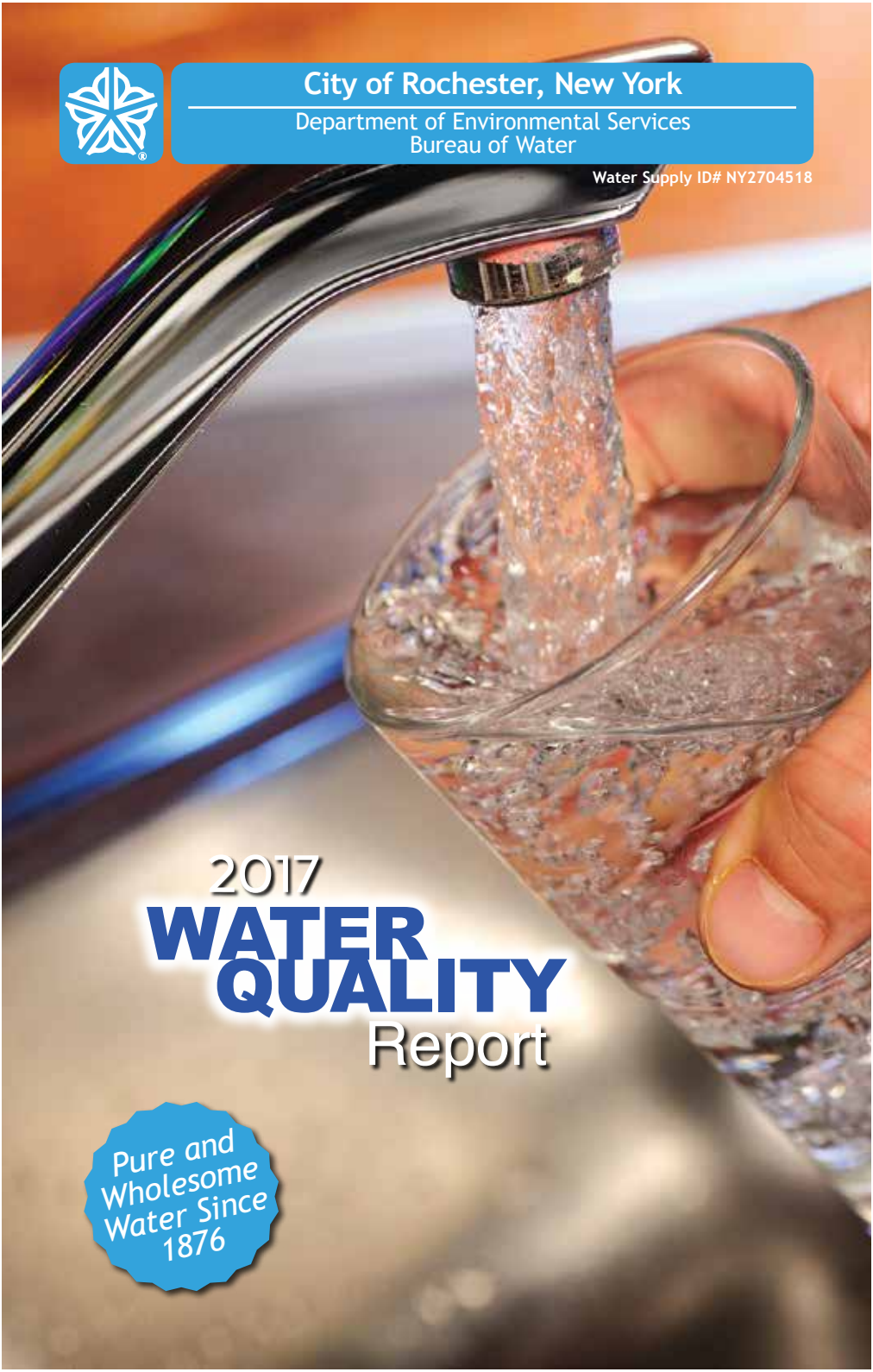

City of Rochester, New York
Department of Environmental Services
Bureau of Water
Water Supply ID# NY2704518
2017
WATER QUALITY
Report
Pure and Wholesome Water Since 1876

THE CITY OF ROCHESTER WATER BUREAU is pleased to present our 2017 Water Quality Report. This report includes water quality information for the 2017 calendar year. The U.S. Environmental Protection Agency (EPA) requires all water utilities to produce and distribute water quality reports on an annual basis. For 2017, the City has again met or exceeded all of the drinking water standards set by the EPA and the New York State Department of Health (NYSDOH).

The City of Rochester Water Bureau provides water to 210,000 residents and many businesses located within the City of Rochester. Water is also sold wholesale to water districts in the Town and Village of Lima, Livingston County Water and Sewer Authority (LCW&SA), and Monroe County Water Authority (MCWA). The Water Bureau is committed to providing outstanding service through its dedication to water quality and environmental stewardship.

Providing safe and reliable drinking water requires a dedicated team of over 120 experienced, dedicated and specially trained employees. Over 30 Water Bureau employees have obtained NYSDOH certification as water system operators. During 2017, attention was focused on controlling water losses through a robust leak detection program and quarterly water loss control audits.

In 2017, the City continued its commitment to water quality through its involvement with the Partnership for Safe Water. The goal of this voluntary American Water Works Association (AWWA) and EPA program is to help water utilities optimize strategies to provide consumers with quality water that exceeds what current regulations require. Last year marked the 16th year in a row that the Hemlock Filtration Plant earned the Partnership's *"Director's Award for Filtration Plants."*

This report provides information about your water system including the source of our drinking water, its treatment and test results. Should you have any questions or require further information, please contact us at **(585) 428-6680, ext 1.**

WHERE DOES MY DRINKING WATER COME FROM AND HOW IS IT TREATED?

Since 1876, Rochester residents have relied upon Hemlock and Canadice lakes for their drinking water supply. The City also purchases water from MCWA's Shoremont treatment plant on Lake Ontario. (MCWA water quality information, is available at **MCWA.com.**) The Hemlock Water Filtration Plant is a direct filtration plant with a capacity of 48 million gallons per day and employs processes involving coagulation, filtration and disinfection.

During coagulation, chemicals are added to untreated water, causing the natural particulates to clump together into larger particles called floc. The floc is removed by filtration, and the water is then disinfected with chlorine. Like many other cities in the U.S., your water is fluoridated. According to the Center for Disease Control & Prevention, (CDC) fluoride is very effective at preventing cavities when present in drinking water at a properly controlled level. Our fluoride addition system is operated within NYS and CDC guidelines to provide optimal benefit. Water treated at the Hemlock Filtration Plant flows to the city by gravity through three large pipelines. Along the way, water is sold wholesale to water districts in the Town and Village of Lima, LCW&SA and MCWA. The treated water is stored in the City's three reservoirs—Rush Reservoir, Cobbs Hill Reservoir and Highland Park Reservoir. It is re-disinfected as it exits each reservoir and enters a complex grid (over 550 miles) of water mains that distribute the water to city customers. Lake Ontario water from MCWA is pumped into the City distribution system at the Mt. Read

Boulevard pump station, near West Ridge Road. Some areas of the city receive either Hemlock Lake or Lake Ontario water—or a mixture of both—depending on the season.

SOURCE WATER ASSESSMENT SUMMARY:

To raise awareness about the importance of preventing water pollution, the NYSDOH has evaluated the susceptibility of water supplies statewide for potential contamination under the Source Water Assessment Program (SWAP). Through its assessment of the Hemlock/Canadice Lake watershed, SWAP identified several potential sources of contamination, none particularly noteworthy. The City's extensive testing of these pristine lakes confirms that contamination from human activity is negligible. For more information on SWAP, please call **(585) 428-6680,** or the Monroe County Department of Public Health (MCDPH) at **(585) 753-5057.**

WHAT TYPES OF WATER SYSTEM IMPROVEMENTS WERE COMPLETED OR INITIATED IN 2017?

The City is diligent in reinvesting in its water system through its robust annual capital improvement program. In 2017, the Water Bureau spent more than $8 million on system improvements to the Hemlock Filtration Plant, transmission system, distribution system, reservoirs and dams. Some of the program highlights are as follows: installation of 1.4 miles of new water main, including valves, hydrants and service lines, and cleaning and lining 3.9 miles of existing water main in the City's distribution system. Improvements to the filtration plant automation and controls and security systems were also made. The ongoing programs of installing new water meters, (4,661 in 2017) inspecting all fire hydrants and operating main line valves, conducting water main flushing, sampling and testing the water were also performed.

IMPORTANT INFORMATION FROM THE EPA:

• *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*

HOW CAN I SAVE MONEY ON WATER? Simple changes in your daily routine can save you money on your water bill and also reduce stress on the environment. Always repair dripping and leaking faucets, toilets and garden hoses. Log on to ***http://www.dec.ny.gov/lands/5009.html*** for more conservation tips.

• *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 activities. Contaminants that may be present in source water include: microbial contaminants, inorganic contaminants, pesticides and herbicides, organic chemical contaminants and radioactive contaminants.*

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

• Some people may be more vulnerable to disease-causing microorganisms or pathogens in drinking water than the general population. Immuno-compromised individuals, such as people with cancer undergoing chemotherapy, organ transplant recipients, 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 from their health care providers about their drinking water.

2017 STATISTICS

The City of Rochester has a population of 210,000, and approximately 57,900 metered accounts. The base charge for water was $3.62 per 1,000 gallons.

The average daily production at the Hemlock Water Filtration Plant was 36.9 million gallons per day (MGD), some of which was delivered to other utilities. Water supplied to the City averaged 24.9 MGD, with 20.5 MGD being delivered to City customers. The balance, an average of 4.4 MGD, is non-revenue water used for firefighting purposes, water main flushing, or lost to distribution system leaks and water illegally obtained. The Water Bureau continues to focus on reducing the amount of non-revenue water.

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

SHOULD I BE CONCERNED ABOUT CHEMICAL CONTAMINANTS IN MY WATER?

As the state regulations require, we routinely test your drinking water for numerous contaminants, and we have found no contaminants in our water at levels that raise concern. Some substances such as chlorine and fluoride are added to the water supply for health reasons.

IS THERE LEAD IN MY DRINKING WATER?

Lead is a toxic metal known to have negative health effects for people of all ages, particularly **pregnant women, infants and young children**. Lead has been linked to learning disabilities, behavioral problems and other issues.

Lead is not found in Rochester's source water, or in the water mains in the street. Lead can be present in the service lines connecting homes to water mains and in brass fixtures, faucets, and solder in copper plumbing. These items can pass lead into the water you use for drinking and cooking. It is important to note that the Safe Drinking Water Act does not include a health-based limit for lead levels in drinking water. Because lead poses health risks, the EPA has set a Maximum Contaminant Level Goal (MCLG) of zero for lead. Due to the potential health risks of lead, consider taking these steps to reduce your exposure to lead in drinking water:

• Use ONLY Cold Water—Always use COLD water for drinking, cooking and preparing baby formula. Hot water dissolves lead more quickly.

• Flush Your Pipes—Lead levels are usually at their highest when water has been sitting in the pipe for several hours. Clear your pipes by running the cold water for three to five minutes. The cost for running a kitchen faucet for three minutes is about one cent.

• Periodically Clean Faucet Screens—Routinely remove and clean your faucet screens. Screens can accumulate lead and rust particles.

• Use a Water Filter—If you have concerns about levels of lead in your water, consider using a water filter that is certified by NSF International to remove lead (NSF 53). Find out more on filter certification at www.nsf.org

For information on testing your tap water for lead, you may call our Hemlock Water Filtration Plant at (585) 428- 6680 ext. 1, or send an email to watertest@cityofrochester.gov.

Additional information is available at the EPA's Safe Drinking Water Hotline at *1-800-426-4791;* or visit: www.epa.gov/safewater/lead, and at the Coalition to Prevent Lead Poisoning: www.theleadcoalition.org.

CRYPTOSPORIDIUM AND GIARDIA

Cryptosporidium is a microbial pathogen found in surface water and groundwater under the influence of surface water. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. As part of a compliance agreement with the MCDPH and the NYSDOH, the City has conducted routine Cryptosporidium monitoring (twice monthly) form both Highland and Cobb's Hill Reservoirs since 2012. During 2017, as part of our routine sampling plan, 50 samples were collected and analyzed for Cryptosporidium oocysts (24 from Highland and 26 from Cobbs Hill.) No Cryptosporidium or Giardia was detected in any of the samples collected.

WHAT IF I HAVE QUESTIONS?

For more information about Water Bureau activities, fees and other water-related issues, visit: www.cityofrochester.gov/waterbureau or call *(585) 428-7500.* You may contact a customer service representative by dialing 311. Call *(585) 428-5990* if outside of the city limits. Our offices are at *10 Felix Street, Rochester, NY, 14608.*

2017 City of Rochester Water Quality Report

TABLE OF DETECTED CONTAMINANTS

Substance	Units	MCLG	MCL	Hemlock Average (Range)	Ontario Average (Range)	Likely Source	Meets EPA Standards
Barium	mg/L	2	2	0.018	0.022 (0.02-0.024)	Erosion of natural deposits	Yes
Chloride	mg/L	250	250	35 (32-37)	27 (25-30)	Natural deposits, road salt, water treatment chemicals	Yes
Fluoride	mg/L	NA	2.2	0.69 (0.04-0.79)	0.69 (0.22-0.86)	Water treatment additive to promote dental health	Yes
Nitrate/Nitrite	mg/L	10	10	0.16 (0.04-0.22)	0.33 (0.25-0.38)	Fertilizers, erosion of natural deposits, septic tank leachate	Yes
Sodium	mg/L	NA	NA	20	16.3 (15-17)	Natural deposits, road salt, water treatment chemicals	NA
Sulfate	mg/L	NA	250	13 (11-14)	28.5 (27-30)	Naturally occurring	Yes
Treatment Requirements (TT)-95% of samples each month must be less than 0.3 NTU. Annual Range and lowest monthly percentage are listed below for entry point.						**For the distribution system the highest monthly average and range are reported. Turbidity is a measure of water clarity and is used to gauge filtration process.**	
Turbidity Entry Point	NTU	NA	1 NTU	100% (0.03-0.11)	100% (0.03-0.08)	Soil runoff	Yes
Turbidity Distribution	NTU	NA	5 NTU	0.13 (June, July, Sept.) (0.03-1.24)		Soil runoff	Yes
Microbiological Contaminants – The distribution system monthly maximum and annual average % positive for total coliform bacteria are listed below. Total coliform is a group of bacteria used to indicate the general sanitary conditions in a water system. Most species of this group do not present a health concern, but one species, E. coli can be pathogenic.						**In 1993, the State Health Department granted the City a "biofilm variance," or exception to the Total Coliform MCL. Biofilm is a layer of bacteria that can be found on almost all surfaces, including the inside wall of water pipes. The variance does not apply to *E. coli*.**	
Total Coliform	% Positive	0	NA	0.6% (May, Dec.)	0.1% (Annual)	Naturally occurring	Yes
Disinfectant and Disinfectant By-products (DBPs) – Average (Highest LRAA for Total THMs and Haloacetic Acids) and Range from distribution locations are listed below.						**Chlorine has a MDRL (maximum disinfectant Residual Level) and MDRLG (MDRL Goal) rather than an MCL and MCLG. LRAA=Locational Running Annual Average**	
Chlorine (entry point)	mg/L	4*	4*	0.93 (0.19-1.72)	1.16 (0.91-1.7)	Required treatment chemical	Yes
Total THMs	µg/L	NA	80	54 (12-81)		By-product of chlorination	Yes
Haloacetic Acids	µg/L	NA	60	30 (5-37)		By-product of chlorination	Yes
Lead and Copper (2015 Survey) –Test results for 90% of distribution system samples must be less than the Action Level (AL). The 90th percentile and the range of results						**are listed below. Three out of 58 samples tested exceeded the lead AL. Zero out of 58 samples exceeded the copper AL.**	
Lead	µg/L	0	15	9.7 (ND-19)		Corrosion of plumbing	Yes
Copper	µg/L	1300	1300	206 (3-860)		Corrosion of plumbing	Yes

Unregulated Contaminant Monitoring Rule 3 – Once every 5 years the EPA requires public water systems to participate in unregulated contaminant monitoring. In 2012 the EPA established a list of no more than 30 unregulated contaminants referred to as UCMR3. Public water systems were required to participate in UCMR3 monitoring between 2013 and 2015. The monitoring results provide the basis for future regulatory actions to protect public health. Detected contaminants for the Hemlock and Lake Ontario Treatment Plants and the distribution system are reported.

Substance	Units	MCLG	MCL	Hemlock WTP 2015 Range	Ontario WTP 2014 Range	End of Distribution System 2015 Range	Meets EPA Standards
Chromium Total	µg/L		100	ND	ND-0.23	ND	Yes
Chromium-6	µg/L	NA	NA	ND-0.04	0.07-0.09	ND-0.10	NA
Molybdenum	µg/L	NA	NA	ND	1.2-1.3	ND	NA
Strontium	µg/L	NA	NA	50-57	160-190	56-140	NA
Vanadium	µg/L	NA	NA	ND	ND-0.2	ND	NA
Chlorate	µg/L	NA	NA	ND-43	ND-130	21-120	NA

As the State regulations require, we routinely test your drinking water for numerous contaminants.These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, haloacetic acids, radiological and synthetic organic compounds. All tested contaminants not shown in the table were not detected. The complete list of contaminants tested is available at www.cityofrochester.gov/waterquality.

DEFINITION OF TERMS

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.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLG as possible.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the 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.

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

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

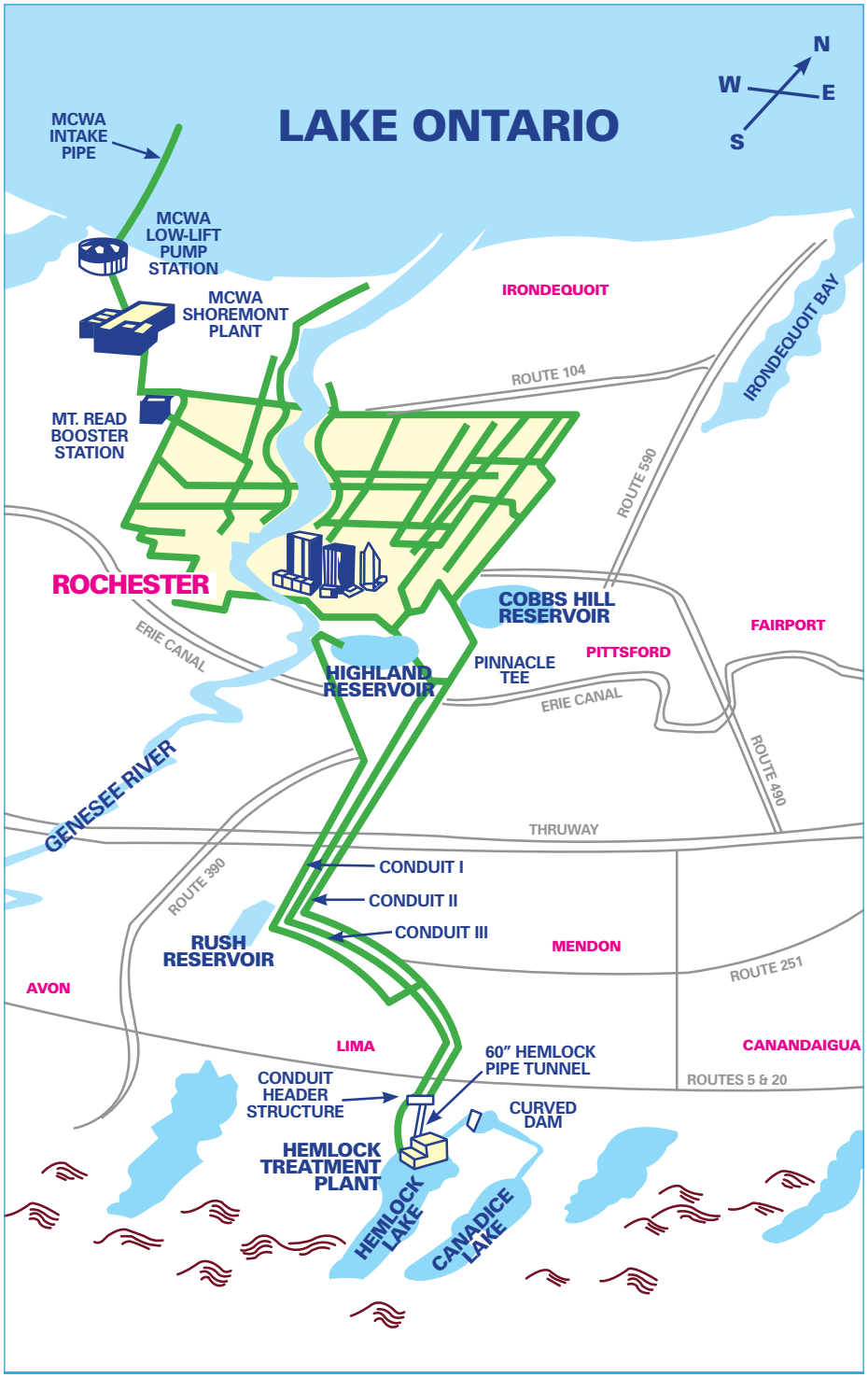
Nephelometric Turbidity Unit (NTU): A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

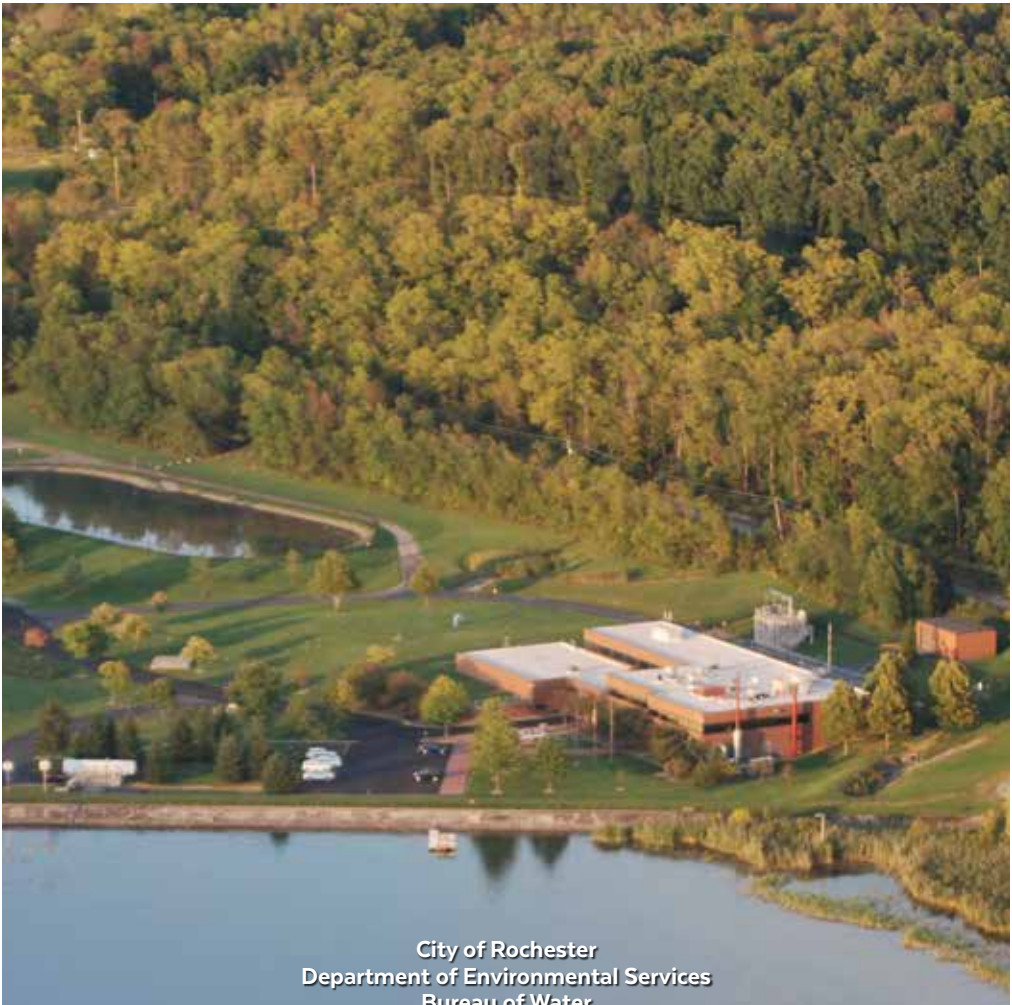
Milligrams per liter (mg/l) corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).

Micrograms per liter (ug/l) corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb).

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

NA: Not applicable





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Bureau of Water
10 Felix Street
Rochester, NY 14608

Believe.

200 Years of Douglass
CITY OF ROCHESTER, N.Y.

Lovely A. Warren, Mayor
Rochester City Council

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