

# REPORT ON WATER QUALITY

This report is a snapshot of the quality of the drinking water that we provided last year. The statistics in this report are based on testing done throughout 2019 and prior years. We hope you will find it helpful to know the sources of your water and the process by which safe drinking water is delivered to your home.

# Where Does My Water Come From?

The Millbury Industrial Park & Park Hill Village is a public water supplier that is considered a "consecutive" water supplier, that is, we receive our water from another public water supply. In our case, the City of Worcester, MA (PWS# 2348000) supplies us with water from their sources. Their test results for all source water sampling are directly applicable to us. However, we are responsible for sampling and analyzing for coliform bacteria, as well as lead and copper in our distribution system. The statistics distributed in the City of Worcester's Consumer Confidence Report (CCR) are shown here and based on testing done throughout 2019 and prior years.

Our water system consists of two sections, the Millbury Industrial Park which consists of twelve commercial lots and the adjacent Park Hill Village which consists of nineteen residential lots. Water for the Millbury Industrial Park is purchased from the City of Worcester and then the water for Park Hill Village is purchased through the Millbury Industrial Park. Each residence is individually metered.

# City of Worcester's Water Sources

Worcester obtains its drinking water from ten surface water sources, or reservoirs, located outside of the City. The watershed for these reservoirs covers 40 square miles with a water capacity of 7.4 million gallons. They include: The Lynde Brook Reservoir, Kettle Brook Reservoir No. 1 and No. 2 in Leicester; the Kettle Brook Reservoir No. 3 in Leicester and Paxton; the Kettle Brook Reservoir No. 4 in Paxton; the Holden Reservoir No. 1 and No. 2 as well as the Kendall Reservoir in Holden; the Pine Hill Reservoir in Paxton, Holden, and Rutland; and the Quinapoxet Reservoir in Holden and Princeton.

In addition to these 10 active reservoirs the City has two wells, the Coal Mine Brook Well on Lake Ave North in Worcester and the Shrewsbury Well off Holden Street in Shrewsbury. Both wells are inactive but could be used in an emergency. Emergency water supplies are also available at Wachusett Reservoir and the Quabbin Aqueduct.

# Maintaining Water Quality

Millbury Industrial Park & Park Hill Village continuously strives to produce the highest quality water possible to meet or surpass every water quality standard. We monitor our distribution system very closely. The standards we operate under were enacted by the U.S. Congress as the Safe Drinking Water Act in 1974 and were amended in 1986 and 1996.

In order to ensure 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 regulations establish limits for contaminants in bottled water that must provide the same protection for public health.



**It's Their Legacy** 

# Millbury Industrial Park

The water system at Millbury Industrial Park & Park Hill Village is operated and maintained by WhiteWater, Inc. If you have any questions about this report, please contact Chris Culberson at 1-888-377-7678.

Additional copies of this report are available upon request and at www.whitewateronline.com



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# **Distribution System Characteristics of Millbury Industrial Park & Park Hill Village**

This report summarizes only those items detected during sampling - not all contaminants that are monitored

Microbial Results			Iighest # Positive a a Month 0 are bacteria th resent. Your w		<b>Cotal #</b> ositive 0 at are nat	MC 1 urally pr	<b>E</b> esent i	MCLG 0 in the env		Violation Yes ironment and a has been found		N are d	Possible Source of Contamination Naturally present in the environment e used as an indicator that other potentially to be free of these contaminants.		
Lead & Copper	Lead & Date(s) Copper Collecte		90 <sup>th</sup> Percentile of Sample		Action Level	MCLG	# of Sites sampled		# of Sites Above Action Level		Exceeds Action Level?		Possible Source of Contamination		
Lead (ppb)	2018		0		15	0	10		0		No		Corrosion of household plumbing systems		
Copper (ppm)			0.06		1.3	1.3	10		÷		No		Corrosion of household plumbing systems		
<u>Regulated</u> Contaminants		C	Date(s) Collected	H Qu Rı A A	ighest larterly unning Innual verage	hest terly Range ning Detecte rage		CL	MCLG Vi		iolation		Possible Source of Contamination		
Disinfection By-Products															
Haloacetic Acids (HAA5) (ppb)			2019		27	19-35	60	0	-	- N		Ву-ј	product of drinking water chlorination		
Total Trihalomethanes (ppb)		o)	2019		71	57-84	80	0	-		No	Ву-ј	product of drinking water disinfection		
Chlorine (ppm)			2019		0.33	0.20-0.5	8 4	Ļ	4		No V		ter additive used to control microbes		
			I												

## **TESTING FOR LEAD**

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. **Millbury Industrial Park & Park Hill Village** 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 <u>http://www.epa.gov/safewater/lead</u>.

**SOURCE WATER CHARACTERISTICS** 

#### **Key to Tables**

- ppm Parts per million, corresponds to one penny in \$10,000
- ppb Parts per billion, corresponds to one penny in \$10,000,000
- pCi/L Picocuries per liter (a measure of radioactivity)
- ND Not detected
- n/a not applicable
- RAA –Running annual average
- TT—Treatment technique

The sources of drinking water in the United States (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 storm water 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 storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production. These contaminants can also come from gasoline storage, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

### City of Worcester's Water Treatment

#### SOME TERMS DEFINED

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

**Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety

**Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.

**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, non-cancer health effects are likely to occur after chronic (lifetime) exposure. If exceeded, it serves as an indicator of the potential need for further action.

**Total Coliform:** A bacteria that indicates other potentially harmful bacteria may be present.

**Unregulated Contaminants:** Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining their occurrence in drinking water and whether future regulation is warranted. **90<sup>th</sup> Percentile:** Out of every 10 homes, 9 were at or below this level. Protecting the sources of water is not enough to assure that your tap water is safe to drink. Both natural and manmade contaminants can still enter even the most well-protected water supply. Water treatment is necessary as the second barrier of protection.

During 2019, water from Worcester's reservoirs was treated at the Worcester Water Filtration Plant, which began operating in 1997 and has continually produced water that fully complies with Federal and State drinking water standards. In calendar 2018, the Water Filtration Plant treated 7,357,251,000 gallons of water using the following processes:

**Ozonation using ozone generated on-site** to disinfect and break down organic matter making the water more efficiently filtered. This is the most effective disinfectant for the parasites *giardia* and *cryptosporidium*.

**Coagulation & Flocculation using cationic polymer and alum** to make tiny particles in the water stick together to form larger particles, which can be trapped in the filters.

**Direct Filtration** to remove particles from the water using a coal and sand filter.

pH Adjustment with lime (Calcium Oxide) to make the water less acidic and less corrosive.

Disinfection with chlorine to kill bacteria and other microorganisms.

Corrosion Control with blended phosphate corrosion inhibitor to make the water less corrosive so that lead and copper found in household plumbing and iron found in water mains does not dissolve in the water.

#### Summary of Finished Water Characteristics of the City of Worcester

Microbiological		Date(s) Collected	Total # Positive	otal # MCL				MCL	GV	iolation	n Possible Source of Contamination		
E. coli		2019	0	Detern	nined upon repeat test	additi ting	tional	0 posit	ive	No	Human and animal fe	ecal waste	
Turbidity	Date(s Collecte	) ed Maximu Measur	m Monthly Measu ed Turbic Lim	est N 7% of 1 1re- kelow dity it	Number of Measure- ments Greater- Than 1.0 NTU		iola- tion	Tu (Comi NTU = Nepl		Furbidity Limits ubined for all filters) phelometric Turbidity Units		Possible Source of Contamination	
Turbidity (NTU) (Combined for all filters)	2019	0.187 NT	U 100%	6	0		No	Less th month ment (	han or ily me can ex	equal to ( asuremen ceed 1.0 ]	qual to 0.3 NTU in 95% of         urements; No measure-       Soil runoff.         eed 1.0 NTU		
<u>Regulated</u> Contaminants		Date(s) Collected	Highest Detect Value	ighest Detect Value		CL	мсі	LG	Viola- tion		Possible Source of Contamination		
Inorganic	Contami	nants											
Barium (ppm)		2018	0.01	n/a	2.0	0	2.0	)	No	Erosion of natural deposits			
Fluoride (ppm)		2019	0.046	n/a	4.0	0	4.0	)	No	Water a	additive, promotes hea	althy teeth	
Nitrate (ppm)		2019	0.04	n/a	10	)	10	)	No	Runoff f sewage	unoff from fertilizer use; leaching from septic tanks; wage; erosion of natural deposits		
Radioactive	e Contan	ninants					<u> </u>						
Gross Alpha Emitters (pCi/L)		2016	0.56	n/a	15	5	0		No	Erosion	of natural deposits		
<u>Unregula</u> Contamin	i <u>ted</u> ants	Date(s) Collecte	d Result or Range Detected	Averaç	je SMCL	SMCL ORSG		or Health visory		Possible Source of Contamination			
Inorganic	Contami	nants											
Nickel		2016	0.001	n/a	-		0	).1	ן	Discharge from industrial processes			
Sodium (ppm)		2019	13.4	n/a	-		2	20	۱ -	Natural sources; runoff from use as salt on roadways; by -product of treatment process			
Secondary													
Manganese* (ppb) 207			15	n/a	50		300*			Erosion of natural deposits			
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\*US EPA and MassDEP have established health advisory levels for manganese to protect against concerns of potential neurological effects.

**Sodium** is a naturally-occurring common element found in soil and water. It is necessary for the normal functioning of regulating fluids in human systems. Some people, however, have difficulty regulating fluid volume as a result of several diseases, including congestive heart failure and hypertension. The guideline of 20 mg/L for sodium represents a level in water that physicians and sodium sensitive individuals should be aware of in cases where sodium exposures are being carefully controlled. For additional information, contact your health care provider, your local board of health or the Massachusetts Department of Public Health, Bureau of Environmental Health Assessment at 617-624-5757.

# Source Water Protection

The MassDEP has prepared a Source Water Assessment Program (SWAP) Report for the water supply source serving the Millbury Industrial Park & Park Hill Village. The report assesses the susceptibility of public water supplies to contamination and makes recommendations.

This report is available from the MassDEP website: <u>http://</u> <u>www.mass.gov/eea/docs/dep/water/drinking/swap/</u> <u>cero/2348000.pdf</u>.

Overall, Worcester's water supplies are considered  $\underline{\textbf{highly}}$  susceptible to contamination.

The first barrier of protection for any water supply system is to have clean sources of water. To protect surface water supply one must control the land within the watershed surrounding the supply. Worcester has maintained very strict control over the land it holds for water supply protection. However, not all of the land in Worcester's watershed is owned or controlled by the City. On some of those privately owned lands activities occur that could pose a threat to water quality in the reservoirs. The potentially threatening land uses include: dairy farms, livestock operations, manure spreading or storage, pesticide storage and use, railroad tracks, aquatic wildlife, landfills and dumps, power line rights of way, stormwater discharges, highways and roadways.

If you have any questions, please contact WhiteWater, Inc., at 1 -888 377-7678.

# Should Some People Take Special Precautions?

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 about drinking water 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 (800-426-4791).

# FOR YOUR INFORMATION

In order to ensure that tap water is safe to drink, the Department of Environmental Protection (MassDEP)

and U.S. Environmental Protection Agency (EPA) prescribe regulations that limit the amount of certain contaminants in water provided to 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. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).

Where to go for more information ....

Massachusetts Department of Environmental Protection (MassDEP) <u>http://www.mass.gov/eea/agencies/massdep/water/</u> <u>drinking/</u>

# **Opportunities to Participate**

Any matters that concern your drinking water supply or issues you would like to see addressed can be presented at the regularly scheduled meeting of the trustees, association or board. If your concerns need immediate attention feel free to contact our current Certified Operator, WhiteWater, Inc., at 1-888-377-7678.

# **Cross Connection Control & Prevention**

The outside watering tap and garden hose tend to



be the most common sources of cross connections

#### What is a cross connection?

A cross connection occurs whenever a potable drinking water line is directly or indirectly linked to a piece of equipment or piping containing non-potable water.

#### Why should I be concerned about cross connections?

An unprotected or inadequately protected cross connection in your home or work place could contaminate the drinking water not only in your building, but in neighboring businesses and homes. Severe illnesses- even deathhave been caused by cross connection contamination events that could have been prevented. Unprotected and inadequately protected cross connections have been known to cause outbreaks of hepatitis A, gastroenteritis, Legionnaire's disease, chemical poisoning, body lesions (from exposure through showering), damage to plumbing fixtures and explosions.

#### How can a cross connection contamination occur?

Non-potable water or chemicals used in equipment or a plumbing system can end up in the drinking waterline as a result of backpressure or backsiphonage. Backpressure occurs when the pressure in the equipment such as a boiler or air conditioning unit is greater than the pressure in the drinking water line.

Backsiphonage occurs when the pressure in the drinking water line drops due to fairly routine occurrences such as water main breaks. nearby fires, unusually heavy water demand. Contaminants are then sucked out and into the drinking water line.

## What can I do to make sure my water supply is protected from cross connections? At home:

- Contact your local water • supplier to find out what he/she is doing to prevent cross connection contamination incidents.
- Survey your home to make • sure you are not unknowingly creating a cross connection
- Do not attach any pesticide, • chemical, or any other nonpotable liquid applicators to your water line

Install hose bibb vacuum breakers (HBVB) on all outside faucets. The HBVB isolates garden hose appli-

cations, protecting your drinking water 🕻 supply from contaminants that could be drawn into your home through the hose. At work:

Contact your supervisor

and/or maintenance person-

nel and find out if all cross

connections within your

workplace are protected.

Find out when/if all back-

flow preventers have been

Ask you facility to provide

you with information on its

cross connection program.

Find out all you can about

from DEP, your local water

department, or a plumbing

cross connection control

tested.

In general:

inspector.



#### For further

information about our **Cross Connection** Control and Backflow Prevention Program please contact Russell Tierney at

#### Phone: 888-377-7678 Fax: 508-248-2895 Email: rtierney@rhwhite.com



Backsiphonage may occur due to a water main break or other lowpressure incident such as a fire.