

Where Does My Water Come From?

North Attleborough's water supply comes from two large watersheds, the Ten Mile River Basin and the Blackstone Basin. The Ten Mile River basin is located in Norfolk and Bristol counties in southeastern Massachusetts and contain all or part of 16 cities and towns including North Attleborough. The Blackstone Basin, the third largest basin in New England, is located in Worcester County and sections of Norfolk, Middlesex and Bristol counties. The two basins supply water to eight groundwater wells located throughout the Town and in neighboring Plainville. Two sand and gravel packed wells, approximately 75 feet, in depth are located east of Route 152 near the Bungay River. Raw water from these wells are pumped to the McKeon Treatment Facility for treatment and then to the water distribution system. Two additional gravel packed wells, approximately 95 feet deep into the overlying aquifer, are located in the Blackstone Basin in the southwest corner of the Town. The remaining four wells, located in the Ten Mile Basin; one located by Whiting's Pond and three wells in Plainville. Are large diameter wells approximately 35 feet deep. Water is pumped from these wells to the Whiting Street Treatment Facility and then to the distribution system. The Department of Environmental Protection (DEP) restricts the maximum amount of water that can be withdrawn from the Ten Mile and Blackstone Basins.

Three water storage tanks located throughout the Town have a combined capacity of 3.5 million gallons (MG). These serve to provide pressure to the water distribution system and supply potable water to meet peak daily use as well as in the event of emergencies such as fire fighting usage.

Water pumped from our wells travel through a system of 120 miles of water mains located throughout the Town to our residential and business customers. North Attleborough's water system also contains approximately 1300 fire hydrants maintained by the Department of Public Works and over 8,000 water service connections to residences and businesses.

Understanding Our Treatment Process

To maintain compliance with Federal and State drinking water regulations, source water must be treated before it reaches consumers' taps. State certified treatment operators treat and monitor our water quality and distribution system at the Whiting Street and McKeon treatment facilities. All critical components of the water distribution system and treatment process are closely monitored and controlled through computer control systems. Raw water is sent to the Whiting and McKeon treatment for process. These facilities are designed to remove iron and manganese, naturally occurring minerals found in groundwater. Greensand filters remove iron and manganese by trapping it within the filters. An additional treatment process is utilized at the Whiting treatment facility consisting of an aeration tower which removes any potential volatile organic substances from the contributing wells. Chlorine is added to the water as a precautionary measure to kill any pathogens that may be present. Chlorine levels are continuously monitored and controlled to ensure disinfection levels are maintained at the

facilities and in the water distribution system. North Attleborough injects the lowest quantity needed to ensure the safety of your water without compromising taste. The water chemistry is adjusted to increase the pH and alkalinity of the water to reduce any corrosion of lead and copper found in household plumbing systems and water service connections to residences and businesses. Finally, fluoride is added to promote dental health and reduce cavities.

The two remaining wells located in the Blackstone Basin have low concentrations of iron and manganese in the raw water, therefore requiring no filtration. At these two well sites, chlorine, fluoride and potassium hydroxide are added to the water at the pumping stations for disinfection and adjustment of the pH and alkalinity of the raw water.



Greensand Pressure Filters at the Whiting Street Treatment Facility

Be WATER SMART - Conserve

Summer is an especially important time to save water. North Attleborough's water supply is sufficient to meet normal water demands. However during the summer, residential water usage skyrockets. If we conserve just a few gallons a day, millions of gallons of water can be saved over the course of a year. Here are a few suggestions that will show you ways to use water more efficiently outdoors, make garden maintenance easier, save money, and more importantly, save our water supply for future generations.

- Use mulch in planted areas to retain water by minimizing loss through evaporation and also to prevent weed growth.
- Water new trees, shrubs and plantings with a slow trickle at the roots to encourage root growth.
- A drip (or trickle) irrigation system can save 30 - 70% of the water used by overhead sprinkler systems.
- Use a shut off nozzle on your hose. Save 10 gallons or more a minute.
- Never hose off sidewalks or driveways. Use a broom instead.
- Wash your car by wetting it, turning off the spray, then using soapy water from a bucket. Rinse rapidly.
- Install rain sensors on your irrigation system
- Water your lawn in the early morning or late evening to avoid excess evaporation. Water evaporates 4-8 times faster during the day.



Town of North Attleborough
Department of Public Works

Dear Customer,

June 20, 2009

The Board of Public Works presents this year's Annual Water Quality Report. This edition covers all water testing completed from January through December 2008 and other important information about your drinking water. We are proud to report that water delivered to our customers has met or exceeded all Federal and State drinking water standards. Our compliance with drinking water regulations established in the Safe Drinking Water Act remains exemplary. North Attleborough takes many steps to provide you high quality tap water and continually performs extensive water quality monitoring, treatment and system improvements. The steps we take will ensure a reliable and safe drinking water supply for years to come. We have great confidence in the water that is delivered to your home and business and we want you to share this confidence.

While maintaining water quality is critical and our top priority, other issues, such as service reliability, adequacy of supply, preparing for future growth, protecting our water supply, and maintaining low water rates are also of key importance. For the third year in a row, a system-wide leak detection survey consisting of 130 miles of water mains was conducted and over 88 million gallons of water were saved from leakage. We encourage you to take time to look over this report. If you have any further questions, or would like additional copies of this report, please contact William Wanberg, Water Quality Supervisor at (508) 695-7790.

Sincerely,

BOARD OF PUBLIC WORKS

Steven M. Cabral, P.E., Chairman
Robert C. Norton, Vice Chairman
Gary A. Porter, Member

Mark L. Hollowell
Director of Public Works

2008 Water Quality Results

We are pleased to report that during the past year the water delivered to your home has met or exceeded all state and federal drinking water standards. Each year your water is analyzed for many substances by DEP certified laboratories. We have listed in the table below only those that were detected in North Attleborough's water. Although the substances listed are significantly below the Maximum Contaminant Level (MCL) we believe it is important you know exactly what was detected and how much was present in the water.

Tested at the Source

Substance	Units	(MCL) Highest Level Allowed	Highest Detected Level	Range of Detections	(MCLG) Ideal Goal	Violation	How it Gets in the Water
Chlorine	ppm	4 MRDL	0.85	0.35 - 0.85	4 MRDLG	NO	Water additive for disinfection
Fluoride	ppm	4	1.12	0.04 - 1.12	4	NO	Water additive for dental health
Nitrate	ppm	10	3.6	1.1-3.6	10	NO	Runoff fom fertilizer use. Leaching from septic tanks.
Perchlorate	ppb	2.0	0.06	ND-0.06	2.0	NO	Component of propellants found in fireworks
Sodium - unregulated	ppm	N/A	41.1	18-41	N/A	NO	Natural sources, by-products of treatment process.

Monitored in the Distribution System

Substance	Units	(MCL) Highest Level Allowed	Highest Detected Level	Range of Detections	(MCLG) Ideal Goal	Violation	How it Gets in the Water
Total Trihalomethanes	ppb	80	24.2	11.9 - 24.2	0	NO	By-products of disinfection.
Haloacetic Acids	ppb	60	7.9	1.9 - 7.9	0	NO	By-products of disinfection.

Microbiological

Substance	MCL: presence of total coliform bacteria in >5% of monthly samples	Number of Positive Samples and Month	Violation	How it Gets in the Water
Total Coliform	Total samples collected per month: 40	1: June <i>resampled - not detected</i>	NO	Naturally present in the environ- ment

Lead & Copper - "At the tap" Sampling

Substance	Units	(AL) Action Level	(MCLG) Ideal	Number of Sites Exceeding AL	90th Percentile Value	Violation	How it Gets in the Water
Lead	ppb	15.0	0	1 out of 30 homes	8.0	NO	Corrosion of household plumb- ing systems.
Copper	ppm	1.3	0	0 out of 30 homes	0.36	NO	Corrosion of household plumbing systems.

Table Definitions

Key: **MCL**=Maximum Contaminant Level - The highest level of a contaminant allowed in water. MCL's are set as close to the MCLG's as feasible using the best available technology. **MCLG**=Maximum Contaminant Level Goal - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety. **MRDL**=Maximum Residual Disinfectant Level - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants. **MRDLG**=Maximum Residual Disinfectant Level Goal - The level of a drinking water disinfectant below which there is no known expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants. **ppm**= parts per million - about one drop in one 55 gallon barrel of water. **ppb**=parts per billion - about one drop in 1000 barrels of water. **pCi/L**=picoCuries per liter. **AL**=Action Level - The concentration of a contaminant that, if exceeded, triggers treatment or other requirements, which a water system must follow. **90th Percentile** - Out of every 10 homes, 9 were at or below this level.





What you should know

about your water

Drinking Water

2008

Drinking

Water Test

Results

North Attleboro Department
of Public Works

Backflow Prevention Program

Cross connections that could contaminate water distribution lines are a major concern for water suppliers. Community water supplies are continually jeopardized by cross-connections unless appropriate valves, known as backflow preventers, are installed and maintained.

A cross-connection is formed at any point where a drinking water line connects to a system containing non-potable water. Examples of these are water lines connected to equipment such as boilers, systems containing chemicals (air conditioning systems, fire sprinkler systems, irrigation systems) or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the equipment or system is greater than the pressure in the drinking water line (backpressure). Contamination can also occur when the pressure in the drinking water line drops due to occurrences such as main breaks and heavy water demand causing contaminants to be pulled from the equipment and into the drinking water line (backsiphonage).

North Attleborough is committed to protecting the public water system. Your water system is protected through two programs:

- The elimination of existing or future cross connections through inspection and regulation of plumbing and water piping within a customer's premises.
- Proper installation and maintenance of backflow preventers on services to premises where actual or potential cross connections exist to prevent backflow or backsiphonage of contaminants or pollutants from the customers' premises into the public water system.

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or when attached to a chemical sprayer for weed killing.

Water suppliers are required to survey all industrial, commercial and institutional facilities to ensure all cross connections are identified and eliminated or protected by an appropriate device. In 2008 over 400 devices were tested to ensure the proper operation when and if required. If you have any question regarding our Cross Connection Program, please contact Kevin Leone, Cross Connection Control Coordinator at (508) 695-7790.

Question

My water is discolored or cloudy once in a while, can I drink it?

Water is piped under pressure throughout the system.

Occasionally, air can be trapped in the water causing cloudiness. This is only temporary and the water clears up in a short period of time. You can safely drink, cook or bathe in the water.

Sediment from pipes can cause a brown or yellow color in water. You may see this at your tap if there is a quick change in the speed or water direction in the pipes located in the streets. This can occur when valves in the water system are being repaired, the system is being flushed or tested, or fire hydrants are in use. Wait until the water clears before doing laundry to avoid staining of clothes. Usually the water will clear up within an hour.

Lead in Drinking Water

In accordance with EPA regulations, North Attleborough is required to test tap water in a sample of homes that are likely to contain lead. These are usually homes with lead service connections or homes built between 1982 and 1986. The EPA requires that 9 out of 10, or 90% of the sampled homes must have lead levels below the Action Level of 15 parts per billion (ppb). North Attleborough reduces the risk of lead in your drinking water by increasing the pH and alkalinity of the water. The following language is an educational statement from the DEP.

"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. North Attleborough is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or 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://www.epa.gov/safewater/lead>."

System Improvements in 2008

Your water travels through miles of water distribution mains each year. To ensure reliability, each part of the water system requires maintenance and improvements in order to provide uninterrupted service. Listed below are some of the significant projects undertaken by the Department of Public Works in 2008.

- Plans completed to replace 5000 linear feet of six inch cast iron water main and appurtenances with 12 inch ductile iron at Hoppin Hill. Expected start date is late summer in 2009.
- Old water service connections replaced to 53 customers throughout the Town
- Installed a new Altitude Control Valve and gate valve system at the Elmwood Storage Tank. This improvement allows water storage tanks to fill to capacity and reduce stress at well sources.
- Approximately 2300 feet of water main replaced throughout the Town.
- Cleaned and redeveloped of two drinking water wells.
- Well pump and motor replaced at the Hillman well.
- Installation of chemical feed monitoring and interlock systems installed to prevent overfeed of drinking water chemicals.
- Fourteen fire hydrants replaced by Water personnel.
- Completed plans to remove filter media in the McKeon and Whiting Street Treatment Facilities.

How You Can HELP Protect our Water Supply

We are all concerned about the quality of water we drink. Drinking water wells may be threatened by many potential contaminant sources including storm runoff, road salting and improper disposal of hazardous materials. Citizens can work together with their local officials to better protect and preserve these invaluable sources for future generations.

The water supply protection area is divided into two zones, Zone I and Zone II. Zone I for each of the wells is a 400 foot radius around each wellhead. Drinking water regulations allow only water supply activities within Zone I. The second zone, Zone II, contributes water to the wells through the ground and surface drainage. The Town's Zone II contains potential sources of contamination that must be managed properly. North Attleborough adopted bylaws and health regulations designed to preserve and protect existing and potential sources of drinking water supplies. The Department of Environmental Protection (DEP) approved the Town's water source protection strategy based on land use and operational restrictions.

The information collected was incorporated into the DEP's Source Water Assessment and Protection (SWAP) Report. A susceptibility ranking of high was assigned utilizing

the information collected during the assessment. Information for the Source Water Assessment Report report can be found on the DEP website at: <http://www.mass.gov/dep/water/drinkingwater.htm>.

A source susceptible to contamination does not indicate poor water quality. Actual quality is best reflected by results of water analyses. Water test results continue to show that your drinking water continues to exceed federal and state drinking water standards.

The following are a few simple ideas that will help keep your drinking water clean and safe to drink.

Hazardous Materials & Wastes

- DO NOT use pesticides or herbicides in areas of influence to the drinking water wells. Try using organic lawn care methods.
- DO NOT dispose of hazardous materials by pouring them on or burying them in the ground or by pouring them down storm drains.
- DO practice good "housekeeping" in automobile/shop maintenance areas. Pick up spills with absorbent material and dispose of properly.

Septic Systems

- DO NOT use commercial septic cleaners
- DO NOT pour hazardous wastes down materials such as paint, paint thinner, solvents, industrial cleaners, disinfectants, pesticides or waste oil down toilets or sinks.
- DO NOT pour grease or cooking oil down the drain. It will clog the soil and leaching system.
- DO NOT dispose of non-biodegradable objects such as disposable diapers down the toilet. They do not decompose.
- DO pump out the septic tank every two or three years.
- DO keep records of system maintenance.

"North Attleborough has been working with the Environmental Protection Agency to define new national drinking water rules by testing for compounds which are not regulated. Our results will be used with other water suppliers to help EPA set regulations for these compounds that are necessary".

How Do Contaminants Get Into Source Water?

Sources of drinking water, both bottled and tap water, include water that travels over the surface of the land or through the ground. This water comes in contact with soil, rock, plants and other material as it follows nature's path to water sources. While this process helps filter and clean the water, it can also carry small amounts of material into the water. Minerals from soils and rock, including low levels of radioactive materials, do not usually cause problems in the water. But water can also carry contaminants from human and animal activity. These include bacteria, viruses, pesticides and fertilizers - some of which can cause illness. Your drinking water is routinely checked for these contaminants and other substances by State certified laboratories in accordance with Federal and State drinking water regulations. The EPA requires all water suppliers to conduct many tests before and after treatment to check the water you are drinking. In fact, North Attleborough goes beyond monitoring requirements to ensure we produce and deliver the highest quality of water to our residents and businesses. We are proud to say that North Attleborough water meets or exceeds all drinking water standards for quality.

In order to ensure that your tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain substances in water for public water supplies. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health. Bottled and tap water may reasonably be expected to contain at least small amounts of some contaminants.

The presence of these contaminants does not necessarily pose a health risk.

For more information about contaminants and potential health effects, call the EPA's Safe Drinking Water Hotline at (800) 426-4791.

Required Health Information From EPA

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly individuals and infants can be particularly at risk from infections. These people should seek advice from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline at 1-800-426-4791.

