



2004 WATER QUALITY REPORT

Proudly Presented By:

WALPOLE WATER
DEPARTMENT



PWS ID#: MA3307000



Continuing Our Commitment

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 strive to 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 110th year of providing public water service, we will 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 newly constructed 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 (formerly School Meadow Brook) has been operating since June of 1998 and continues to provide the desired level of treatment. If you have any health concerns related to the information in this report, we encourage you to contact your health care provider.

The office of the Walpole Water Department is located on the second floor of the Town Hall at 135 School Street. The normal office hours are Monday through Friday from 8:00 a.m. to 4:00 p.m. For more information about this report, or for any questions relating to your drinking water, please call Rick Mattson, Superintendent of Sewer and Water, at (508) 660-7307.

Water Conservation Tips

Water conservation measures are an important first step in protecting our water supply. Such measures not only save the supply of our source water, but can also save you money by reducing your water bill. Here are a few suggestions:

Conservation measures you can use inside your home include:

- Fix leaking faucets, pipes, toilets, etc.
- Replace old fixtures; install water-saving devices in faucets, toilets, and appliances.
- Wash only full loads of laundry.
- Do not use the toilet for trash disposal.
- Take shorter showers.
- Do not let the water run while shaving or brushing teeth.
- Soak dishes before washing.
- Run the dishwasher only when full.

You can conserve outdoors as well:

- Water the lawn and garden in the early morning or evening.
- Use mulch around plants and shrubs.
- Repair leaks in faucets and hoses.
- Use water-saving nozzles.
- Use water from a bucket to wash your car, and save the hose for rinsing.

Information on other ways that you can help conserve water can be found at www.epa.gov/safewater/publicoutreach/index.html.

Where Does My Water Come From?

The water supply for the Town of Walpole consists of groundwater, which is drawn from two underground water-bearing 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 that will allow 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, Water, and Union Streets, have not been used in recent years; however, they are maintained on a regular basis to ensure their availability if needed.



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 potentially being contaminated. 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 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.state.ma.us/dep/brp/dws. For more information please call the Walpole Water Department 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.





Substances That Might Be in Drinking Water

In order to ensure that tap water is safe to drink, the Massachusetts Department of Environmental Protection (MADEP) and the U.S. Environmental Protection Agency (U.S. EPA) prescribe regulations that limit 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 that must provide the same protection for public health. All 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.

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 can acquire naturally occurring minerals, in some cases, radioactive material, and 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 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.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Contamination from Cross-Connections

Cross-connections that could contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment (boilers), systems containing chemicals (air conditioning systems, fire sprinkler systems, irrigation systems), or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the equipment or system is greater than the pressure inside the drinking water line (backpressure). Contamination can also occur when the pressure in the drinking water line drops due to fairly routine occurrences (main breaks, heavy water demand) causing contaminants to be sucked out from the equipment and into the drinking water line (backsiphonage).

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or when attached to a chemical sprayer for weed killing. Fertilizers, cesspools, or garden chemicals may contaminate garden hoses that are left lying on the ground. Improperly installed valves in your toilet could also be a source of cross-connection contamination.

Community water supplies are continuously jeopardized by cross-connections unless appropriate valves, known as backflow prevention devices, are installed and maintained. We have surveyed all industrial, commercial, and institutional facilities in the service area to make sure that all potential cross-connections are identified and eliminated or protected by a backflow preventer. We also inspect and test each backflow preventer to make sure that it is providing maximum protection.

For more information, visit the Web site of the American Backflow Prevention Association for a discussion of current issues (www.abpa.org).



What's In My Water?

We are pleased to report that during the past year, the water delivered to your home or business complied with all state and federal drinking water requirements. Over the course of each year, the Water Department conducted more than 400 water quality tests looking for bacteria, nitrates, volatile organic contaminants, and total trihalomethanes. For your information, we have compiled the table below to show what substances were detected in our drinking water during 2004. With the exception of lead in a few homes, all of the substances listed below are under the Maximum Contaminant Level (MCL) set by the U.S. EPA; we feel it is important that you know exactly what was detected and how much of the substance was present 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.

REGULATED SUBSTANCES							
SUBSTANCE (UNITS)	YEAR SAMPLED	MCL	MCLG	AMOUNT DETECTED	RANGE LOW HIGH	VIOLATION	TYPICAL SOURCE
Alpha emitters (pCi/L)	2003	15	0	1.5	0.4-1.5	No	Erosion of natural deposits
Beta/photon emitters (pCi/L) ¹	2003	50	0	11	NA	No	Decay of natural and man-made deposits
Combined Radium (pCi/L)	2003	5	0	0.5	ND-0.5	No	Erosion of natural deposits
Fluoride (ppm)	2004	4	4	1.01	0.92-1.01	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs] (ppb)	2004	60	NA	7.95 ²	3.5-15	No	By-product of drinking water disinfection
Nitrate (ppm)	2004	10	10	0.84	0.41-0.84	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Simazine (ppb)	2003	4	4	0.13	ND-0.13	No	Herbicide runoff
Total Coliforms (% positive samples) ³	2004	5% positive monthly samples	0	3.8	NA	No	Naturally present in the environment
TTHMs [Total Trihalomethanes] (ppb)	2004	80	NA	32.75 ²	8-60	No	By-product of drinking water disinfection

Tap water samples were collected for lead and copper analyses from 30 homes throughout the service area

SUBSTANCE (UNITS)	YEAR SAMPLED	ACTION LEVEL	MCLG	AMOUNT DETECTED (90TH% TILE)	HOMES ABOVE ACTION LEVEL	ACTION LEVEL EXCEEDANCE	TYPICAL SOURCE
Copper (ppm)	2004	1.3	1.3	0.74	0	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	2004	15	0	70	3	Yes	Corrosion of household plumbing systems; Erosion of natural deposits

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.

NA: Not applicable

ND: 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).

OTHER SUBSTANCES

SUBSTANCE (UNITS)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW HIGH	TYPICAL SOURCE
Bromodichloromethane (ppb)	2004	13	2.0-13.0	By-product of drinking water disinfection
Chlorodibromomethane (ppb)	2004	2.0	0.6-2.0	By-product of drinking water disinfection
Chloroform (ppb)	2004	39.0	0.08-39.0	By-product of drinking water disinfection
Sulfate (ppm)	2004	10.0	6.7-10.0	Naturally occurring
Sodium (ppm) ⁴	2004	45	19-45	Erosion of natural deposits and road de-icing agents

Footnotes:

¹The 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 During the month of June, two of 52 samples indicated the presence of coliform bacteria. All remaining samples collected during 2004 were negative and absent of coliform.

⁴ 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.

Community Participation

The Board of Sewer and Water Commissioners holds regularly scheduled meetings on the second and fourth Monday of each month. Those consumers who wish to attend or participate at 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.

Lead in Drinking Water

During July, August, and September, the Water Department collected a round of water samples and had them analyzed for lead and copper. Of the 31 samples that were collected from 30 sites, only four exceeded the lead action level of 15 ppb (parts per billion). Since the lead value that was recorded at the 90th percentile exceeded the 15-ppb level, a violation of a corrosion control treatment technique occurred and as a result, a public education program was implemented by the Water Department. In an effort to reduce the lead levels, the pH was adjusted to better control corrosion. Additional sampling will be performed to check the effectiveness of this treatment technique; water treatment will continue in accordance with established regulations. 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 homes plumbing. Infants and children who drink water that contains lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure. If you are concerned about lead levels in your home's water, you may wish to have your water tested. To reduce lead content, flush your tap for 30 seconds to 2 minutes before using tap water. For more information call the Safe Drinking Water Hotline at (800) 426-4791.

