacetic Acid	N/A	1.5 ppb (Range 0.5 – 4.3)	<i>By-product of drinking water chlorination</i>	N/A
Bromoacetic Acid	NA	BDL (Range ND - 1.3)	<i>By-product of drinking water chlorination</i>	N/A
Trichloroacetic Acid	N/A	16.7 ppb (Range 12.8 – 20.4)	<i>By-product of drinking water chlorination</i>	N/A

Distribution System levels for UCMR4 (Unregulated Contaminant Monitoring Rule 4)

Parameter	MCL	Highest Level and/or Range Detected During 2020 (i)		Compliance
Monochloroacetic Acid	N/A	BDL ppb (Range ND - 2.1)	<i>By-product of drinking water chlorination</i>	N/A
Monobromoacetic Acid	N/A	BDL ppb (Range ND - 0.8)	<i>By-product of drinking water chlorination</i>	N/A
Dichloroacetic Acid	N/A	11.8 ppb (Range 6.5 - 17.1)	<i>By-product of drinking water chlorination</i>	N/A
Trichloroacetic Acid	N/A	12.7 ppb (Range 8.7 - 16.6)	<i>By-product of drinking water chlorination</i>	N/A
Bromochloroacetic Acid	N/A	2.4 ppb (Range 1.8 - 3.1)	<i>By-product of drinking water chlorination</i>	N/A
Bromodichloroacetic Acid	N/A	2.9 ppb (Range 2 - 4.8)	<i>By-product of drinking water chlorination</i>	N/A
Dibromoacetic Acid	N/A	BDL ppb (Range ND - 0.6)	<i>By-product of drinking water chlorination</i>	N/A
Chlorodibromoacetic Acid	N/A	0.5 ppb (Range 0.4 - 1.0)	<i>By-product of drinking water chlorination</i>	N/A
Total Organic Carbon	N/A	3.34 ppm (Range 2.37 - 3.90)	<i>Naturally present in the environment</i>	N/A

Notes

- (a) Individual sample and individual location
- (b) Calculated value derived from the analysis performed on high-priority customers (lead & copper testing is required every 3 years, the MWD maintains compliance)
- (c) Action level is based on the calculated 90th percentile (lead & copper testing is required every 3 years, the MWD maintains compliance)
- (d) Test frequency as determined by state and federal regulatory agencies (lead & copper testing is required every 3 years, the MWD maintains compliance)
- (e) 95% of samples within a given month
- (f) Ratio is a value derived from monthly TOC percent removal calculation
- (g) See Sodium notice on page 5
- (h) Treatment that reliably achieves at least 99.99 percent (4-log) treatment of viruses using inactivation
- (i) The Unregulated Contaminant Monitoring Rule 4 (UCMR4) is performed every 5 years according to EPA requirements

Middletown Water Department Consumer Confidence Report 2023

Dear Valued Customer:

Water quality, service, reliability, affordability and sustainability remain at the core of what we do in the City of Middletown (City). We work hard each and every day to fulfill our purpose to make life better for people by delivering water for life. Water is essential for public health, fire protection, economic growth and overall quality of life, which is why we take our purpose and role in the community so seriously. For over 100 years, we have played a vital role in meeting the ever-changing water demands of our City.

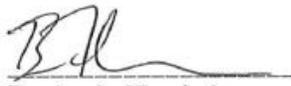
We are committed to complete transparency about our water quality testing. This Consumers' Annual Report provides you with a summary of our City's drinking water quality in 2023. The water business is a complex industry. In this report, you can find out where your water comes from, discover how we make your water safe to drink and learn what's in your water. All of the information presented in this report says the same thing: the water we deliver to your tap is safe to drink - it meets or is better than all federal and state regulations.

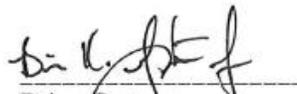
This report provides you with a summary of the water quality data collected through calendar year 2023. The pages of this report contain a map and important terminology. Please refer to this information as you review the water quality data within the tables on pages 6 through 8. This report was produced to give you a better understanding of where your water comes from, and how the water is protected, treated, and tested. Our goal is to help you understand more about the water and the system that is delivering to your tap.

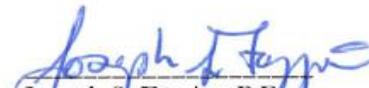
If you wish to participate in decisions that may affect the quality of your drinking water, the Water Pollution Control Authority meets at the Water & Sewer headquarters at 82 Berlin St., Middletown, CT 06457 on the first Thursday of the month at 6:30 pm. Contact the water department at 860-638-3500 to confirm dates and times.

If you have further questions about your water service, or this report, please call Customer Service at 860-638-3500 or visit us online at <http://www.middletownct.gov/water> . We welcome your interest in our city's public water system.

Sincerely,


Benjamin Florsheim
Mayor
City of Middletown


Brian Gartner
Chairman
WPCA


Joseph S. Fazzino P.E.
Director
Water & Sewer Department



Serving Middletown
1867 - 2023
Over *150 Years*

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