Annual Drinking Water Quality Report
Helmetta Water Department
For the Year 2020, Results from the Year 2019

We are pleased to present to you this year's Annual Drinking Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. The Borough of Helmetta bulk purchases all of its water from the East Brunswick Water Utility, who in turn receives its water from the Middlesex Water Company. The New Jersey Department of Environmental Protection (NJDEP) has completed and issued the Source Water Assessment Report and Summary for this public water system, which is available at www.state.nj.us/dep/swap or by contacting NJDEP's Bureau of Safe Drinking Water at (609) 292-5550. You may also contact your public water system to obtain information regarding this Source Water Assessment. Middlesex Water Company's Source Water Assessment is included.

The Helmetta Borough Water Department, the East Brunswick Water Utility and the Middlesex Water Company routinely monitor for contaminants in your drinking water according to Federal and State laws. The tables show the results of that monitoring for the period of January 1st to December 31st, 2019. The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Helmetta Water Department Test Results – PWS ID# NJ1206001						
Contaminant	**Viola-tion Y/N**	**Level Detected**	**Units of Measure-ment**	**MC LG**	**MCL**	**Likely Source of Contamination**
Inorganic Contaminants:						
Copper Test results Yr. 2018 Result at 90th Percentile	N	0.18 No samples exceeded the action level	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead Test results Yr. 2018 Result at 90th Percentile	N	10.1 1 sample out of 10 exceeded the action level	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Disinfection Byproducts:						
TTHM Total trihalomethanes Test results Yr. 2019	N	Range = 19 - 96 Highest LRAA = 60	ppb	N/A	80	By-product of drinking water disinfection
HAA5's Total Halocetic Acids Test results Yr. 2019	N	Range = 23 - 40 Highest LRAA = 31	ppb	N/A	60	By-product of drinking water disinfection

Regulated Disinfectants	**Level Detected**	**MRDL**	**MRDLG**
Chlorine Test results Yr. 2019	Range = 0.2 – 0.8 ppm Average = 0.5 ppm	4.0 ppm	4.0 ppm

Chlorine: Water additive used to control microbes.

HAA5 and TTHM compliance is based on a Locational Running Annual Average (LRAA), calculated at each monitoring location. The LRAA calculation is based on four completed quarters of monitoring results.

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 agriculture, urban storm water 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 storm water runoff, and septic systems.
- 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. Food and Drug Administration 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 contaminants does not necessarily indicate that the 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 at 1-800-426-4791.

If you have any questions about this report or concerning your water utility, please contact Paul Reed at 732-521-4946 ext.110. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled Borough Council meetings at Borough Hall, 51 Main Street. Meetings are held on the third Wednesday of each month at 7:00 p.m.

East Brunswick Water Utility Test Results – PWS ID# NJ1204001						
Contaminant	**Viola-tion Y/N**	**Level Detected**	**Units of Measure-ment**	**MC LG**	**MCL**	**Likely Source of Contamination**
Inorganic Contaminants:						
Copper Test results Yr. 2019 Result at 90th Percentile	N	0.24 No samples exceeded the action level	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead Test results Yr. 2019 Result at 90th Percentile	N	1.3 No samples exceeded the action level	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Disinfection Byproducts:						
TTHM Total trihalomethanes Test results Yr. 2019	N	Range = 17 - 78 Highest LRAA = 51	ppb	N/A	80	By-product of drinking water disinfection
HAA5's Total Halocetic Acids Test results Yr. 2019	N	Range = 24 - 54 Highest LRAA = 37	ppb	N/A	60	By-product of drinking water disinfection
Regulated Disinfectants		**Level Detected**		**MRDL**		**MRDLG**
Chlorine Test results Yr. 2019		Range = 0.2 – 2.0 ppm Average = 1.1 ppm		4.0 ppm		4.0 ppm

Chlorine: Water additive used to control microbes.

HAA5 and TTHM compliance is based on a Locational Running Annual Average (LRAA), calculated at each monitoring location. The LRAA calculation is based on four completed quarters of monitoring results.

Middlesex Water Company Test Results – PWS ID# NJ1225001						
Contaminant	**Viola-tion Y/N**	**Level Detected**	**Units of Measure-ment**	**MC LG**	**MCL**	**Likely Source of Contamination**
Inorganic Contaminants:						
Barium Test results Yr. 2019	N	0.03	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride Test results Yr. 2019	N	0.06	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Copper Test results Yr. 2019 Result at 90th Percentile	N	0.14 No samples exceeded the action level	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead Test results Yr. 2019 Result at 90th Percentile	N	0.9 No samples exceeded the action level	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as Nitrogen) Test results Yr. 2019	N	Range = 0.8 – 3.5 Highest detect = 3.5	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Microbiological Contaminants						
Turbidity Test results Yr. 2019	N	Highest detect = 0.2 100% of samples < 0.3		N/A	TT 95% of samples <0.3 NTU	Soil runoff, naturally present in the environment.
Radioactive Contaminants						
Gross Alpha Test results Yrs. 2017 & 2018	N	Range = 2.0 – 4.7 Highest detect = 4.7	pCi/1	0	15	Erosion of natural deposits
Uranium Test results Yr. 2017 & 2018	N	Range = 1.8 – 13.6 Highest detect = 13.6	ppb	0	30	Erosion of natural deposits

Middlesex Water Company Test Results – PWS ID# NJ1225001						
Contaminant	**Viola-tion Y/N**	**Level Detected**	**Units of Measure-ment**	**MC LG**	**MCL**	**Likely Source of Contamination**
Disinfection Byproducts:						
TTHM Total trihalomethanes Test results Yr. 2019	N	Range = 1 - 77 Highest LRAA = 52	ppb	N/A	80	By-product of drinking water disinfection
HAA5's Total Halocetic Acids Test results Yr. 2019	N	Range = 9 - 46 Highest LRAA = 37	ppb	N/A	60	By-product of drinking water disinfection
Regulated Disinfectants		**Level Detected**		**MRDL**		**MRDLG**
Chlorine / Chloramines Test results Yr. 2019		Range = 0.1 – 2.2 ppm Average = 0.7 ppm		4.0 ppm		4.0 ppm

Chlorine / Chloramines: Water additive used to control microbes.

HAA5 and TTHM compliance is based on the Locational Running Annual Average (LRAA), calculated at each monitoring location. The LRAA calculation is based on four completed quarters of monitoring results.

Unregulated Contaminant Monitoring Rule (UCMR)

The Middlesex Water Company participated in the UCMR in 2019. Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether regulation is warranted. Their results are available upon request.

Contaminant	**Level Detected**	**Units of Measurement**	**Likely source**
Chlorate	Range = 114 - 172	ppb	Agricultural defoliant of desiccant; disinfection byproduct; used in the production of chloride dioxide
Chromium (VI)	Range = 0.1 – 0.3	ppb	Naturally-occuring element; used in the making of steel and other alloys; chromium -3 or -6 are used for chrome plating, dyes and pigments, leather tanning, and other wood preservation
1,4 Dioxane	Range = 0.2 – 1.4	ppb	Discharge from industrial chemical factories
Perchlorate	Range = 0.2 – 0.3	ppb	Discharge from industrial chemical factories
Perfluorooctanic Acid (PFOA)	Range = 3 - 6	ppt	Man –made chemical used in the manufacture of fluoropolymers.
Perfluorobutane SulfonicAcid (PFBS)	Range = 2 - 3	ppt	Man –made chemical used in the manufacture of fluoropolymers.
Perfluorohexane Sulfonic Acid (PFOS)	Range = ND - 4	ppt	Man –made chemical used in the manufacture of fluoropolymers.
Perfluoroheptanoic Acid PFHepA)	Range = ND – 3	ppt	Man –made chemical used in the manufacture of fluoropolymers.
Perfluorohexane Acid (PFHxA)	Range = ND – 3	ppt	Man –made chemical used in the manufacture of fluoropolymers.
Manganese	Range = ND – 0.4	ppb	Manganese is an essential nutrient, and toxicity is not expected from levels which would be encountered in drinking water.
HAA6 Br	Range = ND – 0.1	ppb	By-product of drinking water disinfection

Unregulated Contaminants for Which EPA Required Monitoring

The East Brunswick Water Utility participated in the Unregulated Contaminant Monitoring Rule (UCMR) in 2019. Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

Contaminant	**Level Detected**	**Units of Measurement**	**Likely source**
Manganese	Range = ND – 0.4	ppb	Manganese is an essential nutrient, and toxicity is not expected from levels which would be encountered in drinking water.
HAA6 Br	Range = ND – 11.58	ppb	By-product of drinking water disinfection
HAA9	Range = ND – 73.88	ppb	By-product of drinking water disinfection

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 Helmetta Water Department, the East Brunswick Water Utility and the Middlesex Water Company 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 second to 2 minutes before using water for drinking and 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. However, for those served by a lead service line, flushing times may vary based on the length of the service line and plumbing configuration in your home. If your home is set back further from the street a longer flushing time may be needed. *To conserve water, other household water usage activities such as showering, washing clothes, and running the dishwasher are effective methods of flushing out water from a service line.* To determine if you have a lead service line, please contact your drinking water utility.

Cryptosporidium

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Cryptosporidium is usually removed through the filtration process and inactivated by other treatment processes such as chlorination and / or ozonation. In order to check for the presence of Cryptosporidium, the USEPA issued the Long Term Enhanced Surface Water Treatment Rule in January 2006. Our sample results did not show any presence of Cryptosporidium. We believe it is important for you to know that cryptosporidum may cause serious illness in 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. These people should seek advice from their health care providers.

DEFINITIONS

In the "Test Results" tables you may find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in $10,000.

Parts per billion (ppb) or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.

Parts per trillion (ppt) or nanogram per liter - one part per trillion corresponds to one minute in 20,000 years, or a single penny in $100,000,000.

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

Millirems per year (mrem/yr) - measure of radiation absorbed by the body.

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Action Level - the concentration of a contaminant, which if exceeded, triggers treatment or other requirements, which a water system must follow.

Maximum Contaminant Level - The "Maximum Allowed" (MCL) is 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 -The "Goal"(MCLG) is 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.

Secondary Contaminant- Substances that do not have an impact on health. Secondary Contaminants affect aesthetic qualities such as odor, taste or appearance. Secondary standards are recommendations, not mandates.

Treatment Technique (TT) - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Turbidity – A measure of the particulate matter or "cloudiness" of the water. High turbidity can hinder the effectiveness of disinfectants.

Recommended Upper Limit (RUL) – Recommended maximum concentration of secondary contaminants. These reflect aesthetic qualities such as odor, taste or appearance. RUL's are recommendations, not mandates.

Maximum Residual Disinfectant Level (MRDL): 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.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a 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 contamination.

Middlesex Water Company- PWSID # NJ1225001

Middlesex Water Company is a public community water system consisting of 31 wells, 1 surface water intake, 1 purchased ground water source, and 1 purchased surface water source.

This system's source water comes from the following aquifers and/or surface water bodies: glacial sand and gravel, Brunswick Aquifer System, Delaware & Raritan Canal

This system purchases water from the following water systems: New Jersey Water Supply Authority, New Jersey American Water – Raritan System

Susceptibility Ratings for Middlesex Water Company Sources

The table below illustrates the susceptibility ratings for the seven contaminant categories (and radon) for each source in the system. The table provides the number of wells and intakes that rated high (H), medium (M), or low (L) for each contaminant category. For susceptibility ratings of purchased water, refer to the specific water system's source water assessment report.

The seven contaminant categories are defined at the bottom of this page. DEP considered all surface water highly susceptible to pathogens, therefore all intakes received a high rating for the pathogen category. For the purpose of Source Water Assessment Program, radionuclides are more of a concern for ground water than surface water. As a result, surface water intakes' susceptibility to radionuclides was not determined and they all received a low rating.

If a system is rated highly susceptible for a contaminant category, it does not mean a customer is or will be consuming contaminated drinking water. The rating reflects the potential for contamination of source water, not the existence of contamination. Public water systems are required to monitor for regulated contaminants and to install treatment if any contaminants are detected at frequencies and concentrations above allowable levels. As a result of the assessments, DEP may customize (change existing) monitoring schedules based on the susceptibility ratings.

	Pathogens			**Nutrients**			**Pesticides**			**Volatile Organic Compounds**			**Inorganics**			**Radionuclides**			**Radon**			**Disinfection Byproduct Precursors**		
Sources	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L
Wells - 31		**29**	**2**	**10**	**21**			**4**	**27**	**31**			**14**	**17**		**3**	**28**		**31**			**14**	**17**	
Surface water intakes - 1	**1**			**1**				**1**			**1**		**1**					**1**			**1**	**1**		

Pathogens: Disease-causing organisms such as bacteria and viruses. Common sources are animal and human fecal wastes.

Nutrients: Compounds, minerals and elements that aid growth, that are both naturally occurring and man-made. Examples include nitrogen and phosphorus.

Volatile Organic Compounds: Man-made chemicals used as solvents, degreasers, and gasoline components. Examples include benzene, methyl tertiary butyl ether (MTBE), and vinyl chloride.

Pesticides: Man-made chemicals used to control pests, weeds and fungus. Common sources include land application and manufacturing centers of pesticides. Examples include herbicides such as atrazine, and insecticides such as chlordane.

Inorganics: Mineral-based compounds that are both naturally occurring and man-made. Examples include arsenic, asbestos, copper, lead, and nitrate.

Radionuclides: Radioactive substances that are both naturally occurring and man-made. Examples include radium and uranium.

Radon: Colorless, odorless, cancer-causing gas that occurs naturally in the environment. For more information go to http://www.nj.gov/dep/rpp/radon/index.htm or call (800) 648-0394.

Disinfection Byproduct Precursors: A common source is naturally occurring organic matter in surface water. Disinfection byproducts are formed when the disinfectants (usually chlorine) used to kill pathogens react with dissolved organic material (for example leaves) present in surface water.

IMPORTANT INFORMATION ABOUT OUR DRINKING WATER

The East Brunswick Water Utility recently failed to comply with required testing procedures. Even though this was not an emergency, as our customers, you have a right to know what happened and what we did to correct the situation.

*We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether, or not our drinking water meets health standards. During 2019, we did not complete all monitoring or testing for chlorine, and therefore cannot be sure of the quality of your drinking water during that time. Any sample we collect must be sent to, analyzed, and reported by a certified laboratory within a specific amount of time. A chlorine sample was collected in October 2019 and sent to a certified lab. However, the lab was late submitting the test results.
The 2019 range of testing results for chlorine were 0.2 - 2.0 (under the Maximum Contaminant Level of 4.0).

There is nothing you need to do at this time.

You may continue to drink the water. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

In October 2019 we collected chlorine samples and sent to a certified lab for analysis. The sample was analyzed but not reported by the lab to the state in a timely manner. For more information, contact East Brunswick Water Utility at 732-257-8313.

The East Brunswick Water Utility recently failed to comply with a required testing procedure. Even though this was not an emergency, as our customers, you have a right to know what happened and what we did to correct the situation.

*We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During 2019, we did not complete all monitoring or testing for pH and Orthophosphate at the point of entry, and therefore cannot be sure of the quality of your drinking water during that time. Any sample we collect must be sent to, analyzed, and reported by a certified laboratory within a specific amount of time. Samples were collected and tested for during the first half of 2019, however, due to a scheduling error, the data was not reported in a timely manner.

There is nothing you need to do at this time.

You may continue to drink the water. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.
In the first half of 2019 we collected samples and sent to a certified lab for analysis for pH and Orthophosphate. The sample was analyzed but not reported to the state in a timely manner. For more information, contact East Brunswick Water Utility at 732-257-8313.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is from the East Brunswick Water Utility
State Water System ID#: NJ1204001
Date: May 2020

We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future. Please call our office if you have questions.