WEST BOYLSTON WATER DISTRICT
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WEST BOYLSTON, MA 01583
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(508) 835-3025
PWS ID # 2321000

2012 DRINKING WATER QUALITY REPORT

In accordance with federal drinking water regulations, the West Boylston Water District has prepared this report to inform consumers on the quality of water provided over the past year. In addition to water quality information, this report includes a brief history of the District and a description of our wells. If you have any questions about this report, please contact Michael D. Coveney, Superintendent, at the West Boylston Water District at (508) 835-3025. During nights, weekends, holidays or emergencies, please call (508) 835-4421 for assistance. You may also visit the West Boylston Water District website at www.westboylstonwater.org

The Board of Water Commissioners meet the second and fourth Monday of each month at 7 p.m. The meetings are held at the District Office. During these meetings, opportunities are available for customers to publicly discuss their water quality concerns. We request that any concerns or discussion topics be submitted in writing to the Board prior to the meeting. Anyone that wishes to discuss issues with the commission is encouraged to notify the district in writing no later than the Monday prior to the Board Meeting so they may have their name placed on the agenda.

YOUR DRINKING WATER SOURCES

The West Boylston Water District maintains three groundwater supply sources. The Lee Street Well No. 4 (PWS ID # 2321000-04G), which is located off Lee Street, has a Department of Environmental Protection (DEP) approved pumping rate of 250 gallons per minutes (gpm). The Oakdale Well (PWS ID # 2321000-01G), which is located off Thomas Street, has a DEP approved pumping rate of 725 gpm. The Pleasant Valley Well (PWS ID#2321000-05G), which is located off Temple Street, has a DEP approved pumping rate of 500 gpm. The water is treated at each source with two chemicals prior to distribution. Potassium hydroxide is injected to elevate the pH of the water for corrosion control. A polyphosphate blend is also used to sequester manganese, which tends to cause staining of fixtures. The quality of water pumped and distributed by the District meets or surpasses United States Environmental Protection Agency (EPA) and Massachusetts Department of Environmental Protection (DEP) primary drinking water guidelines and regulations. The EPA and DEP require water to be tested regularly. A certified laboratory performs all tests and the results are reported to DEP. Tests for bacterial contamination are performed monthly, whereas tests for other contaminants are performed annually or at a frequency determined by the DEP.

PROTECTION OF WATER SOURCES

The Water District has taken an active approach in protecting its groundwater supply sources. A Zone II Delineation, which estimates the area of contribution for the well, was approved for the Lee Street Well No.4 by the DEP in 1989. Zone II Delineation for both the Pleasant Valley Well and the Oakdale Well were completed under the DEP's Source Water Assessment and Protection (SWAP) program in July 1999 and December 2000. The SWAP report assesses the susceptibility of the public water supply to potential sources of contamination. DEP determined the susceptibility of the Oakdale and Pleasant Valley Wells to be high because of the presence of the

railroad corridor, a high-threat activity. The Lee Street Well was assessed as having only moderate threats. Within the Zone II Delineation for the Pleasant Valley Well, the land is lightly developed with no known agricultural activities. A former landfill located within the limits of the Zone II of the Pleasant Valley Well was the only other potential source of any threat to report. Within the Zone II Delineation for the Oakdale Well, three commercial users including a medical facility, beauty salon and a vehicle repair shop, as well as a cemetery were identified as potentially posing a threat to the groundwater. In addition, the SWAP reports recommended that the District make two amendments to the Groundwater Protection District Bylaw that was adopted in 1994. These changes include providing specific language within the Bylaw prohibiting landfilling of wastewater and septage residuals from the Zone II and prohibiting expansion of impervious surface on exiting nonresidential land within Zone II so that the impervious surfaces are not greater than 10% of the lot size. The complete SWAP report can be reviewed online at http://www.mass.gov/dep/water/drinking/2321000.pdf or at the West Boylston Water District Office on 183 Worcester Street. A source water protection plan has also been completed for the District by the Massachusetts Rural Water Association. This complete report can also be reviewed at our office or can be found on our website at http://www.westboylstonwater.org/Reports/SWPP.pdf.

SUBSTANCES FOUND IN DRINKING WATER

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.

Contaminants that may be present in source water include:

Microbial contaminants - such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants - such as salts and metals, can be naturally-occurring or result from urban storm water runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, and farming.

Pesticides and herbicides - may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

Organic chemical contaminants - including synthetic and volatile organic chemicals that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

Radioactive contaminants - can be naturally occurring or be the result of oil and gas production and mining activities.

Lead & Copper - 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. The West Boylston Water District is 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 http://www.epa.gov/safewater/lead.

Manganese - is a naturally occurring mineral found in rocks, soil and groundwater, and surface water. Manganese is necessary for proper nutrition and is part of a healthy diet, but can have undesirable effects on certain sensitive populations at elevated concentrations. The United States Environmental Protection Agency (EPA) and MassDEP have set an aesthetics-based Secondary Maximum Contaminant Level (SMCL) for manganese of 50 ug/L (micrograms per liter), or 50 parts per billion, and health advisory levels. In addition, EPA and MassDEP have also established public health advisory levels. Drinking water may naturally have manganese and, when concentrations are greater than 50 μg/L, the water may be discolored and taste bad. Over a lifetime, EPA recommends that people drink water with manganese levels less than 300 μg/L and over the short

term, EPA recommends that people limit their consumption of water with levels over 1000 ug/L, 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 ug/L, nor should formula for infants be made with that water for longer than 10 days.
See: http://www.epa.gov/safewater/ccl/pdfs/reg_determine1/support_cc1_magnese_dwreport.pdf.

In order to ensure that tap water that is safe to drink, the Department and EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. FDA and the Massachusetts Department of Public Health 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 contamination. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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 can be particularly at risk from infections. These people should seek advice from their health care providers. EPA/CDC 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 (1-800-426-4791)."

IMPORTANT DEFINITIONS

Maximum Contaminant Level (MCL) – 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.

Maximum Contaminant Level Goal (MCLG) – 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.

Secondary Maximum Contaminant Level (SMCL) – These standards are developed to protect the aesthetic qualities of drinking water and are not health based.

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

Action Level (AL) – The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

Parts Per Million (ppm) – This unit is equivalent to one milligram per liter (mg/L). One part per one million is equal to:

- One ounce in 82,500 pounds
- One minute in two years
- One penny in $10,000

Parts Per Billion (ppb) – Micrograms per liter (ug/L).

Massachusetts Office of Research and Standards Guideline (ORSG) – This is the concentration of a chemical in drinking water, at or below which, adverse health effects are unlikely to occur after chronic (lifetime) exposure. If exceeded, it serves as an indicator of the potential need for further action.

Lead and Copper 90th Percentile – Out of every 10 homes sampled, 9 were at or below this level.

Maximum Residual Disinfectant Level (MRDL): 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.

Maximum Residual Disinfectant Level Goal (MRDLG) -- The level of a drinking water disinfectant below which there is no known expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

WATER QUALITY TESTING RESULTS

The tables below list all the drinking water contaminants that were detected during the 2012 calendar year or during the most recent monitoring period for each contaminant group. The presence of these contaminants in the water does not necessarily indicate that the water poses a health threat.

Microbiological Contaminants	Highest # Positive Samples in a month	MCL	MCLG	Violation (Y/N)	Possible Source of Contamination
Total Coliform *	0	1	0	N	Naturally present in the environment

Unregulated/Secondary Contaminants	Date Collected	Range Detected	Average	SMCL	Health Advisory	Possible Source
Manganese (ppb) ** Source Wells	Monthly in 2012	0 - 790	395	50	300	Erosion of natural deposits
Manganese (ppb) ** Distribution System	Monthly in 2012	0 - 130	18.5	50	300	Erosion of natural deposits
Sulfate (ppm)	9/11/12	7-13	10.3	250	n/a	Natural sources
Sodium (ppm)***	4/3/12	15-24	16.4	N/A	20	Natural sources, runoff from road salt
Nickel (ppb)	4/3/2012	0 - 1.6	0.53	N/A	100	Discharge from industrial processes

Inorganic Contaminants	Date(s) Collected	90th Percentile	Action Level	MCLG	# of sites sampled	# sites above Action Level	Possible Source
Lead (ppb)	8/24/11	1.3	15	0	20	0	Corrosion of household plumbing systems; erosion of natural deposits
Copper (ppm)	8/24/11	0.36	1.3	1.3	20	0	Corrosion of household plumbing systems; erosion of natural deposits; Leaching from wood preservations

Regulated Contaminants	Date Collected	Range Detected	Average	MCL or MRDL	MCLG or MRDLG	Violation (Y/N)	Possible Source
Inorganic Contaminants							
Nitrate (ppm)	4/3/12	0.0-1.05	0.665	10	10	N	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Thallium (ppb)	2/15/11 – 6/15/11	0 – 0.002	0.001	2	0.5	N	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories
Barium (ppm)	4/3/12	0.007 - 0.008	0.0077	2	2	N	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Arsenic (ppb)	4/3/12	0.-.2.7	1.7	10	0	N	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics: production wastes

** Total Coliform: Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other potentially harmful bacteria may be present. There were **no** coliform detections in any of the samples that were collected in 2012.*

*** Manganese: More information on this contaminant can be found on page two (2) of this report*

**** Sodium-sensitive individuals, such as those experiencing hypertension, kidney failure, or congestive heart failure, should be aware of the levels of sodium in their drinking water where exposures are being carefully controlled.*

ADDITIONAL INFORMATION

History of the District

The West Boylston Water District was established in 1939 at which time one well was installed on Lee Street and a 460,000-gallon water storage tank was constructed off Lawrence Street. Over time, the District constructed three additional wells on Lee Street. In 1956, the District added the Oakdale Well and a 500,000-gallon capacity storage tank off Beaman Street. In the 1970's, the Pleasant Valley Well was added off Temple Street. A one million-gallon capacity storage tank off Stockwell Road and a 1.2 million-gallon capacity storage tank off Lawrence Street were added in 1965 and 1978, respectively. Currently, the District utilizes only one of the four Lee Street wells, the other three were abandoned due to high levels of iron. The Pleasant Valley well provides about half of the District's water at 54%. While Lee St well provides 30% and Oakdale well provides 16%.

2012 Accomplishments

The District has been active with replacing older fire hydrants with new traffic models that are designed to break without the loss of any water. The Valley Forge Circle water main has been approved and is scheduled to be replaced in 2013. The AMR (Automatic Meter Reading) meter replacement program is still ongoing until all meters have been upgraded. The well exploration program is still underway with a possible new site between Prescott and Sterling St. We have performed an extended pump test to determine if this site is a viable source for the District. We are currently in discussions with our engineering consultant and state authorities to determine the results of this test. We have also completed an exterior rehabilitation of the Beaman St/Oakdale water tank. We also encourage you to visit our website at http://www.westboylstonwater.org for more information and to also sign up for our new CodeRed notification system which will notify you of any important issues happening with the water system.

WATER CONSERVATION TIPS

The West Boylston Water District is permitted to withdraw 560,000 gallons of water per day on an annual average. We are currently NOT exceeding this permitted value; the District Commissioners have kept in place the Mandatory Water Use Restrictions. These restrictions affect lawn watering, which is allowed on an odd/even basis between 7 pm and 7 am the following morning.

If you live in a home with an address ending with an odd number, you are permitted to begin watering at 7 pm on odd numbered days. Homes with even numbers are permitted to water at 7 pm on even numbered days until 7 am the following morning. No lawn water use is permitted on Mondays to allow the system to replenish. Your cooperation in this effort is greatly appreciated.

As part of the West Boylston Water District's efforts to inform water customers on water conservation and protection, the following are some tips on how you can help conserve and protect your water.

- Repair leaking faucets and toilets. If your faucet is dripping at the rate of one drop per second, you can expect to waste 2,700 gallons per year.
- Use you dishwasher and clothes washer only when you have a full load. Make sure that the water level is appropriately set for the load size.

- If you are building a new home, or remodeling an existing one, install low flow faucets and fixtures.
- Take short showers rather than baths. Use low flow showerheads. Less water is typically used during a shower than during a bath.
- Do not use running water to thaw meat or other frozen foods. Defrost food overnight in the refrigerator or by using the defrost setting on your microwave.
- Avoid flushing toilets unnecessarily. Dispose of tissues and other such waste in the trash rather than the toilet.
- If the toilet flush handle frequently sticks in the flush position, letting water run constantly, replace or adjust it.
- Insulate your water pipes.
- Turn off the faucet while you shave, brush your teeth, or hand wash dishes.
- Avoid running water in the shower while you are shampooing or soaping.
- Attach a pistol-type sprayer to the end of your garden hose.
- If you water your lawn, do so only when absolutely necessary. Lawns need only one inch of water per week from all sources. If there has been an inch of rain in the week, you don't need to water.
- Use mulch around trees and shrubs and in garden beds.
- Use plant varieties that are adapted to you locality and soil conditions.
- Use an inexpensive rain gauge to measure rain and watering efforts.
- Never water at mid-day to prevent high evaporation and sunburned grass.
- Use shut-off nozzles on hoses and automatic shut-off devices on irrigation systems.
- Limit pesticide and fertilizer use.
- Practice good septic system maintenance.

Your help in following these tips will help in protecting the water resources of West Boylston.

BACKFLOW PREVENTION

As your drinking water supplier, the West Boylston Water District is concerned about the possible introduction of contaminants to the drinking water from the sources we supply water to. Most outside contamination takes place when the customer uses equipment that re-pressurizes the water supplied, or when negative pressures occur in the water supply mains, as with a water main that breaks. Typically, most water suppliers have a backflow prevention program in place that addresses this problem with commercial and industrial customers. These customers use their water supply for many purposes with a potential for cross contamination. To this end, the district closely monitors these services and often requires special testable devices be placed in their water supply piping to prevent contamination.

This concern doesn't end with commercial and industrial customers. Residential customers must concern themselves with potential contamination. Permanent irrigation systems require the installation of a backflow prevention device. Lawns are typically treated with composted materials and/or chemical fertilizers. In the event of a flow reversal, water exposed to the aforementioned contaminants could be introduced to the household and possibly the water distribution system.

Another potential source of contamination is the newer aspirator devices that are sold to apply insecticides and fertilizers. These devices connect to a hose and the velocity of the water draws the concentrated chemical up to a mixing area that becomes a spray. Most of these units are supplied with a check valve. However, these devices are easily fouled and can easily result in failure. Vacuum breakers are the best protection in this situation. These devices can be purchased at most hardware stores and are generally built in on the new outside silcocks (outside faucets). Never leave these devices connected to your water supply or unattended.