

**SAMPLING RESULTS**

Over the course of this year the Walpole Water Department conducted more than 500 water quality tests looking for bacteria, nitrates, organics, and other contaminants, such as total trihalomethanes. We have compiled the table below to show what substances were detected in our drinking water during 2010. Even though all of the substances listed below are under the Maximum Contaminant Level (MCL) set by the U.S. EPA, we feel that it is important that you know exactly what was detected and how much of the substance was present in the water.

The state allows 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 is included, along with the year in which the sample was taken.

**REGULATED SUBSTANCES**

| Substance (Units)                                | Year Sampled | MCL MRDL | MCLG (MRDLG) | Amount Detected | Range (Low-High) | Violation | Typical Source   |
|--|--------------|----------|--------------|-----------------|------------------|-----------|--|
| Alpha emitters (pCi/L)                           | 2005         | 15       | 0            | 1.5             | ND – 1.5         | No        | Erosion of natural deposits  |
| Asbestos (MFL)                                   | 2005         | 7        | 7            | 2               | NA – NA          | No        | Decay of asbestos cement water mains; Erosion of natural deposits  |
| Barium   | 2010         | 2        | 2            | .013            | .010 - .013      | No        | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits                 |
| Beta/photon Emitters <sup>1</sup> (pCi/L)        | 2005         | 50       | 0            | 35              | 11 – 35          | No        | Decay of natural and man-made deposits   |
| Chloramines (ppm)                                | 2010         | [4]      | [4]          | 2.04            | .11 – 2.04       | No        | Water additive used to control microbes  |
| Chlorine (ppm)                                   | 2010         | [4]      | [4]          | 2.09            | ND – 2.09        | No        | Water additive used to control microbes  |
| Combined Radium 226 (pCi/L)                      | 2005         | 5        | 0            | 1.3             | ND – 1.3         | No        | Erosion of natural deposits  |
| Fluoride (ppm)                                   | 2010         | 4        | 4            | 1.36            | 0.62 – 1.36      | No        | Water additive which promotes strong teeth   |
| Haloacetic Acids <sup>2</sup> [HAA] (ppb)        | 2010         | 60       | NA           | 13.7            | 1.7 – 23.6       | No        | By-product of drinking water disinfection  |
| Nitrate (ppm)                                    | 2010         | 10       | 10           | 1.1             | 0.37 – 1.1       | No        | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.               |
| Perchlorate(ppb)                                 | 2010         | 2        | NA           | 0.26            | 0.15 – 0.26      | No        | Inorganic chemicals used as oxidizers in solid propellants for rockets, missiles, fireworks and explosives |
| Simazene (ppb)                                   | 2010         | 4        | 4            | 0.17            | 0.15 - 0.17      | No        | Herbicide runoff   |
| TTHMs <sup>2</sup> [Total Trihalomethanes] (ppb) | 2010         | 80       | NA           | 24.26           | 9.8 – 40.3       | No        | By-product of drinking water disinfection  |

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

| Substance (Units) | Year Sampled | Action Level | MCLG | Amount Detected (90 <sup>th</sup> Percentile) | Sites Above AL/Total Sites | Violation | Typical Source   |
|-------------------|--------------|--------------|------|---|----------------------------|-----------|--|
| Copper (ppm)      | 2009         | 1.3          | 1.3  | 0.87  | 0/30                       | No        | Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives |
| Lead (ppb)        | 2009         | 15           | 0    | 4   | 0/30                       | No        | Corrosion of household plumbing systems; Erosion of natural deposits                                   |

**INITIAL DISTRIBUTION SYSTEM EVALUATION (IDSE)<sup>3</sup>**

| Substance (Units)                                | Year Sampled | MCL MRDL | MCLG (MRDLG) | Amount Detected | Range (Low-High) | Violation | Typical Source                            |
|--|--------------|----------|--------------|-----------------|------------------|-----------|---|
| Haloacetic Acids [HAA] IDSE Results (ppb)        | 2009         | NA       | NA           | 31              | 7.1 – 31         | No        | By-product of drinking water disinfection |
| TTHMs [Total Trihalomethanes] IDSE Results (ppb) | 2009         | NA       | NA           | 62.7            | 6.3 - 62.7       | No        | By-product of drinking water disinfection |

**SECONDARY SUBSTANCES**

| Substance (Units)                  | Year Sampled | SMCL | MCLG | Amount Detected | Range (Low-High) | Violation | Typical Source   |
|------------------------------------|--------------|------|------|-----------------|------------------|-----------|--|
| Chloride (ppm)                     | 2010         | 250  | NA   | 100             | 64 -100          | No        | Runoff/leaching from natural deposits                    |
| Sulfate (ppm)                      | 2010         | 250  | NA   | 12              | 8 -12            | No        | Runoff/leaching from natural deposits; Industrial wastes |
| Total Dissolved Solids (TDS) (ppm) | 2010         | 500  | NA   | 250             | 210 - 250        | No        | Runoff/leaching from natural deposits                    |

**UNREGULATED SUBSTANCES<sup>4</sup>**

| Substance (Units)          | Year Sampled | Amount Detected | Range (Low-High) | Typical Source                                       |
|----------------------------|--------------|-----------------|------------------|--|
| Chloroform (ppb)           | 2010         | 23              | 2.2 - 23         | By-product of drinking water disinfection            |
| Dibromochloromethane (ppb) | 2010         | 2.9             | .9 – 2.9         | By-product of drinking water disinfection            |
| Sodium <sup>5</sup> (ppm)  | 2010         | 58              | 56 - 58          | Erosion of natural deposits and road de-icing agents |
| Bromodichloromethane (ppb) | 2010         | 6.3             | 2.8 – 6.3        | By-product of drinking water disinfection            |

<sup>1</sup>The MCL for Beta/photon emitters is written as 4 mrem/year. EPA considers 50 pCi/L as the level of concern for beta emitters

<sup>2</sup> Amount detected is the highest running annual average

<sup>3</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 TTHMsJ) result from continuous disinfection of drinking water and form when disinfectants combine with organic matter that naturally occurs in the source water.

<sup>4</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 the U.S. EPA in determining their occurrence in drinking water and whether future regulation is warranted.

<sup>5</sup>Sodium sensitive individuals, such as those experiencing hypertension, kidney failure, or congestive heart failure, should be aware of the sodium levels where exposures are being carefully controlled. The Massachusetts Office of Research and Standards has established a guideline of 20 ppm for sodium.

**Table Definitions:**

**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.

**MFL** (million fibers per liter): A measure of the presence of asbestos fibers that are longer than 10 micrometers.

**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. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.

**NA:** Not applicable

**ND:** Substance not detected

**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).

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

**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 for many years. 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.

**Source Water Assessment**

The Massachusetts Department of Environmental Protection has completed a Source Water Assessment and Protection (SWAP) report for the Town of Walpole's water supply. The report contains information relative to land uses in the water supply areas of both the Mine Brook and School Meadow Brook aquifer wells, which are highly susceptible to potential contaminants. It 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's 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 visiting the water or health department offices located in the Town Hall or by going online at [www.mass.gov/dep/water/drinking/3307000.pdf](http://www.mass.gov/dep/water/drinking/3307000.pdf). For more information call the Walpole Water Department at (508) 660-7309

## Substances that Could be in Water

To ensure that tap water is safe to drink, the Department of Environmental Protection (Department) and the U.S. Environmental Protection Agency (U.S. EPA) prescribes 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 come from sewage treatment plants, septic systems, agricultural livestock operations, or 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 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.

## Other Physical Water Characteristics

Here is a short list of constituents we tested for that might be of interest to you.

|            |                 |
|------------|-----------------|
| Ammonia:   | ND – .25 ppm    |
| Calcium:   | 14.7 – 16.8 ppm |
| Hardness:  | 57.7 – 64.1 ppm |
| Magnesium: | 5.09 – 5.36 ppm |
| Potassium  | 1.1 – 2.1 ppm   |

## Quality First

As we enter our 116<sup>th</sup> year of providing public water service, we are once again proud to present our annual water report. As in years past, we are committed to delivering the best-quality drinking water possible and remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and demand management.

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

The Walpole Water Department is located at the Town Hall, 135 School St. For more information regarding hours of operation, the content of this report, or any other questions related to your drinking water, please call Rick Mattson, Superintendent of Sewer and Water, at (508) 660-7309.

## 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>.

## Community Participation

The Board of Sewer & Water Commissioners holds regularly scheduled meetings on the second and fourth Monday of each month. Those who wish to attend or participate in the meetings should look for postings in the Town Hall, on the website, or call the secretary for details at (508) 660-7309. The public is invited to attend all meetings.

## Lead and Drinking Water Educational Statement

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](http://www.epa.gov/safewater/lead).

## Where Does My Water Come From?

The water supply for the Town of Walpole consists entirely of groundwater, which is drawn from two underground water formations called aquifers. These aquifers were created thousands of years ago at the end of the Great Ice Age.

The School Meadow Brook Aquifer, located in the southern section of town, has ten wells. The Mine Brook Aquifer, located in the west-northwestern section of town has four sets of operational wells.

As an alternative source of water, Walpole has interconnections with the towns of Foxboro and Norwood. These connections which are located on Washington Street, Water Street, and Union Street, have not been used in recent years; however, they are maintained on a regular basis to ensure their availability if needed.

## Outdoor Water Tips and Facts

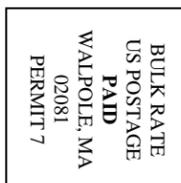
If you step on your lawn and the grass springs back, it does not need to be watered.

The best time to water is early morning (4 to 7 am). You can lose as much as 30% of water to evaporation by watering midday.

An irrigation system should be checked each spring before use to make sure it was not damaged by frost.

Town of Walpole Water  
Department  
135 School Street  
Walpole, MA 02081

POSTAL PATRON  
WALPOLE, MA



# 2010 WATER QUALITY ANNUAL REPORT



*Water Testing Performed in 2010  
By the Town of Walpole Water Department*

## Mandatory Odd/Even Water Management Policy

Effective May 2, 2011 all use of automatic irrigation systems and any type of lawn sprinklers shall comply with the odd/even water system.

Properties with even numbered street addresses will be allowed to use irrigation systems and sprinklers on even calendar days and properties with odd numbered street addresses will be allowed to use irrigation systems and sprinklers on odd calendar days. The use of sprinklers, automatic or other is prohibited between the hours of 9:00 am and 5:00 pm on **ALL** days. Handheld watering of vegetable and flower gardens, and car washing with the use of a hose equipped with a spring loaded nozzle is unrestricted and may be performed on any day or time.

This policy **IS MANDATORY** and shall remain in effect until October 2, 2011.

## Indoor Water Tips and Facts

Leaks can account for an average of 1337 cubic feet (10,000 gallons) of water wasted in the home every year which is enough to fill a backyard swimming pool.

A leaky faucet that drips one drip per second can waste more than 401 cubic feet (3,000 gallons) per year.

Fixing easily corrected household water leaks can save homeowners more than 10% on their water bill.

One way to find out if you have a toilet leak is to place a drop of food coloring in the toilet tank. If the color shows up in the bowl within 15 minutes without flushing, you have a leak. Make sure to flush immediately after this experiment to avoid staining the tank.

Most leaky showerheads can be fixed by ensuring a tight connection using pipe tape and a wrench.

A full bathtub can require up to 70 gallons of water, while taking a 5-minute shower uses only 10 to 25 gallons.

Wash only full loads of dishes and clothes or lower the water settings for smaller loads.