

# Water Quality Report

## City of Rochester, NH

**Water Testing Performed in 2016**  
**Prepared by the Rochester Water Treatment Facility**  
**PWS ID: NH2001010**

*“And it never failed that during the dry years the people forgot about the rich years, and during the wet years they lost all memory of the dry years.”*

*- John Steinbeck*



# How's My Water?

From source to tap, the City of Rochester is committed to providing our customers with the highest quality drinking water that meets or exceeds state and federal requirements. We will continue to work on your behalf to ensure delivery of a quality product. Throughout 2016 we conducted more than **2250 tests for over 175 drinking water compounds** and sampled continuously throughout the distribution system.

Our mission as a responsible public water system is to deliver the best-quality drinking water and reliable service at an economical cost. We rely on instrumentation, equipment and training, along with communication from our customers, for successful operations.

The water treatment facility operates at or below projected O&M costs, due to the skill, planning, effort, and training of our innovative and dedicated staff. Active management of our 6500 acre watershed this year was valuable in maintaining a sustainable resource and protecting the quality of our source water. Maintenance and efficiency remain a primary focus for the staff, who are invested in the customers, department, and each other.

Advances were made in the health and maintenance of the distribution system, including system-wide enforcement of our backflow prevention and cross connection control program and targeted directional water main and hydrant flushing. Work to supplement and diversify our supply continued this year with an evaluation of groundwater expansion and storage capacity augmentation in one of our major reservoirs.

In response to the increased concern nationwide of elevated lead and perfluorinated compounds in drinking water, we proactively conducted additional tests throughout the water supply. This year also began our two-year raw water sampling schedule for cryptosporidium and giardia.

Aging infrastructure presents challenges to drinking water safety,

and continual improvement is needed to maintain the quality of life we desire for today and for the future. This year we conducted significant maintenance and infrastructure improvements at the West End Spillway, Tufts Pond Dam, Gina Drive pump station, surface water intake screen, and Cocheco Well aerators. We commissioned the Granite Ridge Booster Pump Station on Farmington Road to serve development within The Ridge; repaired or replaced over 1000 feet of water main; and repaired several service and distribution leaks.

During drinking water week the department hosted an open house to dedicate the new filters and control systems, which was well attended by the public and neighboring water purveyors. Our expanded outreach programs included visits from Spaulding High School, area elementary students, and local residents; distribution of household hazardous waste flyers; and new promotional literature. Our chief operator was elected President of the New Hampshire Water Works Association and taught water treatment classes throughout the year.

When considering the high value we place on water, it is truly a bargain to have water service that protects public health, fights fires, supports businesses and the economy, and provides us with the high-quality of life we enjoy. Your water is a valuable, plentiful, and cost effective resource.

**Due to the conservation efforts of customers like you and the proactive management of our water supply, we maintained safe and plentiful drinking water during the 2016 drought. Thank you.**

## *Did You Know?*

- Workers excavated the Rochester Reservoir by hand in 1885, working nine hours per day for only \$1.25 per day!
- January 1892, there were only 445 water service connections in the city.
- Disinfection of the drinking water began in 1944.

## Drinking Water Sources

The City of Rochester consumed approximately **714 million gallons of drinking water in 2016**. The surface water treatment facility is our primary supply, which draws from the Rochester Reservoir. Water is diverted from the Berrys River watershed and stored in both the reservoir and Round Pond. The City also produces drinking water from the Cocheco well treatment plant. The distribution system supplies potable water to every tap and hydrant and consists of approximately 120 miles of water main, three water storage tanks, six water booster stations and approximately 8,000 service connections.

The City of Rochester operates the surface water filtration facility **24 hours per day, seven days per week**. Our operators are required to maintain certifications and participate in training programs. Our two water treatment facilities are capable of treating approximately 5.5 million gallons of water per day. The treatment process at the surface water plant removes impurities from the water through oxidation, coagulation, flocculation, settling and filtration. Water then flows by gravity into the distribution system to your home or business. Treatment at the well consists of aeration to remove dissolved carbon dioxide and is pumped from the site into the distribution system. Both facilities add chlorine for disinfection, fluoride to promote strong teeth, sodium bicarbonate to increase the alkalinity, and blended phosphate for corrosion control.

Raw surface water quality fluctuates seasonally, with turbidity and color averaging 1.5NTU and 40ptcu; TOC from 4-7mg/l; and pH from 5.5 to 6.5. Raw groundwater quality, specifically dissolved carbon dioxide and manganese, fluctuates based on withdrawal rates.

## Infrastructure

Aging infrastructure presents challenges to drinking water safety and supply. Upcoming projects include further repairs to the Tufts Pond Dam and upper raw water transmission main; directional water main and hydrant flushing; DBP precursor removal at the treatment plant with powdered activated carbon; and improvements to the raw water pump station to increase efficiency, preserve capacity, and protect the facility. Pictured below are some infrastructure upgrades and the new booster pump station at The Ridge Market Place online in 2016.

### The Ridge Market Place Booster Pump Station



### Lower Raw Water Transmission Main



### East End Dam Regrading





# Water Quality Monitoring & Sourcewater Assessment

Water is one of the world's most precious resources and we take seriously the integrity and conservation of our supply. The NH Department of Environmental Services (DES) has prepared a Source Water Assessment Report for the source serving our community, assessing the source's vulnerability to contamination. The results of the assessment prepared on 10/29/02, are as follows: Berrys River received 1 high susceptibility rating, 3 medium susceptibility ratings and 8 low susceptibility ratings. Source water assessment information and comprehensive water quality data may be obtained from the Water Department, please call 603-335-4291 for more information or visit NH Department of Environmental Services Drinking Water and Groundwater Bureau web site at: <http://des.nh.gov/organization/divisions/water/dwgb/index.htm>

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

We continually refine and advance water treatment techniques in response to new regulations and our duty to provide safe and clean water for our customers. This requires us to perform extensive water sample collection and analysis for many different waterborne substances including: pH, Color, Turbidity, Coliform, Cryptosporidium, Total Organic Carbon, Disinfection Byproducts (TTHM/HAA5), Lead and Copper, Iron, Manganese, Nitrates, Volatile/Synthetic Organic and Inorganic Chemicals, and Alkalinity.

## Health Information

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 800-426-4791.

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 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 salts and 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 by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems. **Radioactive contaminants**, can be naturally occurring or be the result of the 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. The United States Food and Drug Administration (FDA) regulation establishes limits for contaminants in bottled water that must provide the same protection for public health.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

## Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council, bottled water is not necessarily cleaner or safer than most tap water. In fact, about 25 percent of bottled water is actually just bottled tap water (40 percent, according to government estimates).

The Food and Drug Administration is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled water makes them unsuitable for babies and young children. Furthermore, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for 70 percent of all bottled water sold in the United States.

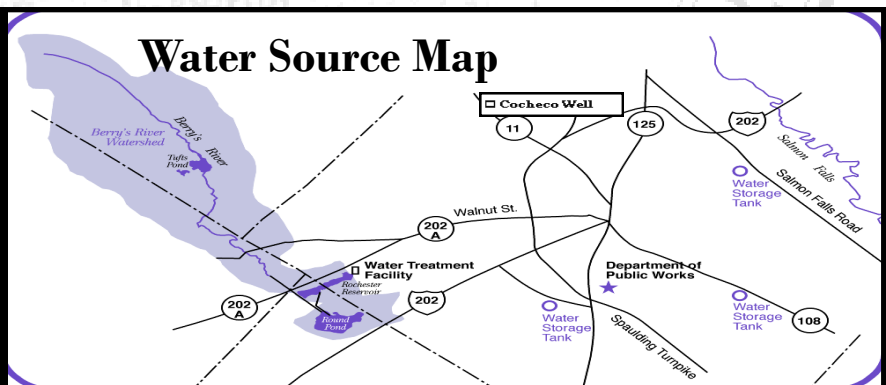
People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to \$1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water. For a detailed discussion on the NRDC study results, check out their Web site at [www.nrdc.org/water/drinking/bw/exeum.asp](http://www.nrdc.org/water/drinking/bw/exeum.asp).

### We'd like to thank all of our sample site hosts!

Burger King, McDonald's on North Main Street, Holiday Inn, Shell Station On Route 11, Nantucket Beadboard, Tara Estates, Community Center, Rochester Post Office, City Hall, Blue Seal Feeds, Subway on North Main Street, Dunkin' Donuts on Washington Street, Public Works, Cumberland Farms on Knight Street, Care Pharmacy, Granite State Glass, Skyhaven Airport, Rochester Public Library, Citi Financial, Dunkin' Donuts on Highland Street, Cumberland Farms on Highland Street, Liberty Research, Gonic Post Office, 125 RV & Marine, and Holy Rosary Credit Union.

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## Questions or Concerns

If you are interested in a tour of the facilities or have questions on water quality and our treatment and supply systems, please call Ian Rohrbacher, Chief Operator, at 335-4291 Monday through Friday 7:00am to 3:00pm. We will be pleased to answer all of your questions.

**We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards.**

The Rochester Water System conducted disinfection by-product (DBP) sampling for the third quarter of 2016 in the month of August. Initial test results yielded a locational running annual average (LRAA) at two sample sites which exceeded the MCL for total trihalomethanes (TTHM). The locational running annual average (LRAA) is determined by averaging all the samples collected at a particular monitoring location during the previous four calendar quarters.

TTHM results were 87mg/L at Site 321 and 90mg/L at Site 324 during quarter 3, exceeding the maximum contaminant level for TTHM when calculating the LRAA. Repeat TTHM samples taken in September demonstrated significantly reduced concentrations such that the LRAA would be within DBP compliance levels (78mg/L at each site) if included in the calculation. Due to the elevated results in the previous quarter, fourth quarter TTHM averages remained in exceedence at 82mg/L for Site 321 and 82mg/L for site 324. **All subsequent DBP testing moving forward indicates that the LRAA's have remained below the standard for Total Trihalomethanes (TTHM) of 0.080 mg/L.**

**What does this mean?**

**This is not an emergency.** If it had been, you would have been notified immediately.

**What should I do?**

There is nothing you need to do at this time. Repeat TTHM samples demonstrated a reduction in total trihalomethane concentrations to compliance levels when included in the averaging. All subsequent routine test results have remained below the MCL. The EPA has determined that TTHMs pose a chronic health hazard based on multi-year exposure to sensitive populations. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidney or central nervous system and may have an increased risk of getting cancer. If you have specific health concerns, please contact your health care professional. General health related questions may be directed to Dave Gordon of the NHDES Environmental Health Program at (603) 271-4608.

**Steps We Implemented:**

The combination of warmer weather and drought conditions, as well as water conservation efforts, were identified as the primary causes for the elevated TTHMs. The City remains committed to providing our customers the best quality drinking water that meets and exceeds State and Federal standards. We believe the measures taken above best represent the water quality of the system and establish an improved set of conditions for future monitoring.

Our immediate response to the elevated results included the following measures:

- 1) Made representatives of NHDES aware of the issue and our response plan
- 2) Performed a soft flush of the distribution system to reduce residence time
- 3) Retained an outside engineering firm to assist with system modeling and confirm optimum treatment techniques
- 4) Conducted TTHM formation potential analysis at specific areas within the distribution system
- 5) Increased our disinfection byproduct sampling to a monthly schedule
- 6) Commenced usage of Powdered Activated Carbon for dissolved and total organic carbon reduction
- 7) Initiated changes to our flushing program

The initial TTHM results will remain as part of the quarterly averaging until August of 2017. Consequently, the City of Rochester has been issued Notices of Violation by NHDES pertaining to the monitoring and reporting of those averages.

**Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.**

For further information, please contact Ian Rohrbacher, Chief Operator at 335-4291; John Storer, Director of City Services at 332-4096; or Michael Bezanson, City Engineer at 332-4096.

# Water Quality Results for 2016

This table lists all drinking water contaminants we detected during the 2016 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in the table is from testing done January 1 through December 31, 2016. The state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

*Finished water production typically enters the distribution system at less than 0.030NTU, 0ptcu, <1.9mg/l TOC, 7.3 pH, 1.60 mg/l free chlorine, 0.03 mg/L manganese, and a hardness of 20-30 mg/l.*

Detected Analyte / Contaminant	Our Water	MCL	MCLG	Meets Limits?	Typical Source of Contaminant	Health Effects
<b>Microbiological Contaminants</b>						
E. coli Bacteria	0	0	0	Y	Human and animal fecal waste	E.coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems.
Turbidity (NTU)	0% exceedence Avg: 0.065 Max: 0.093	TT (0.3)	N/A	Y	Soil runoff	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.
Total Organic Carbon (TOC, mg/L)	Avg: 2.1 Range: 1.7-2.8	TT	N/A	Y	Naturally present in environment	Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.
<b>Radioactive Contaminants</b>						
Compliance Gross Alpha (pCi/L)-(Cocheco Well)	1.2	15	0	Y	Erosion of natural deposits.	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Compliance Gross Alpha (pCi/L)-(Surface Water)	0.6			Y		
Uranium(ug/L)-(Cocheco Well)	0.1	30	0	Y	Erosion of natural deposits.	Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.
Uranium(ug/L)-(Surface Water)	ND			Y		
Combined Radium 226+228 (pCi/L)-(Cocheco Well)	0.7	5	0	Y	Erosion of natural deposits.	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.
Combined Radium 226+228 (pCi/L)-(Surface Water)	0.6	5	0	Y	Erosion of natural deposits.	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.

# Water Quality Results for 2016

Inorganic Contaminants						
Chlorine (ppm)  (Surface Water Plant ppm range) (Cocheco Well ppm range)	0.80  1.20-2.30  0.90-1.6	MRDL=4	MRDLG=4	Y  Y  Y	Water additive used to control microbes	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
Copper (2014) (mg/L)*	0.18	1.3mg/L (AL)	1.3	Y	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
Lead (2014) (ppb)**	1	15ppb (AL)	0	Y	Corrosion of household plumbing systems; Erosion of natural deposits	(15 ppb in more than 5%) Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing.
Barium (mg/L)	0.0042	2	2	Y	Discharge of drillingwastes; discharge frommetal refineries; erosion of natural deposits	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood-pressure.
Iron (mg/L)	<0.1	0.3 (SMCL)	N/A	Y	Naturally occurring, corrosion of cast iron pipes	Water could be rusty color; sediment; metallic taste; reddish or orange staining
Manganese (mg/L)	0.0215	0.05 (SMCL)	N/A	Y	Erosion of natural deposits	Water could be black to brown color; black staining; bitter metallic taste
Sodium (mg/L)	15	NONE	N/A	NA	Natural sources; runoff from use as salt on roadways; by-product of treatment process	
Zinc (mg/L)	0.0039	5 (SMCL)	N/A	Y	Erosion of natural deposits, leaching from plumbing materials	Metallic Taste
Chloride (mg/L)	9	250 (SMCL)	N/A	Y	Runoff from road de-icing, use of inorganic fertilizers, landfill leachates, septic tank effluents, animal feeds, industrial effluents, irrigation drainage, and seawater intrusion in coastal areas	
Fluoride (mg/L)	0.7	4	4	Y	Erosion natural deposits; additive to promote strong teeth.	Your public water supply is fluoridated. According to the Centers for Disease Control and Prevention, if your child under the age of 6 months is exclusively consuming infant formula reconstituted with fluoridated water, there may be an increased chance of dental fluorosis. Consult your child's health care provider for more information.
Sulfate (mg/L)	26	250 (SMCL)	N/A	Y	Natural sources	Salty Taste
Raw Cryptosporidium (Oocysts/L)	0	NA	NA	NA	The public water supply is currently engaged in a 24 month sample schedule for cryptosporidium. Results for the six month period in 2016 showed concentrations of 0 cysts/L in discrete samples. Sampling will continue through 2018.	
Volatile Organic Contaminants						
TTHMs [Total trihalomethanes] (ug/L)***	Avg: 90 Range: 0.5-170	80ug/L	N/A	N	By-product of drinking water chlorination	Some people who drink water containing trihalomethanes in 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.
HAA5 [Haloacetic Acids] (ug/L)***	Avg: 54 Range: 1-79	60ug/L	N/A	Y	By-product of drinking water chlorination	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.



# Water Quality Results for 2016

## Synthetic Organic Contaminants (including Pesticides and Herbicides)

No Detects

ND

N/A

N/A

Y

N/A

## Unregulated Contaminants (UCMR3)

Analyte	Average (Range)	Reporting Detection Limit	What is the Unregulated Contaminant Monitoring Rule?
Chromium (ug/L)	0.3 (0.2-0.4)	0.2	Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminants monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. The 1996 amendments to the Safe Drinking Water Act (SDWA) require that once every five years, the U.S. Environmental Protection Agency (EPA) issue a new list of no more than 30 unregulated
Strontium (ug/L)	27.3 (19.3-42.3)	0.3	
Chromium VI (ug/L)	0.07 (0.04-0.10)	0.03	
Chlorate (ug/L)	120 (70-160)	20	

## Perfluorinated Chemicals (PFCs)

Analyte	Result	PFCs are a family of man-made compounds that do not naturally occur in the environment. They have a large number of industrial uses and are found in many commercial products because of their properties to resist heat, oil, grease and water.
Perfluorohexanoic Acid (PFHxA) (ug/L)	7.1	On May 19, 2016 the U.S. Environmental Protection Agency (USEPA) issued drinking water lifetime health advisories for two PFCs, perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS). After a review of USEPA's information, on May 31, 2016 NHDES filed an emergency rule to establish the health advisories as Ambient Groundwater Quality Standards (AGQS). NHDES set three groundwater standards: 70 parts per trillion (ppt) for PFOA, 70 ppt for PFOS and 70 ppt for PFOA and PFOS combined, where the chemicals are found together. After completing the regular rulemaking process, these rules became permanent on October 22, 2016. In response, the City of Rochester Water Department sampled for the "Full List" of 22 PFC compounds which

### Footnotes:

\* Copper content in the treated water prior to entering the distribution system is 0.0018mg/L. Corrosion of household plumbing contributes to the higher average.

\*\* 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. This contaminant is tested for once every three years, on the corresponding dates per regulation. The next monitoring period is 2017. This water system is responsible for high quality drinking water, but can not control the variety of materials used in your plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing cold water your tap for at least 30 seconds before using water for drinking or cooking. Do not use hot 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://water.epa.gov/drink/info/lead/index.cfm>.

\*\*\* For TTHM and HAA5 results it is possible to get a slightly higher level at one site and still be within MCL range. This level is derived from samples taken at 4 locations, four times a year and is a running annual average of all TTHM concentrations.

### Abbreviations

**MCLG** – Maximum Contaminant Level Goal, or the level of a contaminant in drinking water below which there are no known or expected health risks. **MCL** – Maximum contaminant level, the highest level of a contaminant that is allowed in drinking water. **AL** – Action level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow. **TT** – Treatment technique, or required process intended to reduce the level of a contaminant in drinking water. **MRDLG** – Maximum residual disinfectant level goal or the level of drinking water disinfectants below which there is no known or expected health risk. **MRDL** – Maximum residual disinfectant level or the highest level of a disinfectant allowed in drinking water. **NA** – not applicable, **ND** – none detected, **NR** – not regulated, **NTU** – Nephelometric Turbidity Units, **ppm** – parts per million, **ppb** – parts per billion, **ppt** – parts per trillion, **ppq** – parts per quadrillion, **MFL** – million fibers per liter, **pCi/L** – pico curies per liter, a measurement of radioactivity.

### Definitions:

**Radon** – EPA sets drinking water standards and has determined that radon is a health concern at certain levels of exposure. Radon is a naturally occurring radioactive contaminant that occurs in groundwater. It is a gas and is released from water into household air during water use. Radon has been found in epidemiology studies to cause lung cancer in humans at high exposure levels. At lower exposure, the risk of lung cancer is reduced. The City of Rochester is supplied by surface water and groundwater from a gravelly sand aquifer. High levels of radon are typically associated with deep bedrock wells.

**Turbidity** is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality and the effectiveness of filtration. High Turbidity can hinder the effectiveness of disinfectants.

**Total Trihalomethanes** – (TTHM) Some people who drink water containing TTHM in excess of the MCL over many years experience problems with their liver, kidneys or central nervous system and may have an increased risk of getting cancer.

**Haloacetic Acids** – (HAA5) Some people who drink water containing HAA5 in excess of the MCL over many years have an increased risk of getting cancer.

**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. This water system is responsible for high quality drinking water, but can not control the variety of materials used in your plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing cold water from your tap for at least 30 seconds before using water for drinking or cooking. Do not use hot 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://water.epa.gov/drink/info/lead/index.cfm>.