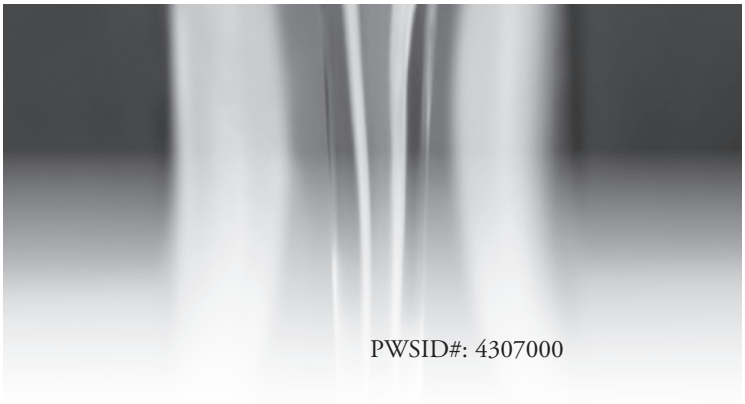
ANNUAL

WATER QUALITY REPORT

Water testing performed in 2009



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

Maintaining High Standards

We are once again proud to present to you our annual water quality report. Over the years we have strived to produce drinking water that meets or exceeds all state and federal drinking water standards. We continually adopt new and better methods of delivering to you the best-quality drinking water. As regulations and drinking water standards change, we are committed to incorporating these changes system-wide in an expeditious and cost-effective manner.

As we enter our 115th year of providing public water service, we diligently maintain our objective of providing quality drinking water. Currently, this objective is achieved through the operation of municipally owned treatment facilities for each of Walpole's two aquifers. The H.E. Willis Plant, located on Leonard Road, was placed into service in June of 2004 and utilizes a technologically advanced treatment system. The Edward J. Delaney Plant has been operating since June of 1998 and is currently undergoing rehabilitation to ensure that the desired level of treatment continues.

The Walpole Water Department is located at the Town Hall, 135 School Street. 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.

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 or call the secretary for details at (508) 660-7309. The public is invited to attend all meetings.

Where Does My Water Come From?

The water supply for the Town of Walpole consists entirely of ground water, 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, currently has seven wells that have historically provided three-quarters of the town's total water production. The Mine Brook Aquifer, located in the west-northwestern section of town, now has four sets of operational wells allowing for a more evenly balanced distribution of water production between the two aquifers.

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.

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.

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) 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.

Lead and Drinking Water

During the months of July and August, the Water Department collected lead and copper samples from 30 homes throughout the community. During this round of testing, none of the homes exceeded the Lead Action Level of 15 ppb. The Water Department offers the following education 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.

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. For more information, please call the Walpole Water Department at (508) 660-7309.

Other Physical Water Characteristics From 2009

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

Alkalinity: 44-92 ppm

Ammonia: ND-0.16 ppm

Calcium: 13.3-18.2 ppm

Hardness: 52.1-64.3 ppm

Magnesium: 4.6-5.5 ppm

Potassium: 22.7-57.5 ppm

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/.

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.

Sampling Results

Over the course of this year, the Walpole Water Department conducted more than 400 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 2009. Even though all of the substances listed below, with the exception of the coliform results from February, 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 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
2,4-D (ppb)	2009	70	70	0.16	ND–0.16	No	Runoff from herbicide used on row crops
Alpha Emitters (pCi/L)	2005	15	0	1.5	ND–1.5	No	Erosion of natural deposits
Asbestos (MFL)	2005	7	7	2	NA	No	Decay of asbestos cement water mains; Erosion of natural deposits
Barium (ppm)	2007	2	2	0.006	0.005–0.006	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Beta/Photon Emitters[1] (pCi/L)	2005	50	0	35	11–35	No	Decay of natural and man-made deposits
Chloramines (ppm)	2009	[4]	[4]	1.95	0.22–1.95	No	Water additive used to control microbes
Chlorine (ppm)	2009	[4]	[4]	1.74	0.01–1.74	No	Water additive used to control microbes
Combined Radium (pCi/L)	2005	5	0	1.3	ND–1.3	No	Erosion of natural deposits
Fluoride (ppm)	2009	4	4	1.25	0.67–1.25	No	Water additive which promotes strong teeth
Haloacetic Acids [HAA][2] (ppb)	2009	60	NA	18.43	11.4–28.6	No	By-product of drinking water disinfection
Nitrate (ppm)	2009	10	10	0.95	0.59–0.95	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Perchlorate (ppb)	2009	2	NA	0.32	0.09–0.32	No	Inorganic chemicals used as oxidizers in solid propellants for rockets, missiles, fireworks, and explosives
Simazine (ppb)	2009	4	4	0.12	ND–0.12	No	Herbicide runoff
TTHMs [Total Trihalomethanes][2] (ppb)	2009	80	NA	26.96	15.0–43.6	No	By-product of drinking water disinfection
Total Coliform Bacteria[3] (# positive samples)	2009	1 positive monthly sample	0	4	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)	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

UNREGULATED SUBSTANCES [4]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromodichloromethane (ppb)	2009	6.1	4.4–6.1	By-product of drinking water disinfection
Chlorodibromomethane (ppb)	2009	3.6	0.6–3.6	By-product of drinking water disinfection
Chloroform (ppb)	2009	21	3.7–21	By-product of drinking water disinfection
Dibromochloromethane (ppb)	2009	2.9	ND–2.9	By-product of drinking water disinfection
Sodium[5] (ppm)	2009	63	28–63	Erosion of natural deposits and road de-icing agents

INITIAL DISTRIBUTION SYSTEM EVALUATION [6]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Haloacetic Acids [HAA]–IDSE Results (ppb)	2009	31	7.1–31	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]–IDSE Results (ppb)	2009	62.7	6.3–62.7	By-product of drinking water disinfection

[1] The MCL for beta/photon emitters is written as 4 mrem/year. The U.S. EPA considers 50 pCi/L as the level of concern for beta emitters.

[2] Amount detected is the highest running annual average.

[3] Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other potentially harmful bacteria may be present. During the month of February coliforms were found in more samples than allowed and this was a warning of a potential problem. As a precautionary measure, the level of disinfection in the system was increased. Follow up samples that were collected over the course of the month were free of any coliform, indicating that the problem was resolved.

[4] 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.

[5] 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.

[6] 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 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. 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).