

# WATER QUALITY REPORT

# 2007

TOWN OF NORTH ATTLEBOROUGH

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BOARD OF PUBLIC WORKS  
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PWS ID #4211000

# 2007 ANNUAL WATER QUALITY REPORT

*Dear Customer,*

*The Board of Public Works is pleased to send you this year's annual report on your drinking water quality. This yearly report provides us with an opportunity that describes how we treat, test, deliver and report on the tap water that reaches your home in an effort to enhance public awareness on this invaluable resource. North Attleborough takes many steps to provide you high quality tap water including an extensive water quality monitoring and testing program. With a focus on customer service and efficiency in operations, we continue to strive for excellence through water system improvements and planning for the future that will ensure a safe and reliable drinking water supply for years to come.*

*Each year your drinking water is analyzed by an independent state certified laboratory for a wide range of substances. We are pleased to report that the water delivered to homes and businesses met or exceeded all State and Federal drinking water standards established in the Safe Drinking Water Act. Our compliance with drinking water regulations remains exemplary. The reason is simple; our staff is dedicated toward on goal – quality first.*

*We encourage your feedback. The Board of Public Works which has oversight of the Department of Public Works, including the Water Division, has regularly scheduled meetings on the second and fourth Tuesdays of each month. These meetings are presently held in the Department of Public Works Offices located at 240 Smith Street and have a start time of 7:00 pm. The general public is cordially invited to attend these meetings.*

## North Attleborough's Water System

The Town's water is supplied from eight (8) ground-water wells not under the influence of surface water. The raw water pumped from our wells is treated and subsequently travels through a system of approximately 130 miles of water main pipe lines located throughout the Town to our residential and business customers. We have three (3) water storage tanks for emergency fire fighting and peak daily use. The system contains approximately 1,300 fire hydrants located throughout Town and provides water service to some 8,700 connections including residences and businesses. Information for the Source Water Assessment Program report can be found at the web site <http://www.mass.gov/dep/water/drinking.htm>.

## Protecting Our Water Sources

To ensure the highest quality of drinking water, North Attleborough has adopted zoning bylaws to comply with Massachusetts Wellhead Protection regulations. These bylaws are designed to preserve and protect the natural resources of the Town and prevent contamination of the aquifer by placing operational restrictions in areas of influence to the Town's drinking water wells.

## Leak Detection Program

The Water Division is continuing a previously initiated intensive water main leak detection program. This program surveys the entire water system, on an annual basis, for underground leaks. Any leaks identified in the Town's Distribution System are repaired by Water Division personnel in a timely manner, making the operation more efficient by reducing the amount of water lost to non-consumptive use. Property owners are responsible for repairing service leaks located on their private property.

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More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population is. 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 about drinking water 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 (800-426-4791).

## Any Questions?

If you have any questions concerning the Town of North Attleborough Water Division or water quality issues, please call the North Attleborough Water Division at 508-695-7790. Water Quality Data for community water systems throughout the United States is available at <http://www.waterdata.com>.

## Water Quality Summary

The following list contains the contaminants with allowable concentrations that were detected during our water sampling and analysis programs. We did not include the test results for constituents that were not detected. The table below contains the name of each substance, the highest level allowed by regulation (MCL), the ideal goals (allowable level or concentration) for maintenance of public health, the amount actually detected, the usual source(s) of these constituents, footnotes explaining our findings, and a key to the units of measurement. Definitions of MCL and MCLG are important and are shown below.

### Key To Summary

#### Maximum Contaminant Level (MCL):

The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology. These values are typically expressed in units of milligrams/Liter (mg/L).

#### Maximum Contaminant Level Goal (MCLG):

The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

#### Maximum Residual Disinfectant Level (MRDL):

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.

#### Maximum Residual Disinfectant Level Goal (MRDLG):

The level of a drinking water disinfectant below which there is no

known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

**90th Percentile:** Out of every 10 homes, 9 were at or below this level.

**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

**MCLG** = Maximum Contaminant Level Goal

**MRDL** = Maximum Residual Disinfectant Level

**MRDLG** = Maximum Residual Disinfectant Level Goal

**ppm** = parts per million, or milligrams per Liter (mg/L)

**ppb** = parts per billion, or micrograms per Liter (µg/L)

**NR** = not regulated

**NE** = not established

## SUMMARY OF 2007 WATER TEST RESULTS

Listed in the table below are the substances that were detected in North Attleborough's drinking water in 2007. Not listed are over 100 other contaminants that were tested for but were not detected.

### TESTED AFTER TREATMENT

| Substance      | MCL | MCLG | Highest Level Detected | Range of Detection | How it Gets into the Water                             |
|----------------|-----|------|------------------------|--------------------|--|
| Fluoride (ppm) | 4   | 4    | 2.0                    | 0.82 – 1.2         | Water additive to promote dental health                |
| Nitrate (ppm)  | 10  | 10   | 4.1                    | 2.7 – 4.1          | Runoff from fertilizer use; Leaching from septic tanks |
| Sodium (ppm)   | NR  | NR   | 41.0                   | 21.0 – 41.0        | Erosion of natural deposits                            |

### TESTED IN THE DISTRIBUTION SYSTEM

| Substance                   | MCL         | MCLG        | Highest Level Detected | Range of Detection | How it Gets into the Water                 |
|-----------------------------|-------------|-------------|------------------------|--------------------|--|
| Total Trihalomethanes (ppb) | 80          | 0           | 38.2                   | 11.5 – 38.2        | By-products of drinking water disinfection |
| Haloacetic Acid (ppm)       | 60          | 0           | 57.0                   | 9.0 – 57.0         | By-products of drinking water disinfection |
| Chlorine (ppm)              | 4<br>(MRDL) | 4<br>(MRDL) | 0.99                   | 0.03 – 0.89        | Water additive for disinfection            |

| Microbiological | Highest % of Positive Samples and Month | Violation of EPA's 5% Limit | How it Gets into the Water           |
|-----------------|---|-----------------------------|--------------------------------------|
| Total Coliform  | 7.5% (June)<br>2.5% (March)             | Yes<br>No                   | Naturally present in the environment |

Coliforms are bacteria that are naturally present in the environment and are used only to indicate that other, potentially harmful bacteria *may* be present. In June 2007, Coliform was detected in three samples. In accordance with DEP regulations, repeat sampling of the sites was conducted. Results from these analyses indicated Coliform was not then present. (The following is required language from DEP: Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses and parasites, which can cause symptoms such as nausea, cramps, diarrhea and associated headaches.)

## Corrosion of Household Plumbing

Water mains that carry the water from water sources to your home are made mostly of iron and steel and do not add lead to water. However, lead can get into tap water through pipes in the home, lead solder used in plumbing and some brass fixtures. Corrosion, or wearing away of lead-based materials can add lead to tap water, especially if the water sits for extended periods of time before use. Under EPA rules, we must treat tap water in homes that are likely to have high lead levels. These are usually homes with lead service lines or lead solder. The EPA rule requires that 9 out of 10, or 90%, of these homes must have lead levels below the Action Level of 15 parts per billion (ppb). We sample and test the water from at least 30 homes throughout Town in accordance with regulations. The data shown below documents that the results of the last set of tests conducted were all within state guidelines. 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 by an independent state certified laboratory. Flushing your tap for 30 seconds to 2 minutes before using tap water, after a period of non use (overnight) is one practical method of reducing your possible exposure to lead and other metals commonly used in plumbing and fixtures that could leach into drinking water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).

| Contaminant  | MCL        | 90th Percentile | Range           | Major Sources                           |
|--------------|------------|-----------------|-----------------|---|
| Lead (ppm)   | AL = 0.015 | 0.008           | < 0.002 – 0.045 | Corrosion of household plumbing systems |
| Copper (ppm) | AL = 1.3   | 0.36            | 0.007 – 0.54    | Corrosion of household plumbing systems |

## How Your Water is Treated

North Attleborough's treatment facility operators are continually attending training seminars aimed at increasing their level of Operator Certification, as administered by the State of Massachusetts, Department of Environmental Protection. To meet State and Federal requirements for safe drinking water, the water from our wells is treated before being supplied to our customers. Where necessary, we treat the water for corrosion control to minimize lead and copper leaching, disinfect for bacteria, and filter the water to remove iron and manganese. Fluoride is added in prescribed concentrations to enhance dental health. Corrosion control is achieved by injecting potassium hydroxide into the water to increase the pH of the water which reduces the potential for plumbing materials (lead and/or copper) to leach into the drinking water supply. Chlorine, in the form of sodium hypochlorite, is added into the water to ensure proper disinfection is achieved throughout the system. "Greensand" filters are employed at both of our water treatment plants to remove iron and manganese, naturally occurring minerals found in groundwater sources. A listing of our well sites and the forms of treatment provided to the water drawn from each well is shown below.

| Treatment                         | Well 2, 3, 4 | Well 1 | Well 5, 6 | Well 7 | Well 8 |
|-----------------------------------|--------------|--------|-----------|--------|--------|
| Corrosion Control (pH Adjustment) | X            | X      | X         | X      | X      |
| Disinfection                      | X            | X      | X         | X      | X      |
| Iron & Manganese Removal          | X            | X      | X         |        |        |
| Fluoride                          | X            | X      | X         | X      | X      |
| Air Stripping                     | X            | X      |           |        |        |

## Information from DEP Regarding Substances in Drinking Water

Throughout the USA, 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. 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.

Substances 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; **Pesticides and Herbicides**, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses; **Inorganic Contaminants**, such as salts and metals, that can be naturally-occurring or result from urban storm water runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming; **Organic Chemical Contaminants**, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems; **Radioactive Contaminants**, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants allowable in drinking water supplied to the public. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water that must provide the same protection for public health as is required of public water suppliers.

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