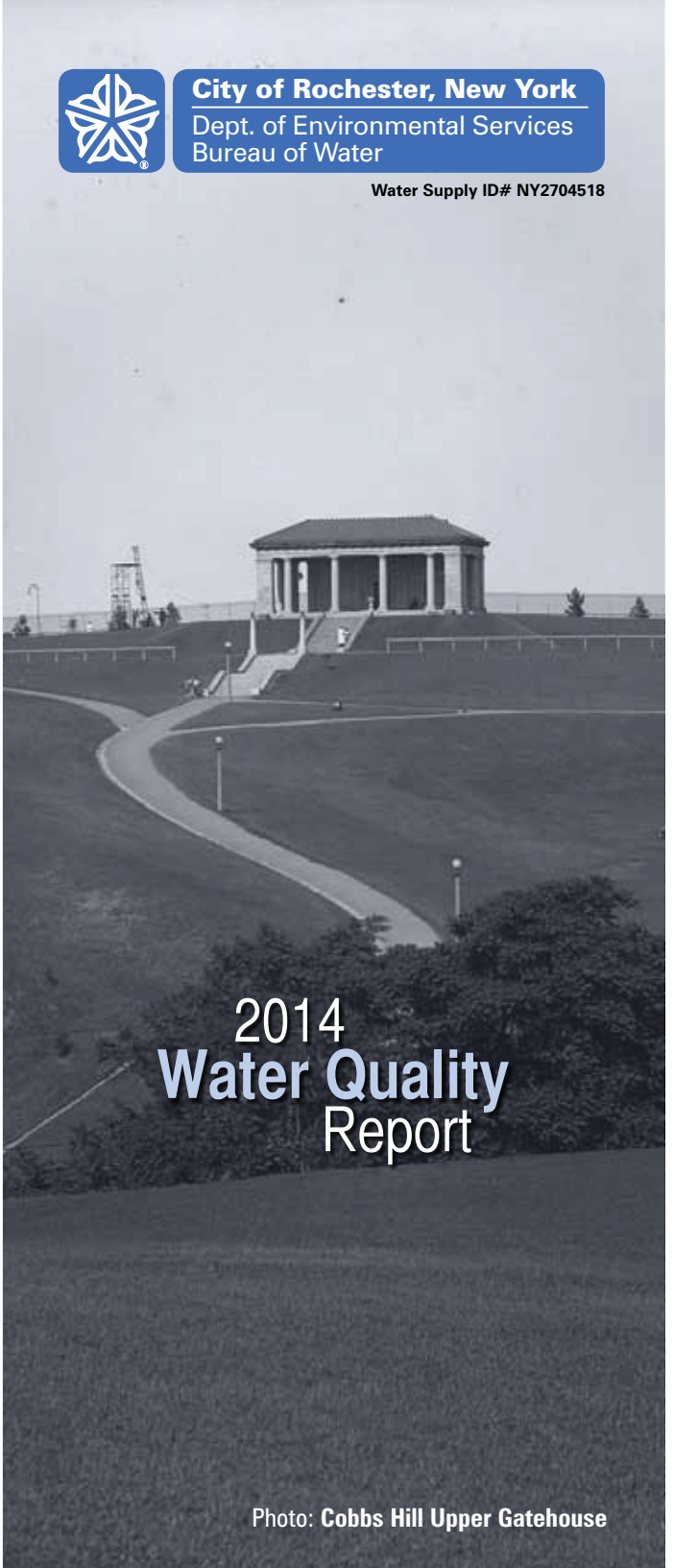
City of Rochester, New York
Dept. of Environmental Services
Bureau of Water

Water Supply ID# NY2704518



2014 Water Quality Report

Photo: **Cobbs Hill Upper Gatehouse**

The **Rochester Water Bureau** is pleased to provide you with this report on the quality of your drinking water. This report provides news on your water system and describes the source of your drinking water, its treatment and test results.

FLOWING INTO THE FUTURE WHILE MAINTAINING THE PAST!

The Rochester Water Bureau has been providing drinking water for more than 138 years, and much of the original system is still in use. The Bureau, however, is continually upgrading and rehabilitating this historic system with state-of-the-industry technologies in a fiscally responsible manner, while keeping abreast of regulations and water quality concerns.

Each year the Rochester Water Bureau is involved with protecting the watershed, ensuring that treatment practices are highly effective and transmission and distribution systems are structurally sound and able to provide you with safe and high quality drinking water. For 2014, the City has again met and/or exceeded all of the drinking water standards set by the Environmental Protection Agency (EPA) and the New York State Department of Health (NYDOH). The City continues its commitment to quality by providing safe drinking water 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 superior water quality to consumers that exceed what current regulations require. In 2014, the Hemlock Filtration Plant earned the Partnership's *"Director's Award for Filtration Plants"* for its 13th year, and our distribution system in its first effort to qualify, earned the Partnership *"Director's Award for Distribution Systems."* In 2014, the City won the AWWA *"Best Tasting Water"* award for all of New York State.

WHERE DOES MY WATER COME FROM?

Since 1876, Rochester residents have relied upon Hemlock and Canadice Lakes for their drinking water supply. The City's also purchases water from the Monroe County Water Authority (MCWA) Shoremont treatment plant on Lake Ontario. For MCWA information, please see **www.MCWA.com.**

The NYDOH has evaluated the susceptibility of water supplies statewide for potential contamination under the Source Water Assessment Program (SWAP). Though its assessment of the Hemlock/Canadice Lake watershed it identified several potential sources of contamination, none were particularly noteworthy. The City's extensive testing of these pristine lakes confirms that contamination from human activity is negligible. For more information on the SWAP, please call (585)428-6680.

HOW IS MY WATER TREATED AND DELIVERED?

The Hemlock and Shoremont treatment plants both employ similar treatment 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 through addition of chlorine. Like many other cities in the U.S., your water is also fluoridated. This past year, the Bureau earned the "Water Fluoridation Quality Award" presented by the Center for Disease Control & Prevention (CDC) and the US Department of Health and Human Services. According to the CDC, fluoride is very effective in preventing cavities when present in drinking water at an optimal range from 0.6 to 1.2 mg/l. In 2014, the Bureau performed, 1079 fluoride tests and 100% of the test results fell within the CDC's optimum range.

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 towns/villages of Lima, the Town of Richmond, to Livingston County Water and Sewer Authority, and MCWA.

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.

TABLE OF DETECTED CONTAMINANTS

Substance	Units	MCLG	MCL	Hemlock Average (range)	Ontario Average (range)	Likely Source	Meets EPA Standards
Barium	mg/L	2	2	0.017	0.016-0.023	Erosion of natural deposits	Yes
Chloride	mg/L	250	250	34 (31-35)	24-38	Natural deposits, road salt, water treatment chemicals	Yes
Fluoride	mg/L	NA	2.2	0.70 (0.66-0.73)	0.1-1.4	Water treatment additive to promote dental health	Yes
Nitrate	mg/L	10	10	0.06	0.22-0.34	Fertilizers, erosion of natural deposits, septic tank leachate	Yes
Sodium	mg/L	NA	NA	17	14-23	Natural deposits, road salt, water treatment chemicals	NA
Treatment Requirements (TT)– 95% of samples each month must be less than 0.3 NTU. Annual range and lowest monthly percentage are listed below. Turbidity is a measure of water clarity and is used to gauge filtration process.							
Turbidity Entry Point	NTU	NA	1 NTU Monthly Average	99% (May) (0.05-0.62)	100% (0.03-0.30)	Soil runoff	Yes
Bacteria–The distribution system monthly maximum and annual average % positive 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	5%	1.7% (June) 0.3 (Annual)	ND	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*	.96 (0.60-2.16)	1.0 (0.3-2.4)	Required treatment chemical	Yes
Total THMs	µg/L	NA	80	58 (31-80)		By-product of chlorination	Yes
Haloacetic Acids	µg/L	NA	60	37 (23-40)		By-product of chlorination	Yes
Lead and Copper– Test results for 90% of distribution system samples must be less than an Action Level (AL), instead of an MCL. The 90th percentile and the range of results are listed below. Three out of 54 samples tested exceeded the lead AL.							
Lead	µg/L	0	15	9 (ND-28)		Corrosion of plumbing	Yes
Copper	µg/L	1300	1300	93 (14-200)		Corrosion of plumbing	Yes

Definition of Terms

- **µg/L** Micrograms per liter– same as parts per billion (ppb); corresponds to one ounce in 7,812,500 gallons of water.
- **AL** Action Level– the concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.
- **MCL** Maximum Contaminant Level– the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible.
- **MCLG** Maximum Contaminant Level Goal– the level of a contaminant in drinking water below which there is no known or expected health risk, with allowance for a margin of safety.
- **mg/L** Milligrams per liter– same as parts per million (ppm); corresponds to one ounce in 7812.5 gallons of water.
- **ND** Not Detected– laboratory analysis indicates that the constituent is either absent or present below current limits of testing.
- **NA** Not Applicable
- **NTU** Nephelometric Turbidity Unit– a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- **TT** Treatment Technique- A required process intended to reduce the level of a contaminant in drinking water.

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 is pumped into the City distribution system primarily in the area of Mt. Read Boulevard and West Ridge Road. The volume of water purchased varies from 0 to 26 million gallons per day (MGD). Some areas of the city may receive either Hemlock Lake or Lake Ontario water—or a mixture of both—depending on the season.

WHAT TYPES OF WATER SYSTEM IMPROVEMENTS WERE COMPLETED OR INITIATED IN 2014?

The City is diligent in reinvesting in its water system through its robust annual capital improvement program. In 2014, the Water Bureau spent more than $8 million on system improvements to the Hemlock Filtration Plant, transmission system, reservoirs, dams and distribution system. Some of the program highlights are as follows: structural and mechanical improvements to Cobbs Hill Reservoir, including a new reservoir bypass system and upgrades to the chlorine system and reservoir automation; completion of the South Clinton Avenue project of modernizing 10,000 feet of transmission conduit; and cleaning and lining 1.2 miles of 36" conduit leading into Cobbs Hill Reservoir. Also undertaken was installing 8,500 feet of new water main and cleaning and lining 7.5 miles of existing water main in the City's distribution system. The ongoing capital programs of installing new water meters, (more than 4,000 in 2014) inspecting and repairing hydrants, exercising valves, conducting water main flushing, sampling and testing the water were also performed.

2014 STATISTICS

The average production at the Hemlock Filtration Plan was 37 MGD. Consumption in the city averaged 20.9 MGD for a population of approximately 210,000, which represents 57,794 metered accounts. Wholesale sales to upland communities and to MCWA averaged 16.6 MGD. Lost water (the portion of water put into the system that cannot be accounted for by metered sales or other permitted uses) was 23.5 percent. The base charge for water was $3.38 per 1,000 gallons.

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. It is important to understand that all drinking water, including bottled water, contains small amounts of impurities. The mere presence of a contaminant does not mean there is a healthrisk.

Some substances such as chlorine and fluoride are added to the water supply for health reasons. More information about contaminants and potential effects on your health can be obtained by calling the **EPA Safe Drinking Water Hotline** at **1-800-426-4791** or the **Monroe County Department of Public Health (MCDPH)** at **(585) 753-5057**.

HOW DO CONTAMINANTS GET INTO THE WATER?

The sources of drinking water (both tap and bottled include rivers, lakes, streams, ponds, reservoirs, springs and underground aquifers. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and in some cases, radioactive material. It can also pick up contaminants that result from the presence of animals and from human activities. These may include microbial and inorganic contaminants, pesticides and herbicides, organic chemical contaminants, disinfection byproducts and radioactive substances.

WHAT KINDS OF TESTS WERE DONE ON MY DRINKING WATER?

Your water was tested for more than eighty (80) types of regulated microorganisms and chemical compounds in 2014. Samples were collected from all stages of the system, including at the source (streams and lakes),

during various steps in the treatment process, at the storage reservoirs and from the customers' taps. Your water is tested for inorganic contaminants, nitrate, nittite, lead and copper, volatile organic contaminants, Synthetic organic contaminants and disinfection byproducts. The contaminants detected in your drinking water are included in the **Table of Detected Contaminants**.

WERE THE PROTOZOANS *CRYPTOSPORIDIUM* OR *GIARDIA* FOUND IN OUR WATER?

No. All City and MCWA tests for these organisms were again negative in 2014. However, certain people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people, some elderly and some infants, may be particularly at risk for infections. These people should seek advice about drinking water from their healthcare providers. EPA/CDC guidelines on appropriate means to reduce the risk of infection by Cryptosporidium, Giardia and other microbial contaminants are available by calling the **Safe Drinking Water Hotline 1-800-426-4791** or MCDPH at **(585) 753-5057.**

IS THERE LEAD IN MY DRINKING WATER?

At-the-tap lead levels in the majority of Rochester households remain below allowable limits. However, the amount of lead present varies by the age and types of plumbing materials in your home and also varies depending upon how long the water sits in your pipes before it is used. To minimize your lead intake from water, simply allow the tap to run for one or two minutes before use. Water from hot water taps should never be used for drinking or cooking. Pregnant women, infants and young children are typically more vulnerable to the effects of lead than the general population. If you are concerned about elevated lead levels in water, call us at **(585) 428-6680**. For more information about lead in drinking water, call the Safe Drinking Water Hotline at **1-800-426-4791**, or visit: **www.epa.gov/safewater/lead**

For a complete list of results for all substances tested in 2014, go to: **www.cityofrochester.gov/waterquality**. For more information about Water Bureau activities, fees and other water-related issues, visit: **www.cityofrochester.gov/waterbureau** or call **(585) 428-6680.** You may contact a customer service representative, at **311** or if calling from outside of the city limits, **(585) 428-5990**. Our offices are at **10 Felix Street, Rochester, NY 14608.**