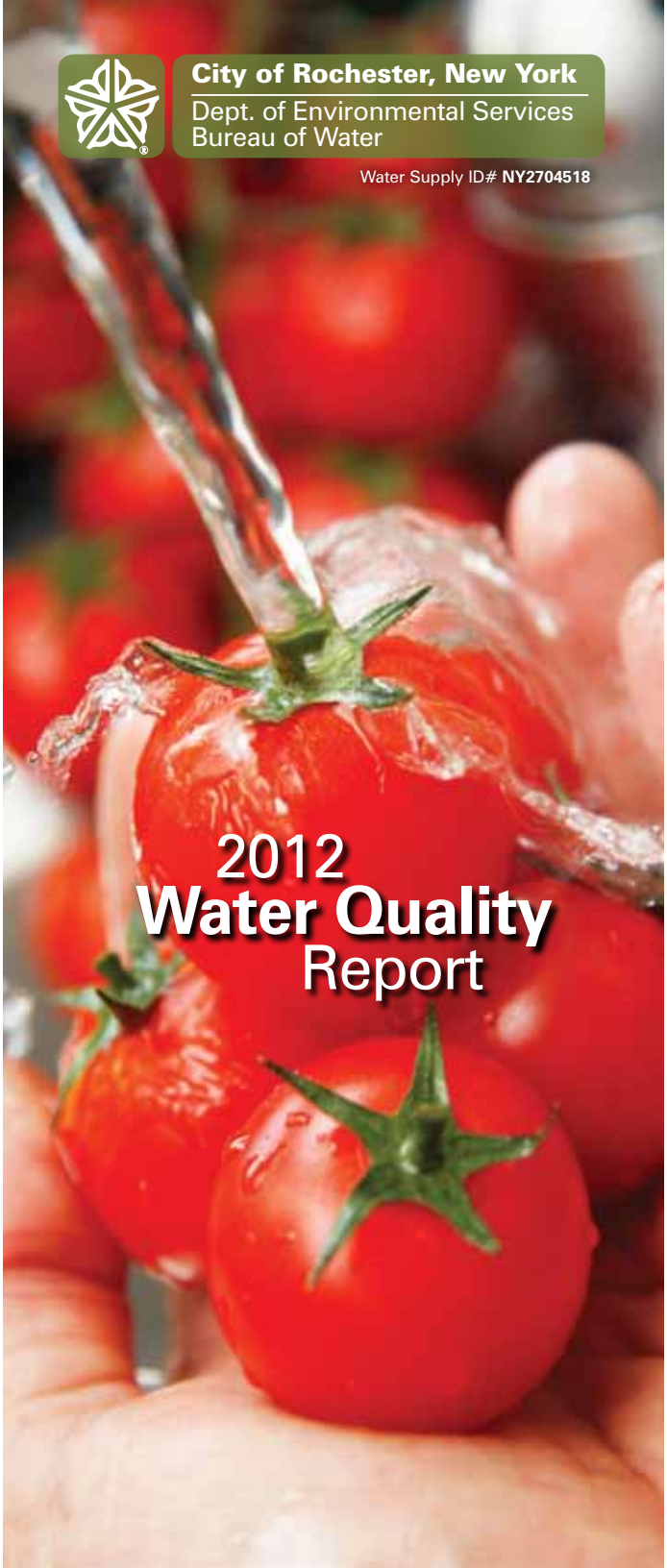
City of Rochester, New York
Dept. of Environmental Services
Bureau of Water

Water Supply ID# **NY2704518**



2012 Water Quality Report

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

MEASURE OF MANDATE RELIEF IN 2012

The New York State Department of Health (NYSDOH) and the EPA granted the City an extension to 2024 – an extra 10 years – to complete the work of installing ultraviolet disinfection reactors at Cobbs Hill and Highland Reservoirs. This work, which is mandated by EPA's LT2 rule, is expected to cost $12 million. Mayor Thomas S. Richards requested an extension in a letter to the EPA's administrator, wherein he wrote, *"At a time of severely strained budgets and people rightly demanding that public funds be judiciously spent, this regulation imposes expenditures that are too onerous and benefits that are, at best, difficult to measure."* The City has increased testing at these two reservoirs for the water-borne pathogens *Cryptosporidium* and *Giardia* to ensure public health is not put at risk. None of the 40 samples tested so far was positive for these organisms.

WHERE DOES MY WATER COME FROM?

Since 1876, Rochester residents have relied upon Hemlock and Canadice Lakes for their drinking water. The City supplements its water supply with water from Lake Ontario, purchased from MCWA. This water is treated at MCWA's Shoremont Treatment Plant located on Dewey Avenue. During 2012, both systems were in compliance with applicable State drinking water requirements. More information can be found at: **www.MCWA.com**.

The NYSDOH 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 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 State's Source Water Assessment plan please call us at **428-6477**.

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 the addition of chlorine. Like many other cities in the U.S., your water is also fluoridated. According to the U.S Centers for Disease Control (CDC), fluoride is very effective in preventing cavities when present in drinking water at an optimal range of 0.7 to 1.2 mg/l. In 2012, fluoride treatment was interrupted for thirteen days for system maintenance. For the remaining balance of the year, 1,033 fluoride tests were run and 96 percent 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 115-year old pipelines. Along the way, water is sold wholesale to districts in the towns/villages of Livonia, Lima, Richmond and also to the MCWA, which in turn supplies it to several communities. A large volume of treated water is stored in the City's three reservoirs. It is re-disinfected as it exits each

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.

Substance	units	MCLG	MCL	Hemlock Average (range)	Ontario Average (range)	Likely Source	Meets EPA Standards
Barium	mg/L	2	2	0.015	0.021 (0.020-0.023)	Erosion of natural deposits	Yes
Chloride	mg/L	250	NA	33 (32-35)	26	Natural deposits, road salt, water treatment chemicals	Yes
Fluoride	mg/L	NA	2.2	0.72 (0.19-1.31)	0.7 (0.2-1.0)	Water treatment additive to promote dental health	Yes
Nitrate	mg/L	10	10	0.18 (0.08-0.30)	0.32 (0.20-0.36)	Fertilizers, erosion of natural deposits, septic tank leachate	Yes
Sodium	mg/L	NA	NA	19	16 (15-16)	Natural deposits, road salt, water treatment chemicals	NA
Treatment Requirements (TT)- 95% of samples each month must be less than 0.3 NTU. 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	TT	100% (0.05-0.18)	100% (0.03-0.09)	Soil Runoff	Yes
Bacteria–The maximum and 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% 0.60	ND	Naturally occurring	Yes
Disinfectant and Disinfectant By-products (DBPs)–Average and Range are listed below. *Chlorine has a MDRL (Maximum Disinfectant Residual Level) and MDRLG (MDRL Goal) rather than an MCL and MCLG.							
Chlorine (entry point)	mg/L	4*	4*	1.08 (0.48-1.5)	1.1 (0.8-2.1)	Required treatment chemical	Yes
Total THMs	µg/L	NA	80	36 (23-65)	38 (19-57)	By-product of chlorination	Yes
Haloacetic Acids	µg/L	NA	60	24 (10-41)	10 (6-26)	By-product of chlorination	Yes
Lead and Copper –Test results for 90% of the 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)	1.7 (ND-15)	Corrosion of plumbing	Yes
Copper	µg/L	1300	1300	93 (14-200)	73 (12-320)	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.

reservoir and enters a complex grid (roughly 600 miles) of water mains that distribute the water to city homes and businesses.

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 purchase varies from 0 to 26 million gallons per day (MGD), depending on the season. Some areas of the city may receive water from Hemlock, Lake Ontario, or a mixture of water from both lakes, depending on the season and the prevailing pattern of demand.

WHAT TYPES OF WATER SYSTEM IMPROVEMENTS WERE COMPLETED OR INITIATED IN 2012?

The City completed a $9 million project to cover and line the City's 65 MG Rush Reservoir. This project is part of a $25 million, multi-year effort to bring our reservoirs into compliance with EPA's LT2 rule. Other projects completed included cleaning and cement lining over 8.6 miles of aging cast-iron pipes, and replacing 2.3 miles of pipe. The City also hired a consulting firm to complete a Water Rate Study to provide an independent analysis on the true cost of providing water. The final report is expected in 2013.

2012 STATISTICS

The average production at the Hemlock Filtration Plant was 37 MGD. Consumption in the city averaged 21.1 MGD for its population of 210,000, which represents 58,039 metered accounts. Wholesale sales to upland communities, including MCWA, averaged 18.0 MGD. Lost water, the portion of water put into the system that cannot be accounted for by metered sales or other permitted uses, was 4.8 MGD. The Consumption Charge for water was $3.24/1000 gals.

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 health risk. 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 water) 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 OUR DRINKING WATER?

Your water was tested for more than 80 types of regulated microrganisms and chemical compounds in 2012. Samples were collected from all stages of the system, including at the source (streams and lakes), during the treatment process, at the storage reservoirs and from customer taps. All of the test results were found to be in compliance with State drinking water requirements.

HOW CAN I FIND OUT MORE ABOUT FEES AND WATER SERVICE RELATED ISSUES?

You may contact a customer service representative, 24 hours a day by calling **311**. People outside of the Rochester city limits may call (585) 428-5990. For more about Water Bureau services, fees and contacts visit: **www.cityofrochester.gov/waterbureau/**

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

No. All City and MCWA tests for these organisms in source waters were again negative in 2012. However, certain people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people such as those with cancer undergoing chemotherapy, people who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly and some infants can be particularly at risk for infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen their 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 **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 found in your home and varies depending on 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. 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 **428-6477**. 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/index.html**.

A complete list of results for all substances tested in 2012 is available at **www.cityofrochester.gov/waterquality/** or by calling **428-6477**.

Questions? Call 311

Outside the city call 428-5990

www.cityofrochester.gov/waterquality

one city ROCHESTER

Thomas S. Richards, Mayor
City of Rochester, NY