



ANNUAL  
**WATER**  
QUALITY  
**REPORT**

*Water testing performed in 2009*



*Presented By:*  
**TOWN OF MANSFIELD**

PWS ID#: 4167000

## Maintaining High Standards

The Town of Mansfield, Water Division, is pleased to present its annual water quality report. This report covers all testing performed between January 1, 2009, and December 31, 2009. The events of the past few years have presented many of us with challenges we could not have imagined. Yet, in spite of this, we have maintained our high standards in an effort to continue delivering the best quality drinking water possible. There may be other hurdles in the future, but know that we will always stand behind the drinking water we work diligently to provide to you.

We encourage you to share your thoughts with us on the information contained in this report. Should you ever have any questions, we are always available to assist you.

## Important Health Information

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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or [www.epa.gov/safewater/hotline/](http://www.epa.gov/safewater/hotline/).



## Where Does My Water Come From?

Our water source for the Town of Mansfield comes from the Ten Mile River Basin and Taunton River Basin. The Town water is currently supplied from nine gravel-packed wells and one well field. Our Cate Springs Well is located off of Maple Street in Mansfield and pumps 1,100 gpm (gallons per minute). Albertini Well #2 pumps 500 gpm and Albertini Well #3 pumps 300 gpm; both are located off of West Street. Mahana Well #6 pumps 700 gpm and Morrison Well #10 pumps 695 gpm; these wells are both located off of Plain Street. Dustin Well #7 pumps 800 gpm and is located off of East Street. Prescott Well #8 pumps 700 gpm and Prescott Well #9 pumps 500 gpm; these two are both located off of East Street. The Town opened a Water Treatment Facility in 2005 to remove iron and manganese from the Dustin and Prescott Wells. The Walsh well field, which pumps 1,042 gpm, is located off of Gilbert Street and also includes a treatment facility that removes iron and manganese. The Town of Mansfield has interconnected and has agreements with the Towns of Easton, Norton, and Foxboro, MA, to supply water in emergency situations. A small number of residences in West Mansfield are provided water by the City of Attleboro Water System.

## Source Water Assessment

The Massachusetts Department of Environmental Protection has completed a Source Water Assessment and Protection (SWAP) report for the Town of Mansfield water supply. The report contains information relative to land uses in the water supply areas of our wells, which are highly susceptible to potentially being contaminated. The report also contains several recommendations, including the use of best management practices and the performance of regular watershed inspections. These recommendations are being addressed through annual sanitary surveys of the aquifer areas and the management of stormwater discharges. As a member of the community, you can assist by limiting the use of pesticides and fertilizers on your lawn and by properly disposing of hazardous household chemicals. Anyone who wishes to read the report in its entirety may do so by contacting our office during regular business hours or by going online to [www.mass.gov/dep/water/drinking/4167000.pdf](http://www.mass.gov/dep/water/drinking/4167000.pdf).

## Water Conservation

You can play a role in conserving water and save yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.

Turn off the tap when brushing your teeth.

Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.

Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.

Use your water meter to detect hidden leaks. Simply turn off all taps and water-using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

## Questions?

Mansfield Water is a division of the Department of Public Works operating under DPW Director Lee Azinheira. For questions or concerns related to your drinking water or about this report, contact Water Operations Manager Kurt Gaffney (508) 261-7376. Mansfield Water invites its customers to participate in our Water Email Notification System. The program allows you to receive electronic updates via Email regarding periodic water incidents that may/or may not impact water service (i.e. flushing, construction repairs, etc.). To join this free program send a request to [emccarter@mansfieldma.com](mailto:emccarter@mansfieldma.com)

## Substances That Could Be in Water

To ensure that tap water is safe to drink, the Department of Environmental Protection (DEP) and the U.S. Environmental Protection Agency (U.S. EPA) prescribe regulations limiting the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) and Massachusetts Department of Public Health (DPH) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

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. 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, or wildlife;

**Inorganic Contaminants**, such as salts and metals, which can be naturally occurring or may result from urban stormwater 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 stormwater runoff, and residential uses;

**Organic Chemical Contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and which may also come from gas stations, urban stormwater runoff, and septic systems;

**Radioactive Contaminants**, which can be naturally occurring or may be the result of oil and gas production and mining activities.

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



### Should I use hot water to make baby formula?

No. Hot water may contain impurities such as rust, copper, and lead that come from the hot water heater and plumbing in your house. These impurities can generally dissolve into hot water faster than into cold water.

### Which household activity wastes the most water?

Most people would say the majority of water use comes from showering or washing dishes; however, toilet flushing is by far the largest single use of water in a home (accounting for 40% of total water use). Toilets use about 4-6 gallons per flush, so consider an ultra-low-flow (ULF) toilet, which requires only 1.5 gallons.

### What type of container is best for storing water?

Consumer Reports has consistently advised that glass or BPA-free plastics such as polyethylene are the safest choices. To be on the safe side, don't use any container with markings on the recycle symbol showing "7 PC" (that's code for BPA). You could also consider using stainless steel or aluminum with BPA-free liners.

## Lead and Drinking Water

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. The Town of Mansfield, Water Division, is responsible for providing high quality drinking water, but we 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 [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Community Participation

The Mansfield Board of Selectmen also serve in the role of water and sewer commissioners for the Town. The Board meets every Wednesday evening at 7:00 p.m. at the Mansfield Town Hall (third floor, Conference Room 3A/3B), Six Park Row, Mansfield, Massachusetts. Mansfield water customers are welcome to participate in these public meetings.

## About Our Violation

**N**ON & RTC-SE-09-5D140: In July 2009, the Town incurred a violation from the Massachusetts Department of Environmental Protection (DEP) for one Total Coliform MCL (Maximum Contaminant Level) within a 12-month period. The Water Division collected a total of 65 samples in July to test for the presence of coliform bacteria. Five (5) of our tested samples returned positive coliform results. The drinking water standard is that no more than five percent (5%) of the samples taken per month may test positive.

Coliforms are bacteria that are naturally present in the environment. Their presence is used as an indicator that other potential contaminants may be present. Additional samples were collected and tested to ensure that the quality of the water continues to meet state regulation C310 CMR 22.05, Maximum Microbiological Contaminant Levels, Monitoring Requirements and Analytical Methods. Samples collected on July 30, 2009, and tested for coliform bacteria all returned negative results. As an added precaution, the Water Division chlorinated and flushed pipes in the distribution system to ensure that the bacteria were eliminated. A public notice "Situation Resolved" was published August 17, 2009, with DEP approval.

## The Benefits of Fluoridation

**F**luoride is a naturally occurring element in many water supplies in trace amounts. In our system, the fluoride level is adjusted to an optimal level averaging one part per million (ppm) to improve oral health in children. At this level, it is safe, odorless, colorless, and tasteless. Our water system has been providing this treatment since June 1997. There are over 3.9 million people in 140 Massachusetts water systems and 184 million people in the U.S. who receive the health and economic benefits of fluoridation.



## Sampling Results

During the past year the Mansfield Water Division has taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The tables below show only those contaminants that were detected in the water. The Town receives a sampling schedule each year issued by the Department of Environmental Protection. Included in this schedule was a waiver for inorganics and synthetic organic compound sampling from 2008-2010.

The state requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2009	[4]	[4]	0.11	0.01–0.50	No	Water additive used to control microbes
Combined Radium (pCi/L)	2009	5	0	0.66	NA	No	Erosion of natural deposits
Fluoride (ppm)	2009	4	4	0.96	0.79–1.11	No	Water additive that promotes strong teeth
Haloacetic Acids [HAA] (ppb)	2009	60	NA	4.24	ND–13.8	No	By-product of drinking water disinfection
Nitrate (ppm)	2009	10	10	0.52	0.10–1.44	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Perchlorate (ppb)	2008	2	NA	0.09	ND–0.15	No	Inorganic chemicals used as oxidizers in solid propellants for rockets, missiles, fireworks, and explosives.
TTHMs [Total Trihalomethanes] (ppb)	2009	80	NA	19.84	1.9–50.7	No	By-product of drinking water chlorination
Total Coliform Bacteria (# positive samples)	2009	1 positive monthly sample	0	5	NA	Yes	Naturally present in the environment

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH% TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2007	1.3	1.3	0.5	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	2007	15	0	4	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits

### UNREGULATED SUBSTANCES<sup>1</sup>

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
Bromodichloromethane (ppb)	2009	5.64	ND–13.7
Bromoform (ppb)	2009	0.566	ND–2.6
Chloroform (ppb)	2009	8.23	ND–35.2
Dibromochloromethane (ppb)	2009	2.81	ND–7.7
Sodium (ppm)	2009	46.5	33.8–55.0

### INITIAL DISTRIBUTION SYSTEM EVALUATION<sup>2</sup>

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Haloacetic Acids [HAA]–IDSE Results (ppb)	2009	7.31	ND–35.1	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]–IDSE Results (ppb)	2009	16.20	ND–49.9	By-product of drinking water disinfection

<sup>1</sup> Unregulated contaminants are those for which the U.S. EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist U.S. EPA in determining their occurrence in drinking water and whether future regulation is warranted.

<sup>2</sup> We were required by the U.S. EPA to conduct an evaluation of our distribution system. This is known as an Initial Distribution System Evaluation (IDSE) and is intended to identify locations in our distribution system that have elevated disinfection by-product concentrations. Disinfection by-products (e.g., HAAs and TTHMs) result from continuous disinfection of drinking water and form when disinfectants combine with organic matter that naturally occurs in the source water.

## Definitions

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

**AL (Action Level):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

**MCL (Maximum Contaminant Level):** 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.

**MCLG (Maximum Contaminant Level Goal):** 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.

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

**NA:** Not applicable

**ND (Not detected):** Indicates that the substance was not found by laboratory analysis.

**pCi/L (picocuries per liter):** A measure of radioactivity.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).