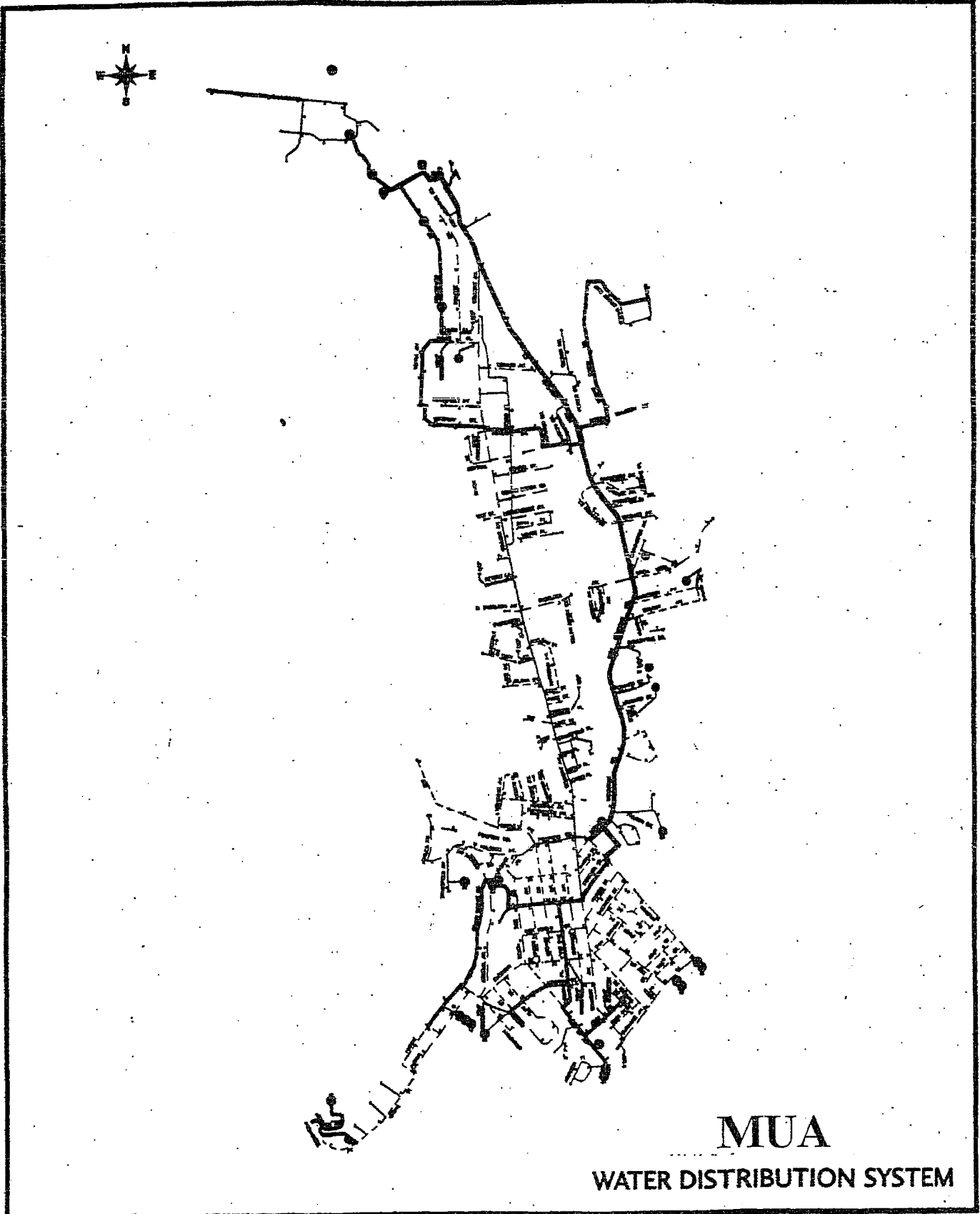


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Water Department Consumer Confidence Water Quality Report



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WATER DISTRIBUTION SYSTEM

Annual Drinking Water Quality Report
Manchester Utilities Authority
For the Year 2016, Results from the Year 2015

We are pleased to present to you this year's Annual Drinking Water Quality Report. Our constant goal is to provide you with a safe and dependable supply of drinking water. This report shows our water quality and what it means.

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).

The Manchester Utilities Authority and its suppliers routinely monitor for contaminants in your drinking water according to Federal and State laws. This tables show the results of our monitoring for the period of January 1st to December 31st, 2015. 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, although representative, are more than one year old.

Manchester Utilities Authority Test Results PWS ID #NJ1603001						
Contaminant	Viol a- tion Y/N	Level Detected	Units of Meas ure- ment	M C LG	MCL	Likely Source of Contamination
Inorganic Contaminants:						
Copper Test results Yr. 2015 Result at 90 th Percentile	N	0.12 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. 2015 Result at 90 th Percentile	N	2.7 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. 2015	Y	Range = 35 - 115 Highest LRAA = 82	ppb	N/ A	80	By-product of drinking water disinfection
HAA5 Haloacetic Acids Test results Yr. 2015	N	Range = 18 - 40 Highest LRAA = 33	ppb	N/ A	60	By-product of drinking water disinfection
Microbiological Contaminants						
Total coliform Bacteria	Y	3 positive routine samples in September 2015		0	1 positive monthl y sample.	Naturally present in the environment

We had three (3) positive routine Total Coliform Bacteria samples in September 2015, of which you were notified. We immediately resampled and all test results were negative. Total Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems. We have modified system operating procedures and are investigating further actions to improve the chlorine level in the system to reduce the occurrence of bacteria in our system.

Regulated Disinfectants	Level Detected	MRDL	MRDLG
Chlorine Test results Yr. 2015	Average = 0.9 ppm	4.0 ppm	4.0 ppm

Total Haloacetic Acids (HAA5) and Total Trihalomethanes (TTHM) compliance is based on a Locational Running Annual Average (LRAA),

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Manchester Utilities Authority Exceeded the MCL for TTHMs at One Monitoring Location

Our water system recently violated a drinking water standard, of which you were notified. Although this is not an emergency, as our customers, you have a right to know what happened, what you should do and what we are doing to correct this situation. We also failed to notify NJDEP within 48 hours after sample results were received.

We routinely monitor for the presence of drinking water contaminants. We received notice that one (1) of our sampling locations exceeded the Maximum Contaminant Level (MCL) for Total Trihalomethanes (TTHMs). The MCL for TTHMs is 80 parts per billion (ppb) based on a Locational Running Annual Average (LRAA). The LRAA for this site was 82 ppb.

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.

Trihalomethanes are byproducts of drinking water disinfection / chlorination. Some people who drink water containing trihalomethanes 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 getting cancer.

We have modified system operating procedures and will be cleaning storage tanks and flushing mains to reduce the trihalomethanes that may be formed as a byproduct of drinking water disinfection / chlorination.

Our water supply: In 2015 we purchased our water from the Passaic Valley Water Commission. The Passaic Valley Water Commission obtains some of their water from the North Jersey District Water Supply Commission. Supply sources are the Passaic River, and the Wanaque Reservoir and the Monksville Reservoir. The New Jersey Department of Environmental Protection (NJDEP) has completed and issued Source Water Assessment Reports and Summaries for these public water systems, which are 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 these water system's Source Water Assessments.

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 Manchester Utilities Authority and its drinking water suppliers 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>

Waivers: The Safe Drinking Water Act regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for asbestos, volatile organic chemicals and synthetic organic chemicals. Our system received monitoring waivers for asbestos and synthetic organic contaminants.

If you have any questions about this report or concerning your water utility, please contact Henry Manger at 973-427-0096. If you would like to learn more, please attend any of our regularly scheduled Board meetings held at the Haledon Municipal Building, 510 Belmont Avenue, Haledon. Meetings are held on the second Monday of each month at 7:30 p.m. The Manchester Utilities Authority is committed to providing quality water. We ask that our customers help us protect our water resources, which are an integral part of our community. Kindly contact our office if you have questions.

Definitions:

In the following table you will 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.

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

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.

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

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.

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.

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 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.

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.

Total Organic Carbon (TOC) - We are required to remove a certain percentage of (TOC) from our drinking water on a monthly basis. Total Organic Carbon has no adverse health effects. However, TOC provides a medium for the formation of disinfection byproducts.

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

Potential sources of contamination:

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 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.

Passaic Valley Water Commission (PVWC) is a major supplier of drinking water in Northern New Jersey. PVWC's main facility is the Little Falls Water Treatment Plant located in Totowa, NJ. Water diverted from the Passaic and Pompton Rivers is treated, filtered and disinfected at the plant. Treated water is then mixed with treated water from the North Jersey District Water Supply Commission's (NJDWSC) Wanaque Reservoir treatment plant.

Cryptosporidium: is a microbial pathogen found in surface water throughout the United States. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100% removal. Our monitoring indicates the presence of these organisms in our source water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people, infants and small children, and the elderly are at a greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

The Passaic Valley Water Commission (PVWC) exceeded the Recommended Upper Limit for Sodium. For healthy individuals the sodium intake from water is not important, because a much greater intake of sodium takes place from salt in the diet. However sodium levels above the Recommended Upper Limit (RUL) may be of concern to individuals on a sodium restricted diet.

Passaic Valley Water Commission 2015 Test Results PWS ID# NJ1605002						
Contaminant	Viola-tion Y/N	Level Detected	Units of Measure-ment	MCL G	MCL	Likely Source of Contamination
Microbiological Contaminants:						
Turbidity	N	Highest Measurement = 0.53 Range = 0.02 - 0.53 99.97 % samples < 0.3	NTU	0	TT = % of monthly samples < 0.3 NTU	Soil runoff
Total Organic Carbon (%)	N	Range = 46 - 72%		NA	TT = % removal	Naturally present in the environment

		(25 - 45% required)				
Inorganic Contaminants:						
Barium	N	Range = 0.016 – 0.027 Highest detect = 0.027	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium	N	Range = ND – 0.57 Highest detect = 0.57	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Fluoride	N	Range = ND – 0.09 Highest detect = 0.09	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as Nitrogen)	N	Range = 0.89 – 3.7 Highest detect = 3.7	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nickel	N	Range = 1.63 – 1.98 Highest detect = 1.98	ppb	N/A	N/A	Erosion of natural deposits
Selenium	N	Range = ND – 0.69 Highest detect = 0.69	ppb	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Secondary Contaminant		Level Detected	Units of Measurement		RUL	
Sodium		Range = 75 – 281	ppm		50	

North Jersey District Water Supply Commission (NJDWSC) 2015 Test Results						PWS ID #NJ1613001
Contaminant	Violation Y/N	Level Detected	Units of Measurement	MCL G	MCL	Likely Source of Contamination
Microbiological Contaminants						
Turbidity	N	Highest Measurement = 0.28 100 % < 0.3	NTU	0	TT 0.3 NTU % Of the NTU	Soil runoff
Total Organic Carbon (%)	N	Range = 1.0 % (0.94 – 1.0% required)		NA	TT = % removal	Naturally present in the environment
Inorganic Contaminants:						
Barium	N	0.013	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Nitrate (as Nitrogen)	N	0.5	ppm	10	10	Runoff from fertilizer use; leaching from

						septic tanks, sewage; erosion of natural deposits
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Unregulated Contaminants for Which EPA Requires Monitoring

The Passaic Valley Water Commission (PVWC) collected data in 2015 as part of an ongoing study to determine the general occurrence of unregulated contaminants. Currently, there are no drinking water standards for these compounds. PVWC continues in and supports these types of regulatory and research efforts to maintain a position of leadership in cutting edge water treatment. Unregulated contaminant monitoring helps the USEPA and the NJDEP to determine where certain contaminants occur and whether they should consider regulating those contaminants in the future.

Contaminant	Little Falls WTP (Range of Results)
Chlorate	Range = 88 - 373 ppb