

2014 Annual Drinking Water Quality Report  
 For  
 Westminster Water Department  
 Westminster, Massachusetts  
 PWS ID # 2332000

In 2014 the Westminster Water Department (WWD) pumped a total of 133.551 million gallons of water for the residents and businesses of Westminster. This report provides a snapshot of your drinking water quality over the past year. Included are details about where your water comes from, what it contains, and how it compares to state and federal standards. The report also describes our system's operations and how you can get involved.

**Public Water System Information**

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The Westminster water system is routinely inspected by the Massachusetts Department of Environmental Protection (MassDEP) for its technical, financial, and managerial capacity to provide safe drinking water to you. To ensure that we provide the highest quality of water available, your water system is operated by four Massachusetts-certified distribution and treatment operators who oversee the routine operations of our system.

**Opportunities for Public Participation**

Our office hours are Monday through Friday, 7am to 3:30pm. For emergencies after hours, please call the Police Dispatcher at 978-874-2933. If you would like to participate in discussions regarding your service or water quality issues, the Public Works Commission meets at 2 Oakmont Avenue on the second and fourth Monday of the month at 6:00 pm, unless otherwise posted. If you need to request a meeting with the commissioners about a particular issue, please submit your request in writing to Joshua Hall, Director of Public Works, to have your topic added to the agenda. For additional information or questions about this report, please contact Joshua Hall, Director of Public Works, at 978-874-5572.

**Where Does My Drinking Water Come From?**

The Town of Westminster Water Department customers receive water from the City of Fitchburg (PWS ID # 2097000). The Regional Treatment Facility located on Hager Park Road-Route 140 can draw water from 3 reservoirs located in Westminster, Princeton, and Hubbardston. These reservoirs are Meetinghouse Pond, Mare Meadow Reservoir, and Bickford Pond. After the water leaves the reservoirs, the Treatment Facility treats the water to remove contaminants and adds disinfectant to protect our customer's against microbial contaminants. Once water is treated, it is pumped from our booster pump station, located just south of the Treatment Facility, into the distribution system to Westminster water customers.

Your water is provided by the sources listed below:

Source Name	MassDEP Source ID#	Source Type	Location of Source
Meetinghouse Pond	2097000-01S	Surface water	Westminster
Mare Meadow Reservoir	2097000-06S	Surface water	Westminster & Hubbardston
Bickford Pond	2097000-09S	Surface water	Hubbardston & Princeton

## Source Water Assessment and Protection Program

The Source Water Assessment and Protection (SWAP) program assesses the susceptibility of public water supplies.

What is My System's Ranking?

A susceptibility ranking of **high** was assigned to this system using the information collected during the assessment by the MassDEP.

Where Can I See The SWAP Report?

The report can be viewed online at <http://www.mass.gov/eea/docs/dep/water/drinking/swap/cero/2097000.pdf>. For more information please contact the Fitchburg Water Division at 978-345-9616.

What are the Key Issues for Our Water Supply?

The overall ranking of susceptibility to contamination for the system is **High**, based on possible microbial contaminants from aquatic wildlife. Also noted is a Medium Threat from septic systems, heating fuel oil storage at residences and the use of pesticides for lawn care/gardening in the watershed.

## Why Are There Contaminants In My Drinking Water?

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. More information about contaminants and potential health effects can be obtained by calling the U.S. Environmental Protection Agency (EPA) Safe Drinking Water Hotline at 800-426-4791.

In order to ensure that tap water is safe to drink, the MassDEP and EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. 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.

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.

Contaminants 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, and wildlife.

**Inorganic contaminants** - such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, and 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 can also come from gas stations, urban stormwater runoff, and septic systems.

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

## 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.

**Maximum Residual Disinfectant Level (MRDL)** -- The highest level of a disinfectant (chlorine, chloramines, chlorine dioxide) 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 (chlorine, chloramines, chlorine dioxide) below which there is no known expected risk to health.

MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.

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

**90<sup>th</sup> Percentile** – Out of every 10 homes sampled, 9 were at or below this level.

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

**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.

**Unregulated Contaminants** -- Unregulated contaminants are those for which there are no established drinking water standards. The purpose of unregulated contaminant monitoring is to assist regulatory agencies in determining their occurrence in drinking water and whether future regulation is warranted.

**ppm** = parts per million or milligrams per liter (mg/L)

**ppb** = parts per billion or micrograms per liter (µg/L)

**pCi/L** = picocuries per liter (a measure of radioactivity)

**ND** = not detected     **N/A** = not applicable

**NTU** = Nephelometric Turbidity Units

**RAA** = Running annual average

### 2014 Water Quality Testing Results

What Does This Data Represent?

The following results are from sampling done in 2014 or during the most recent monitoring period for each contaminant group. Only the detected contaminants are shown.

Regulated Contaminant	Date(s) Collected	Highest Result or Highest RAA*	Range Detected	MCL or MRDL	MCLG or MRDLG	Violation (Y/N)	Possible Sources
<b>Inorganic Contaminants</b>							
Barium (ppm)	6/3/14 8/12/14	0.009	0.006-0.009	2	2	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride (ppm) (sampled at Regional)	Daily	1.15	0.00-1.15	4**	4	N	Water additive that promotes strong teeth; erosion of natural deposits
Nickel (ppb)	6/3/14 8/12/14	5	ND-5	100	100	N	Nickel occurs naturally in soils, ground water and surface waters and is often used in electroplating, stainless steel and alloy products.

Regulated Contaminant	Date(s) Collected	Highest Result or Highest RAA*	Range Detected	MCL or MRDL	MCLG or MRDLG	Violation (Y/N)	Possible Sources
Nitrate (ppm) (sampled at Regional)	5/20/14	0.19	0.19–0.19	10	10	N	Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits
<b>Disinfection Contaminants</b>							
Total Trihalomethanes (TTHMs) (ppb)	Quarterly	60.7	39.6-92.3	80	NA	N	Byproduct of drinking water chlorination
Haloacetic Acids (HAA5s) (ppb)	Quarterly	31.5	14.9-43.0	60	NA	N	Byproduct of drinking water chlorination
Chlorine (ppm)	Monthly	0.51	0.00-1.10	4	4	N	Water additive used to control microbes

\* Highest RAA = highest running annual average of four consecutive quarters.  
\*\* Fluoride also has a secondary maximum contaminant level (SMCL) of 2 ppm.

Bacteria	Highest # Positive Samples in a Month	MCL	MCLG	Violation (Y/N)	Possible Sources
Total Coliform	0	1	0	N	Naturally present in the environment
E. coli	0	*	0	N	Human and animal fecal waste

\* Compliance with the E. coli MCL is determined upon additional repeat testing.

Lead and Copper	Date Collected	90 <sup>th</sup> Percentile	Action Level (AL)	MCLG	# of Sites Sampled	# of Sites above AL	Exceeds AL (Y/N)	Possible Sources
Lead (ppb)	9/24/12	14	15	0	20	2	N	Corrosion of household plumbing
Copper (ppm)	9/24/12	0.47	1.3	1.3	20	0	N	Corrosion of household plumbing

Unregulated and Secondary Contaminants	Date(s) Collected	Range Detected	Average	SMCL	ORSG	Possible Sources
<b>Inorganic Contaminants</b>						
Manganese (ppb)	5/6/14 8/12/14 12/18/14	5-10	NA	50	300	Erosion of natural deposits
Sodium (ppm)	6/3/14 8/12/14	20.2-23.3*	NA	NA	20	Natural sources; runoff from road salt
Sulfate (ppm)	8/12/14 12/18/14	3-4	NA	250	NA	Natural sources

\* 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.

Turbidity*	TT	Lowest Monthly % of Samples	Highest Detected Daily Value	Violation (Y/N)	Possible Source of Contamination
Daily Compliance (NTU)	1	-----	0.24	N	Soil runoff.
Monthly Compliance*	0.3	100	-----	N	
Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality.					
*Monthly turbidity compliance is related to a specific treatment technique (TT). Our system filters the water so at least 95% of our samples each month must be below the turbidity limits specified in the regulations.					

### **Do I Need To Be Concerned About Certain Contaminants Detected In My Water?**

**Sensitive Populations** - 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 some infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control and Prevention (CDC) guidelines on lowering the risk of infection by cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

**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.

**Fluoride** - 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 or mg/l) to improve oral health in both children and adults. At this level, it is safe, odorless, colorless, and tasteless. There are over 3.9 million people in 140 Massachusetts water systems and 184 million people in the United States who receive the health and economic benefits of fluoridation.

**Lead** - If present, elevated levels of lead can cause serious health problems, especially for pregnant women, infants, and young children, who are typically more vulnerable to lead in drinking water than the general population. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. It is possible that lead levels in your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. The Westminster Water Department 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 reduce lead content by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested. Additional information about lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (800-426-4791) or online at <http://www.epa.gov/safewater/lead>.

### **Consumer Information**

#### **Cross-Connection Control and Backflow Prevention Program**

The Westminster Water Department makes every effort to ensure that the water delivered to your home or business is clean, safe, and free of contamination. Our staff works very hard to protect the quality of the water delivered to our customers from the time the water is extracted from underground throughout the entire treatment and distribution system. But what happens when the water reaches your home or business? There is still a need to protect the water quality from contamination caused by a cross-connection.

What is a cross-connection?

A cross connection is defined as any direct connection between the public water supply and a non-potable water source, contaminant, or source of pollution. Cross connections can exist both in residential homes and in non-residential facilities.

A cross-connection occurs whenever the drinking water supply is or could be in contact with potential sources of pollution or contamination. Cross-connections exist in piping arrangements or equipments that allow the drinking water to come in contact with non-potable liquids, solids, or gases (hazardous to humans) in event of a backflow.

What is backflow?

Backflow is the undesired reverse of the water flow in the drinking water distribution lines. This backward flow of water can occur when the pressure created by equipment or a system, such as a boiler or air-conditioning, is higher than the water pressure inside the water distribution line (backpressure), or when the pressure in the distribution line drops due to routine occurrences such as water main breaks or heavy water demand causing the water to flow backward inside the water distribution system (backsiphonage). Backflow is a problem that many water consumers are unaware of. And every water customer has a responsibility to help prevent them.

What you can do to help prevent a cross-connection.

Without the proper protection something as simple as a garden hose has the potential to contaminate or pollute the drinking water lines in your house. In fact, over half of the country's cross-connection incidents involve unprotected garden hoses. There are very simple steps that you, as a drinking water user, can take to prevent such hazards:

- **Never** submerge a hose in soapy water buckets, pet watering containers, pool, tubs, sinks, drains, or chemicals.
- **Never** attached a hose to a garden sprayer without the proper backflow preventer.
- Buy and install a hose bibb vacuum breaker on every threaded water fixture. The installation can be as easy as attaching a garden hose to a spigot. This inexpensive device is available at most hardware stores and home-improvement centers.
- Identify and be aware of potential cross-connections to your water line.
- Buy appliances and equipment with a backflow preventer.
- Buy and install backflow prevention devices or assemblies for all high and moderate hazard connections.
- Call Joshua Chapman at 978-874-5572 for more information about cross connections or for a free hose bibb vacuum breaker.

If you are the owner or manager of a property that is being used as a commercial, industrial, or institutional facility you must have your property's plumbing system surveyed for cross-connection. If your property has NOT been surveyed for cross-connection, contact the Westminster Water Department to schedule a cross-connection survey.

The Massachusetts Drinking Water Regulations, 310 CMR 22.00, requires all public water systems to have an approved and fully implemented Cross-Connection Control Program (CCCP). The Westminster Water Department is working diligently to protect the public health of its drinking water customers from the hazards caused by unprotected cross-connections. We are doing this through the implementation of our cross-connection survey program, elimination or proper protection of all identified cross-connections, the registration of all cross-connections protected by reduced pressure backflow preventers (RPBPs) or double check valve assemblies (DCVAs), and the implementation of a testing program for all RPBPs and DCVAs.

Where can I get more information?

WWD: Joshua Chapman, Cross Connection Coordinator 978-874-5572

MassDEP: Otavio dePaula-Santos 617-556-1085

#### Water Conservation Tips

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference – try one today and soon it will become second nature.

- Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Water plants only when necessary.
- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace.

To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.

- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!
- Visit [www.epa.gov/watersense](http://www.epa.gov/watersense) for more information.

#### Source Water Protection Tips

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides – they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use EPA's Adopt Your Watershed to locate groups in your community, or visit the Watershed Information Network's How to Start a Watershed Team.
- Organize a storm drain stenciling project with your local government or water supplier. Stencil a message next to the street drain reminding people "Dump No Waste - Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.