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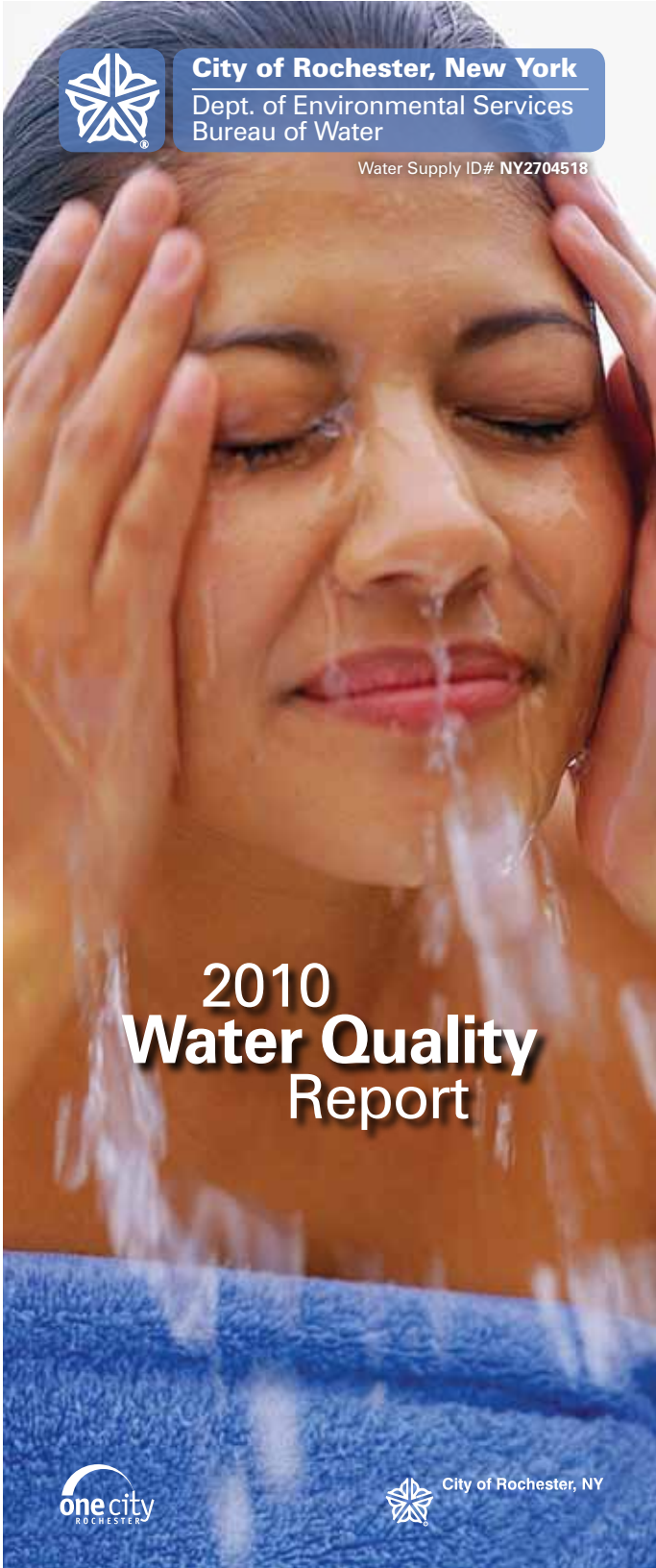
City of Rochester, New York
Hemlock Filtration Plant
7412 Rix Hill Road
Hemlock, NY 14466

Delivering pure and wholesome water right to your home everyday.

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

Water Supply ID# **NY2704518**



2010 Water Quality Report

one city ROCHESTER

City of Rochester, NY

***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.*

MAJOR DECISIONS IN 2010 Following years of negotiations, the City reached an agreement with New York State to sell 6,832 acres of City land in the Hemlock Lake and Canadice Lake watersheds for $13.7 million. Mayor Robert J. Duffy declared, "This sale will not only ensure that the pristine lakes and lands surrounding them remains undeveloped, protecting Rochester's public water supply, it will ensure that this jewel is preserved forever wild for the enjoyment of visitors and residents. This sale means revenue for the City and significantly reduces the City's property tax burden; and with the state assuming the tax burden, the finances of the surrounding towns and agencies are protected." The city still retains unfettered use of the lakes as a public water supply and the deal ensures that the City's legacy of good stewardship of the land is maintained in terms of property maintenance and preservation standards.

WHERE DOES MY WATER COME FROM? Since 1876, Rochester residents have relied upon Hemlock and Canadice Lakes for their drinking water supply. The City supplements its water supply with Lake Ontario water purchased from Monroe County Water Authority (MCWA). This water is treated at MCWA's Shoremont Treatment Plant located on Dewey Avenue **www.MCWA.com.** During 2010, both systems were in compliance with applicable State drinking water requirements.

The New York State Department of Health has evaluated the susceptibility of water supplies statewide for potential contamination under the Source Water Assessment Program. Though their 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.

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. 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 from 0.8 to 1.2 mg/l. In 2010, 1,069 fluoride tests were run and 99% of the results fell within the CDC's optimum range.

Water treated at the Hemlock Filtration Plant flows to the city by gravity through three large 100-year old pipelines. Along the way, water is sold wholesale to water districts in the towns/villages of Livonia, Lima, North Bloomfield, Richmond and also to the MCWA, who in turn supplies it to several communities. A large volume of treated water is stored in the City's three open reservoirs. It is re-disinfected as it exits each reservoir and enters a complex grid (over 500 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 Blvd. and West Ridge Rd. The volume of purchase varies from 0 to 30 million gallons per day (MGD), depending on the season. Some areas of the City may receive either Hemlock Lake or Lake Ontario water, or a mixture of both, depending on the season and the prevailing pattern of demand.

WHAT TYPES OF WATER SYSTEM IMPROVEMENTS WERE COMPLETED OR INITIATED IN 2010? The City completed two large capital projects during 2010. The first, a $5 million project, involved the replacement of almost six thousand feet, of two large, 100-year old pipes, with one larger cement-lined steel pipe. The second project cost $3 million and involved the installation of a synthetic liner into the bowl of Highland Reservoir.The completed Highland work

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 fix dripping and leaking faucets, toilets and garden hoses. Log on to **http://www.dec.ny.gov/lands/5009.html** for more conservation tips.

was just the first phase, of a multi-year, $25 million dollar effort by the City to bring our reservoirs into compliance with a new EPA regulation. Other projects completed included cleaning and cement lining over 35,376 feet of aging cast-iron pipes as well as the complete replacement of 1,400 feet of mains. Four large buried valves in the city were also replaced.

2010 STATISTICS The average production at the Hemlock Filtration Plant was 37.0 MGD. Consumption in the city averaged 20.5 MGD for its population of 207,000, which represents 58,675 retail accounts. Wholesale sales to upland communities, including MCWA, averaged 19.6 MGD. Lost water, the portion of water put into the system that cannot be accounted for by metered sales or other permitted uses, was 6.4 MGD (17% of total amount produced.) The Base Charge for water was $3.01/1000 gals.

SHOULD I BE CONCERNED ABOUT CHEMICAL CONTAMINANTS IN MY WATER? We have found no chemical contaminants in our water at levels that raise concern. Please understand that all drinking water, including bottled water, contains at least small amounts of impurities. The mere presence of a chemical does not mean there is a health risk, and in fact, some substances such as chlorine and fluoride are added to the water supply for health reasons. More information about contaminants and potential health effects can be obtained by calling the EPA Safe Drinking Water Hotline at **1-800-426-4791.**

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; and radioactive substances.

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

You may contact a 24-hr. customer service representative at **311**. Learn more about bureau services, fees, and contacts at: **www.cityofrochester.gov/waterbureau/**

WHAT KINDS OF TESTING WERE PERFORMED ON OUR DRINKING WATER? Your water was tested for more than 80 types of regulated microrganisms and chemical compounds in 2010. Samples were collected from all stages of the system, including the source (streams and lakes), various steps in the treatment process, the storage reservoirs and from the customers' taps. All of our test results were in compliance with State drinking water requirements.

WERE THE PROTOZOANS *CRYPTOSPORIDIUM* OR *GIARDIA* FOUND IN OUR WATER? No. All 4 City and 4 MCWA tests for these organisms in source waters were again negative in 2010. However, 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 their risk of infection by *Cryptosporidium, Giardia* and other microbial contaminants are available from the Safe Drinking Water Hotline, **1-800-426-4791.**

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 does vary by the age and types of plumbing materials found in your home and by how long the water sits in your pipes before it is used. You can minimize your lead intake from water by simply allowing 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 log onto: **www.epa.gov/safewater/lead/index.html.**

A complete list of results for all substances tested in 2010 is available at **www.cityofrochester.gov/waterquality/** or by calling **428-6477.**

Substance	units	MCLG	MCL	Hemlock Average (range)	Ontario Average (range)	Likely Source	Meets EPA Standards
Barium	mg/L	2	2	0.016	0.022 (0.021-0.023)	Erosion of natural deposits	Yes
Fluoride	mg/L	NA	2.2	0.81 (0.68-0.93)	0.9 (0.2-1.5)	Water treatment additive to promote dental health	Yes
Nitrate	mg/L	10	10	0.18 (0.06-0.29)	0.29 (0.22-0.37)	Fertilizers; erosion of natural deposits; septic tank leachate	Yes
Chromium	ug/L	100	100	2.8	ND	Natural deposits	Yes
Sodium	mg/L	NA	NA	17	14 (13-15)	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% (0.04-0.18)	100% (0.04-0.12)	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%	1.4% 0.5%	NA	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*	0.84 (0.5-1.2)	1.1 (0.8-1.4)	Required treatment chemical	Yes
Total THMs	µg/L	NA	80	41 (12-70)	NA	By-product of chlorination	Yes
Haloacetic Acids	µg/L	NA	60	38 (7-84)	NA	By-product of chlorination	Yes
Lead and Copper–Test results for 90% of the samples must be less than the Action Level (AL) instead of an MCL. The 90th percentile and the range of results are listed below. 6 of 55 samples tested exceeded the lead AL.							
Lead	µg/L	0	15	15 (ND-42)	NA	Corrosion of plumbing	Yes
Copper	µg/L	1300	1300	88 (ND-200)	NA	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 which, if exceeded, triggers treatment or other requirements which a water system must follow.

MCL **Maximum Contaminant Level**– the highest level of a contaminant that is allowed in drinking water. MCL's 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.