Presented By Town of Uxbridge Water Department

ANNUAL

PORT WATER TESTING PERFORMED IN 2014

PWS ID#: 2304000

Our Mission Continues

We are proud to present 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.

Information on the Internet

The U.S. EPA Office of Water (www.epa.gov/ watrhome) and the Centers for Disease Control and Prevention (http://www.cdc.gov/healthywater/ drinking/) Web sites provide a substantial amount of information on many issues relating to water resources, water conservation, and public health. Also, the Mass DEP has a Web site (www.mass.gov/eea/agencies/ massdep/water/drinking/) that provides complete and current information on water issues in Massachusetts, including valuable information about our watershed.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised people such as people with cancer undergoing chemotherapy, those 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.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the Department of Environmental Protection (DEP) 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 that 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 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 we 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.

How Is My Water Treated and Purified?

The treatment process consists of a series of steps. First, raw water is drawn from our water sources and treated with potassium hydroxide. This chemical is used for pH adjustment and as a corrosion inhibitor (to protect distribution pipes and household plumbing). A polyphosphate is also added to sequester the iron and manganese that naturally occur in ground water throughout New England. All listed chemical treatments are conducted by trained licensed water operators. Finally, the water is pumped into the High Street underground reservoir and to the water tank on Richardson Street. The final destination from the storage tanks is your home or business. Uxbridge does not currently treat the water with chlorine or fluoride.

Manganese

anganese is a naturally occurring mineral M found in rocks, soil, groundwater, and surface water. Manganese is necessary for proper nutrition and is part of a healthy diet, but it can have undesirable effects on certain sensitive populations at elevated concentrations. The U.S. EPA and Mass DEP have set an aestheticsbased Secondary Maximum Contaminant Level (SMCL) for manganese of 50 ug/L (micrograms per liter), or 50 parts per billion (ppb). In addition, U.S. EPA and Mass DEP have also established public health advisory levels. Drinking water may naturally have manganese and, when concentrations are greater than 50 ppb, the water may be discolored and taste bad. Over a lifetime, U.S. EPA recommends that people drink water with manganese levels less than 300 ppb and over the short term, the EPA recommends that people limit their consumption of water with levels over 1000 ppb, primarily due to concerns about possible neurological effects. Children up to 1 year of age should not be given water with manganese concentrations over 300 ppb, nor should formula for infants be made with that water for longer than 10 days. See www.epa.gov/ safewater/ccl/pdfs/reg_determine1/support_ cc1_magnese_dwreport.pdf.

QUESTIONS?

For more information about this report or for all general problems concerning leaks, meters, hydrants, or mains, call James Boliver at the Water Division at (508) 278-8631 (Monday through Friday, 7 a.m. to 3 p.m.) or write to jboliver@uxbridge-ma.gov.

Emergency: For emergency service after business hours, please call the Uxbridge Police at (508) 278-7755.

Billing and Information: For billing, final readings, and other customer service questions, call the Department of Public Works (DPW) Office at (508) 278-8616.

This report will be posted in the Uxbridge Town Hall, on the Town's Web site (www. uxbridge-ma.gov), and at the Uxbridge Public Library. Extra copies will also be available in the DPW Office located at 147 Hecla Street.

Source Water Assessment and Protection

The Massachusetts Department of Environmental Protection (Mass DEP) completed an assessment of Uxbridge water sources and prepared a report that documents specific threats, such as underground storage tanks, auto repair shops, and transportation corridors. It also recommends actions we can take to protect our water supply. Mass DEP has assessed our susceptibility as high, based on the presence of at least one high-threat land use in our water supply protection areas. This Source Water Assessment and Protection (SWAP) report is available at the Mass DEP's Central Office in Worcester or online at http://www.mass.gov/eea/docs/dep/water/drinking/swap/cero/2304000.pdf.

Where Does My Water Come From?

The Town of Uxbridge customers receive their water from three groundwater sources containing a total of seven gravel-packed wells. The Blackstone Well Field is located at the Water Division Office on Blackstone Street. The second source is the Bernat Well Field, located on town-owned property on the east side of South Main Street. The Rosenfeld Well is located on Quaker Highway. All well fields are replenished from various underground sources.Please help protect your investment by monitoring land use near these well fields.

To learn more about our watershed on the internet, go to the U.S. EPA's Surf Your Watershed site at www.epa.gov/surf.

Тір Тор Тар

The most common signs that your faucet or sink is affecting the quality of your drinking water are discolored water, sink or faucet stains, a buildup of particles, unusual odors or tastes, and a reduced flow of water. The solutions to these problems may be in your hands.

Kitchen Sink and Drain

Hand washing, soap scum buildup, and the handling of raw meats and vegetables can contaminate your sink. Clogged drains can lead to unclean sinks and backed-up water in which bacteria (e.g., pink and black slime) can grow and contaminate the sink area and faucet, causing a rotten egg odor. Disinfect and clean the sink and drain area regularly. Also, flush regularly with hot water.

Faucets, Screens, and Aerators

Chemicals and bacteria can splash and accumulate on the faucet screen and aerator, which are located on the tip of faucets, and can collect particles like sediment and minerals resulting in a decreased flow from the faucet. Clean and disinfect the aerators or screens on a regular basis.

Check with your plumber if you find particles in the faucet screen as they could be pieces of plastic from the hot water heater dip tube. Faucet gaskets can break down and cause black, oily slime. If you find this slime, replace the faucet gasket with a higher-quality product. White scaling or hard deposits on faucets and shower heads may be caused by hard water or water with high levels of calcium carbonate. Clean these fixtures with vinegar or use water softening to reduce the calcium carbonate levels for the hot water system.

Water Filtration and Treatment Devices

A smell of rotten eggs can be a sign of bacteria on the filters or in the treatment system. The system can also become clogged over time, so regular filter replacement is important. (Remember to replace your refrigerator filter!)



What's a Cross-Connection?

Cross-connections that contaminate drinking water distribution lines are a major concern. A crossconnection 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. 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. 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. A backflow preventer must by installed by a licensed plumber with a permit.

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.

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 organic organic, or synthetic organic organic, the tables below show only those contaminants that were detected in the water. The state requires us to monitor for certain substances less often 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.

We participated in the 3rd stage of the EPA's Unregulated Contaminant Monitoring Regulation (UCMR3) program by performing additional tests on our drinking water. UCMR3 benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if the EPA needs to introduce new regulatory standards to improve drinking water quality. Contact us for more information on this program.

REGULATED SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Barium (ppm)	2013	2	2	0.029	ND-0.029	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium (ppb)	2014	100	100	0.2	ND-0.2	No	Discharge from steel and pulp mills; Erosion of natural deposits
Combined Radium (pCi/L)	2013	5	0	1.4	ND-1.4	No	Erosion of natural deposits
Fluoride ¹ (ppm)	2011	4	4	0.13	0.10-0.13	No	Naturally occurring
Nitrate (ppm)	2014	10	10	1.1	0.24-1.1	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Perchlorate (ppb)	2014	2	NA	0.14	0.05-0.14	No	Inorganic chemicals used as oxidizers in solid propellants for rockets, missiles, fireworks, and explosives

Tap water samples were collected for lead and copper analyses from sample sites throughout the community.

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG		T DETECTED TH%TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2012	1.3	1.3	(0.3222	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
SECONDARY SUE	STANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SN		MCLG	AMOUNT	RANGE LOW-HIGH	EXCEEDANC	E TYPICAL SOURCE
(,	.	510	ICL	MCLG	DETECTED	LOW-HIGH	EXCEEDANC	E ITPICAL SOURCE
Iron ² (ppb)	2014		00	NA	354	ND-354	Yes	Leaching from natural deposits; Industrial wastes
		3						

UNREGULATED SUBSTANCES⁴

SUBSTANCE	YEAR	AMOUNT	RANGE	TYPICAL SOURCE
(UNIT OF MEASURE)	SAMPLED	DETECTED	LOW-HIGH	
Sodium (ppm)	2014	46	25–46	Naturally occurring common element found in soil and water; Runoff from seasonal road treatment

UNREGULATED CONTAMINANT MONITORING REGULATION (UCMR3)

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
1,1-Dichloroethane (ppb)	2014	0.05	ND-0.05
Chromium, Hexavalent (ppb)	2014	0.09	0.05-0.09
Strontium (ppb)	2014	110	84-110

¹Fluoride is a naturally occurring element and is not added to the drinking water.

²The high value shown was detected in a sample taken at Well #1, which was removed from service in early 2014.

³ The high value shown was detected in a sample taken at Well #1, which was removed from service in early 2014. The Department has taken this action to reduce the level of manganese in the water.

⁴ Unregulated contaminants are those for which the U.S. EPA has not established drinking water standards. The purpose of monitoring unregulated contaminants is to assist the 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 that 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).

SMCL (Secondary Maximum Contaminant Level): SMCLs are established to regulate the aesthetics of drinking water like taste, smell and odor.

