

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 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.

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Questions?

For more information about this report, or for any questions relating to your drinking water, please call Jennifer Cipriani at 508-747-1620 x131

What's a Cross-connection?

Cross-connections that 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 (back-siphonage).

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. Garden hoses that are left lying on the ground may be contaminated by fertilizers, cesspools or garden chemicals. 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. For more information, review the Cross-Connection Control Manual from the U.S. EPA's Web site at <http://water.epa.gov/infrastructure/drinkingwater/pws/crossconnectioncontrol/index.cfm>. You can also call the Safe Drinking Water Hotline at (800) 426-4791.

Where Does My Water Come From?

The Town of Plymouth's municipal water supply consists of two aquifers and twelve gravel packed wells at ten locations throughout Plymouth. The Plymouth Water Division spends over \$60,000 annually testing its water to ensure water quality to continue its mission to provide the highest quality drinking water and fire protection at the lowest possible cost to the ratepayers. The Plymouth water system serves the entire northern section of town between Federal Furnace road and the Kingston and Carver boundaries; Plymouth Center; Chiltonville; Manomet; and Cedarville areas east of Route 3 south to the Bourne town line.

THOUSANDS HAVE LIVED WITHOUT LOVE, NOT ONE WITHOUT WATER.

- W.H. Auden

Source Water Assessment

A Source Water Assessment Plan (SWAP) is now available at our office. This plan is an assessment of the delineated area around our listed sources through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area, and a determination of the water supply's susceptibility to contamination by the identified potential sources.

According to the Source Water Assessment Plan, our water system had a susceptibility rating of 'high' due to the location of the wells high vulnerability to contamination due to the absence of natural barriers that can prevent contamination migration. If you would like to review the Source Water Assessment Plan, please feel free to contact our office during regular office hours.

Quality First

Once again we are proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2010. As in years past, we are committed to delivering the best-quality drinking water possible. To that end, we remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and community outreach and education while continuing to serve the needs of all of our water users. Thank you for allowing us to continue providing you and your family with quality drinking water.

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.

Respectfully Submitted,
Rich Tierney

Acting Water Superintendent
Plymouth Water Division

Important Health Information

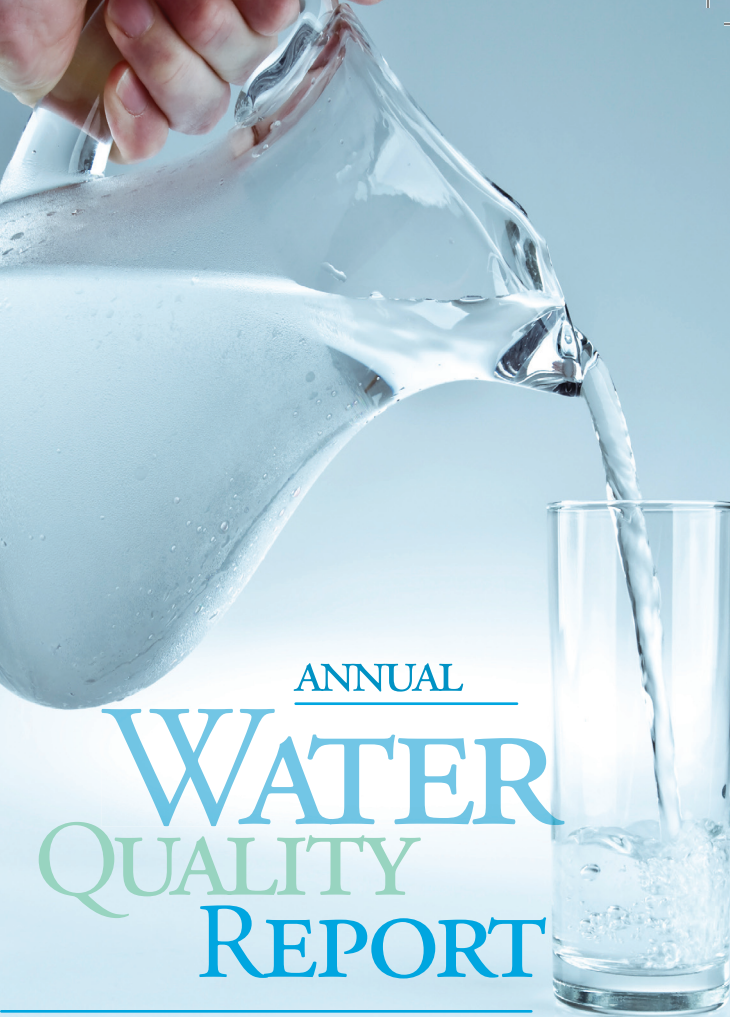
Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants 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>.

Presented By
Plymouth Water Division

PWS ID#: 4239000

ANNUAL
WATER
QUALITY
REPORT

Water testing performed in 2010



Sampling Results

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 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
Alpha Emitters (pCi/L)	2009	15	0	1.35	0.05–1.35	No	Erosion of natural deposits
Combined Radium (pCi/L)	2009	5	0	1.5	0.17–1.5	No	Erosion of natural deposits
Haloacetic Acids [HAA] (ppb)	2009	60	0	3.2	1.1–3.2	No	By-product of drinking water disinfection
Nitrate (ppm)	2010	10	10	2.27	0.05–2.27	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2010	80	0	16.7	1.8–16.7	No	By-product of drinking water disinfection
Tetrachloroethylene (ppb)	2010	5	0	1.4	0.6–1.4	No	Discharge from factories and dry cleaners
Trichloroethylene (ppb)	2010	5	0	0.87	ND–0.87	No	Discharge from metal degreasing sites and other factories

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)	2010	1.3	1.3	0.052	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2010	15	0	0.0051	1/30	No	Corrosion of household plumbing systems; Erosion of natural deposits

UNREGULATED SUBSTANCES					
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE	
Bromodichloromethane (ppb)	2010	1.8	ND–1.8	Byproduct of drinking water chlorination	
Bromoform (ppb)	2010	1.96	ND–1.96	Byproduct of drinking water disinfection	
Chlorodibromomethane (ppb)	2010	1.62	ND–1.62	Byproduct of drinking water chlorination	
Chloroform (ppb)	2010	2.37	ND–2.37	Byproduct of drinking water chlorination	
Sodium (ppm)	2008	52	7–52	Road run off and corrosion control chemical	
Sulfate (ppm)	2010	7.2	5.6–7.2	Naturally occurring in the environment	

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.

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.

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).

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.

What Are PPCPs?

When cleaning out your medicine cabinet, what do you do with your expired pills? Many people flush them down the toilet or toss them into the trash. Although this seems convenient, these actions could threaten our water supply.

Recent studies are generating a growing concern over pharmaceuticals and personal care products (PPCPs) entering water supplies. PPCPs include human and veterinary drugs (prescription or over-the-counter) and consumer products, such as cosmetics, fragrances, lotions, sunscreens, and house cleaning products. Over the past five years, the number of U.S. prescriptions increased 12 percent to a record 3.7 billion, while nonprescription drug purchases held steady around 3.3 billion. Many of these drugs and personal care products do not biodegrade and may persist in the environment for years.

The best and most cost-effective way to ensure safe water at the tap is to keep our source waters clean. Never flush unused medications down the toilet or sink. Instead, check to see if the pharmacy where you made your purchase accepts medications for disposal, or contact your local health department for information on proper disposal methods and drop-off locations. You can also go on the Web at www.Earth911.com to find more information about disposal locations in your area.

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.

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.

Information on the Internet

The U.S. EPA Office of Water (www.epa.gov/watrhme) and the Centers for Disease Control and Prevention (www.cdc.gov) Web sites provide a substantial amount of information on many issues relating to water resources, water conservation and public health.



Why do I get this report each year?

Community water system operators are required by Federal law to provide their customers an annual water quality report. The report helps people make informed choices about the water they drink. It lets people know what contaminants, if any, are in their drinking water and how these contaminants may affect their health. It also gives the system operators a chance to tell customers what it takes to deliver safe drinking water.

Why does my water sometimes look cloudy?

The cloudy look is caused by tiny air bubbles in the water. The water in the pipes coming into your home or business is under pressure, so gasses (the air) are dissolved and trapped in the pressurized water as it flows into your glass. As the air bubbles rise in the glass, they break free at the surface, thus clearing up the water. Although the milky appearance might be disconcerting, the air bubbles won't affect the quality or taste of the water.

How much water is used during a typical shower?

The Federal Energy Policy Act set a nationwide regulation that limits showerheads to a maximum flow of 2.5 gallons per minute (GPM). Showerheads made before1980 are rated at 5 GPM. Since the average shower is estimated to last 8.2 minutes, the old showerheads use 41 gallons of water while the newer, low-flow showerheads use only about 21 gallons.

Is it okay to use hot water from the tap for cooking and drinking?

No, ALWAYS use cold water. Hot water is more likely to contain rust, copper, and lead from household plumbing and water heaters. These substances can dissolve into hot water faster than they do into cold water, especially when the faucet has not been used for an extended period of time.