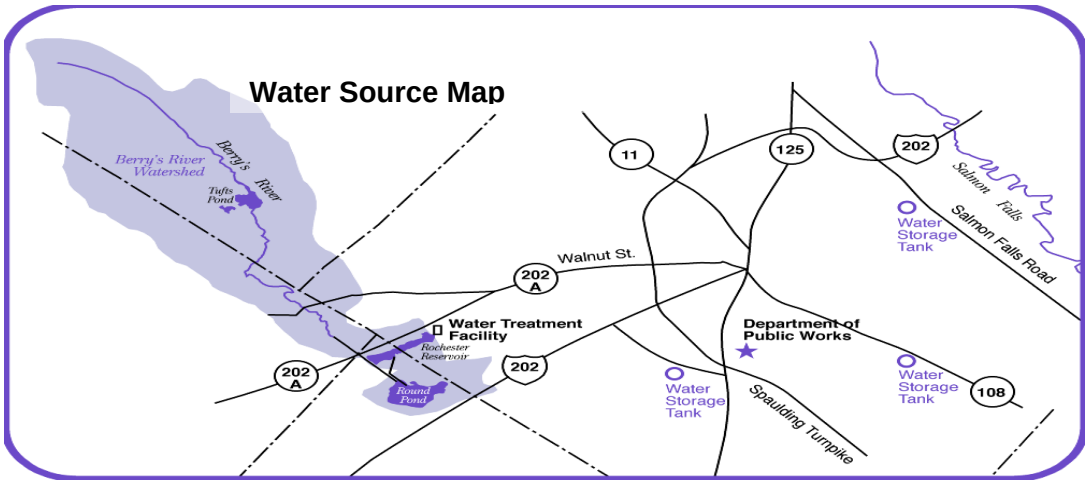
City of Rochester, NH
Water Quality Report 2013



The Quality of Your Drinking Water: 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. We are pleased to report the results of our 2013 testing program to inform you about the quality of drinking water.

Rochester Water System Source: The City of Rochester consumed 707,660,000 gallons of drinking water in 2013. Our primary supply is the Rochester Reservoir. Water diverted from the Berrys River watershed is stored in the reservoir and Round Pond. The City also produces drinking water from the recently constructed Cocheco Well Treatment Facility. The groundwater facility supplied 17,171,800 gallons water in 2013. The distribution system consists of approximately 120 miles of water main, three water storage tanks, five water booster stations and approximately 8,000 service connections.

Rochester's Water Treatment: The City of Rochester operates a water filtration facility 24 hours per day, seven days per week. Our operators are required to maintain certifications and participate in training programs. We treat the water to remove impurities as required by federal and state regulations and accepted health practices. Our two water treatment facilities are capable of treating approximately 5.5 million gallons of water per day. The treatment processes at the surface water treatment plant removes impurities from the water through coagulation, flocculation, settling and filtration. After filtration, chlorine is added to the water for disinfection, fluoride is added to promote strong teeth, and sodium bicarbonate is added to increase the alkalinity. Water then flows by gravity into the distribution system to your home or business. Treatment at the new well facility consists of aeration to remove dissolved carbon dioxide and chemical additives. Fluoride, chlorine, sodium bicarbonate and a corrosion inhibitor are introduced at the Cocheco Well Water Treatment Facility. Finished water is pumped from the site into the service area.

Is Our Water Safe for Everyone? Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as a person 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. The US Environmental Protection Agency (EPA) / US Center for Disease Control and Prevention (CDC) provide guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants and are available from the Safe Drinking Water Hotline (800-426-4791).

Corrosion of Internal Household Plumbing: 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. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested. You can also flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).

Why are contaminants in my drinking water? 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 the 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).

Source Water Assessment Summary: 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. The complete Assessment Report is available for review at The Water Treatment Plant. For more information call the Chief Operator at 335-4291 or visit the DES Drinking Water and Groundwater Bureau web site at www.des.nh.gov/dwgb

Definitions: 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. **MTBE** – Methyl Tertiary-Butyl Ether - , The NH Bureau of Health Risk Assessment considers MTBE a possible human carcinogen. **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. **Sampling Dates**: The State of New Hampshire allows water systems to monitor for some contaminants less than once a year because the concentration of these contaminants does not change frequently. Some of the data presented, though representative, may be more than a year old.

Description of Drinking Water Contaminants: 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, in some cases, radioactive material, 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.

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.

*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.

**This contaminant is tested for once every three years, on the corresponding dates per regulation. Lead & Copper 7/31/2011 90^{th} percentile for copper 0.093 ppm, 90^{th} percentile for lead 0.001 ppm. Next monitoring period is 2014.

Questions or Concerns

Questions on water quality and our treatment and supply systems may be directed to Rochester Chief Operator at the Water Treatment Facility at 335-4291 Monday through Friday 7:00am to 3:00pm.

2013 Water Quality Summary

The results for detected contaminants listed below are from the most recent monitoring done in compliance with regulations ending with the year 2013

Contaminant Units	Level Detected Yes / No Violation	MCL	MCLG	Likely Source of Contamination	Health Effects
Microbiological Contaminants					
Turbidity (NTU)	.10 No Violation	TT	N/A	Soil run off	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 symtoms such as nausea, cramps,diarrhea and associated headaches.
Total Coliform Bacteria	0 No Violation	<40 samples>1 is positive	0	Naturally present in the environment.	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.
Total Organic Carbon (TOC) ppm	1.60 - 2.30 No Violation	TT	N/A	Naturally present in the 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.
					Radioactive Contaminants
Compliance Gross Alpha (pCi/L)-(Cocheco Well)	1.2 No Violation	15	0	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.
Uranium (ug/L)-(Cocheco Well)	0.1 No Violation	30	0	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.
Combined Radium 226 + 228 (pCi/L)	0.7 No Violation	5	0	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.
Inorganic Cotaminants					
Barium (ppm)	.004 No Violation	2	2	Discharge of drilling wastes; discharge from metal 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.
Fluoride (ppm)	0.65 No Violation	4	4	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.
**Lead (ppb)	.001 No Violation	AL=15	0	Corrosion of houshold 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. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791). Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
**Copper (ppm)	.093 No Violation	AL=1.3	1.3	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 gastronintestinal 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.
Volatile Organic					
Surface Water Plant Chlorine Residual ppm Chlorine (ppm)-(Cocheco Well)	1.60 - 2.20 No Violation 1.25 - 1.50	4 MRDL	4 MRDL	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.
Total Trihalomethanes, TTHMs / Haloacetic Acids, HAA5s ppb	55.9 / 36.1 No Violation	80/60	NA	By products of Chlorination Process	Some people who drink water Containing trihalomethanes in exess of the MCL, over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.
Additional Testing					
Additional tests (no Primary MCL)	Results	Date	Treatment technique (if any)	AL (Actin Level) or AGQS (Ambient groundwater quality standard)	
Sodium	17.3	8/5/2011	N/A	>250	