ANNUAL WATER QUALITY REPORT

WATER TESTING PERFORMED IN 2014

Presented By
Town of Mansfield

PWS ID#: 4167000
Our Mission Continues

We are proud to present once again our annual water quality report covering all testing performed between January 1 and December 31, 2014. Most notably, last year marked the 40th anniversary of the Safe Drinking Water Act (SDWA). This rule was created to protect public health by regulating the nation’s drinking water supply. We celebrate this milestone as we continue to manage our water system with a mission to deliver the best quality drinking water. By striving to meet the requirements of SDWA, we are ensuring a future of healthy, clean drinking water for years to come.

Please let us know if you ever have any questions or concerns about your water.

Community Participation

The Mansfield Board of Selectmen also serve as Water Commissioners for the Town. The Board meets every Wednesday at 7 p.m. in the Mansfield Town Hall (third floor Conference Room 3A/B), Six Park Row, Mansfield, MA. Water customers are welcome to participate in these public meetings.

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 http://water.epa.gov/drink/hotline.
The Benefits of Fluoridation

Fluoride 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 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.

Water Conservation

You can play a role in conserving water and saving 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.

Naturally Occurring Bacteria

The simple fact is, bacteria and other microorganisms inhabit our world. They can be found all around us: in our food; on our skin; in our bodies; and, in the air, soil, and water. Some are harmful to us and some are not. Coliform bacteria are common in the environment and are generally not harmful themselves. The presence of this bacterial form in drinking water is a concern because it indicates that the water may be contaminated with other organisms that can cause disease. Throughout the year, we tested many water samples for coliform bacteria. In that time, none of the samples came back positive for the bacteria.

Federal regulations require that public water that tests positive for coliform bacteria must be further analyzed for fecal coliform bacteria. Fecal coliform are present only in human and animal waste. Because these bacteria can cause illness, it is unacceptable for fecal coliform to be present in water at any concentration. Our tests indicate no fecal coliform is present in our water.

Lead in Home Plumbing

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. We are 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 www.epa.gov/safewater/lead.

Questions?

For more information about this report, or for any questions relating to your drinking water, please call Town of Mansfield, Water Operations Manager Kurt E. Gaffney, (508) 261-7376.
Water Main Flushing

Distribution mains (pipes) convey water to homes, businesses, and hydrants in your neighborhood. The water entering distribution mains is of very high quality; however, water quality can deteriorate in areas of the distribution mains over time. Water main flushing is the process of cleaning the interior of water distribution mains by sending a rapid flow of water through the mains.

Flushing maintains water quality in several ways. For example, flushing removes sediments like iron and manganese. Although iron and manganese do not pose health concerns, they can affect the taste, clarity, and color of the water. Additionally, sediments can shield microorganisms from the disinfecting power of chlorine, contributing to the growth of microorganisms within distribution mains. Flushing helps remove stale water and ensures the presence of fresh water with sufficient dissolved oxygen, disinfectant levels, and an acceptable taste and smell.

During flushing operations in your neighborhood, some short-term deterioration of water quality, though uncommon, is possible. You should avoid tap water for household uses at that time. If you do use the tap, allow your cold water to run for a few minutes at full velocity before use and avoid using hot water, to prevent sediment accumulation in your hot water tank.

Please contact us if you have any questions or if you would like more information on our water main flushing schedule.

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 waters makes them unsuitable for babies and young children. Further, the FDA completely exempts bottled water that’s packaged and sold within the same state, which accounts for about 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/exesum.asp.
How much water do we use every day?
The average person in the U.S. uses 80 to 100 gallons of water each day. (During medieval times, a person used only 5 gallons per day.) It takes 2 gallons to brush your teeth, 2 to 7 gallons to flush a toilet, and 25 to 50 gallons to take a shower.

Seventy-one percent of Earth is covered in water: how much is drinkable?
Oceans hold about 96.5 percent of all Earth’s water. Only three percent of the Earth’s water can be used as drinking water. Seventy-five percent of the world’s fresh water is frozen in the polar ice caps.

How much water is in our bodies?
Water makes up almost two-thirds of the human body and 70 percent of the brain. Four hundred gallons of water are recycled through our kidneys each day.

How long can a person go without water?
Although a person can live without food for more than a month, a person can live without water for only approximately one week.

Is tap water cheaper than soda?
Yes! You can refill an 8 oz. glass of tap water approximately 15,000 times for the same cost as a six-pack of soda pop. And water has no sugar or caffeine.

Where Does My Water Come From?
The water source for the Town of Mansfield comes from the Ten Mile River Basin and the Taunton River Basin. Mansfield water is presently supplied from nine gravel packed wells and one well field:

Cate Springs Well #1 located off Maple Street, pumps 1,100 gallons per minute (gpm).

Albertini Wells 2, 3, and 4 are located off West Street and supply a treatment facility to remove iron and manganese: Albertini Well #2 pumps 300 gpm, Albertini Well #3 pumps 300 gpm, and Albertini Well #4 pumps 300 gpm.

Mahana Well 6 pumps 700 gpm and Morrison Well 10 pumps 695 gpm; both are located off Plain Street in West Mansfield.

Dustin Well 7 pumps 800 gpm, Prescott Well 8 pumps 700 gpm, and Prescott Well 9 pumps 500 gpm. These wells are located in East Mansfield off of East Street and supply a treatment facility to remove iron and manganese.

Walsh Wellfield pumps 1,042 gpm. The wellfield is located off Gilbert Street in West Mansfield and also includes a treatment facility to remove iron and manganese.

A small number of residences in West Mansfield are provided water by the City of Attleboro Water System. The Town is interconnected and has agreements with the Town of Easton, Norton, and Foxboro, Massachusetts, to supply water in emergency situations.
During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water.

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.

### 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 which 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.

**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).

<table>
<thead>
<tr>
<th>REGULATED SUBSTANCES</th>
<th>SUBSTANCE (UNIT OF MEASURE)</th>
<th>YEAR SAMPLED</th>
<th>MCL (MRDL)</th>
<th>MCLG (MRDLG)</th>
<th>AMOUNT DETECTED</th>
<th>RANGE LOW-HIGH</th>
<th>VIOLATION</th>
<th>TYPICAL SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorine (ppm)</td>
<td>2014</td>
<td>[4]</td>
<td>[4]</td>
<td>0.34</td>
<td>ND–1.3</td>
<td>No</td>
<td>Water additive used to control microbes</td>
<td></td>
</tr>
<tr>
<td>Fluoride (ppm)</td>
<td>2014</td>
<td>4</td>
<td>4</td>
<td>0.95</td>
<td>0.80–1.2</td>
<td>No</td>
<td>Water additive which promotes strong teeth</td>
<td></td>
</tr>
<tr>
<td>Perchlorate (ppb)</td>
<td>2014</td>
<td>2</td>
<td>NA</td>
<td>0.19</td>
<td>0.09–0.31</td>
<td>No</td>
<td>Inorganic chemicals used as oxidizers in solid propellants for rockets, missiles, fireworks and explosives.</td>
<td></td>
</tr>
<tr>
<td>TTHMs [Total Trihalomethanes]–Stage 1 (ppb)</td>
<td>2014</td>
<td>80</td>
<td>NA</td>
<td>24.9</td>
<td>10.2–52.7</td>
<td>No</td>
<td>By-product of drinking water disinfection</td>
<td></td>
</tr>
</tbody>
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| Tap water samples were collected for lead and copper analyses from sample sites throughout the community |
| SUBSTANCE (UNIT OF MEASURE) | YEAR SAMPLED | AL | MCLG (90TH% TILE) | AMOUNT DETECTED | SITES ABOVE AL/TOTAL SITES | VIOLATION | TYPICAL SOURCE |
| Copper (ppm) | 2013 | 1.3 | 0.56 | 0/30 | No | Corrosion of household plumbing systems; Erosion of natural deposits |
| Lead (ppb) | 2013 | 15 | 0.005 | 0/30 | No | Corrosion of household plumbing systems; Erosion of natural deposits |

<table>
<thead>
<tr>
<th>UNREGULATED SUBSTANCES°</th>
<th>SUBSTANCE (UNIT OF MEASURE)</th>
<th>YEAR SAMPLED</th>
<th>AMOUNT DETECTED</th>
<th>RANGE LOW-HIGH</th>
<th>TYPICAL SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bromodichloromethane (ppb)</td>
<td>2014</td>
<td>7.31</td>
<td>3.7–15.3</td>
<td>By-product of drinking water disinfection</td>
<td></td>
</tr>
<tr>
<td>Chlorodibromomethane (ppb)</td>
<td>2014</td>
<td>5.8</td>
<td>3.2–11.3</td>
<td>By-product of drinking water disinfection</td>
<td></td>
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<tr>
<td>Chloroform (ppb)</td>
<td>2014</td>
<td>9.7</td>
<td>1.5–32.6</td>
<td>By-product of drinking water disinfection</td>
<td></td>
</tr>
<tr>
<td>Sodium (ppm)</td>
<td>2014</td>
<td>44.5</td>
<td>5.65–47.4</td>
<td>Naturally occurring</td>
<td></td>
</tr>
</tbody>
</table>

° 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.