



# West Bridgewater water Department 2021 Consumer Confidence Report

1. PUBLIC WATER SYSTEM INFORMATION.....	2
2. YOUR DRINKING WATER SOURCE .....	2
3. SUBSTANCES FOUND IN TAP WATER .....	3
4. IMPORTANT DEFINITIONS .....	4
5. WATER QUALITY TESTING RESULTS.....	5
6. COMPLIANCE WITH DRINKING WATER REGULATIONS.....	10
7. EDUCATIONAL INFORMATON .....	10
8. ADDITIONAL INFORMATION .....	12

**Before July 1:**



## 2021 Consumer Confidence Report

For

*West Bridgewater Water Department*

West Bridgewater, Massachusetts

MASSDEP PWSID # 4322000

This report is a snapshot of the drinking water quality that we provided last year. Included are details about where your water comes from, what it contains, and how it compares to state and federal standards. We are committed to providing you with this information because informed customers are our best allies.

## PUBLIC WATER SYSTEM INFORMATION

Address: *29 Cyr St*

Contact Person: *Wayne Parks*

Telephone #: *508-894-1271*

### Water System Improvements

Our water system is routinely inspected by the Massachusetts Department of Environmental Protection (MassDEP). MassDEP inspects our system 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 Massachusetts certified operators who oversee the routine operations of our system. As part of our ongoing commitment to you, last year we made the following improvements to our system: During 2021 we undertook the replacement of hydrants. We replaced various components within our system. We also worked with customers when they called upon us for help.

### Opportunities for Public Participation

If you would like to participate in discussions regarding your water quality, you may attend the following meetings or educational events: The water commissioners meet the First and Third Monday of every month except when holidays interfere.

## YOUR DRINKING WATER SOURCE

### Where Does My Drinking Water Come From?

Your water is provided by the following sources listed below:

*We are Ground Water not under the influence of surface water*

Source Name	MassDEP Source ID#	Source Type	Location of Source
Cyr St Station 1 Well #1	4322000-01G	Groundwater	Cyr St
Cyr St Station 1 Well #2	4322000-02G	Groundwater	Cyr St
Norman Ave Station 2 Well #2	4322000-02G	Groundwater	Norman Ave
Manley St Station 3 Well #1	4322000-06G	Groundwater	Manley St
Manley St Station 3 Well #2	4322000-07G	Groundwater	Manley St
Cyr St Station 4 Well #4	4322000-04G	Groundwater	Cyr St
Cyr St Station 4 Well #5	4322000-05G	Groundwater	Cyr St

Residents of Turnpike St and Renker Drive are served by Easton's Public Water Supply

## Is My Water Treated?

Our water system makes every effort to provide you with safe and pure drinking water. To improve the quality of the water delivered to you, we treat it to protect you from contaminants.

- We add a disinfectant to protect you against microbial contaminants.
- We do corrosion control to the water to reduce lead and copper levels.
- We chemically treat the water to reduce levels of iron and manganese at Manley St.
- We use a sequestering agent to prevent mineral build up in our distribution system.

The water quality of our system is constantly monitored by us and MassDEP to determine the effectiveness of existing water treatment and to determine if any additional treatment is required.

Residents can help protect sources by:

- Practicing good septic system maintenance
- Supporting water supply protection initiatives at the next town meeting
- Taking hazardous household chemicals to hazardous materials collection days
- Limiting pesticide and fertilizer use, etc.

## SUBSTANCES FOUND IN TAP 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, 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.

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 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.

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).

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).

In order to ensure that tap water is safe to drink, EPA and MassDEP prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. FDA and Massachusetts Department of Public Health regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

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 Bridgewater 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 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>.

## 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.

**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.

### **Unregulated Contaminants**

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated monitoring is to assist EPA in determining their occurrence in drinking water and whether future regulation is warranted.

**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.

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

**Running Annual Average (RAA)** – The average of four consecutive quarter of data.

**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.

**Level 1 Assessment** - A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

**Level 2 Assessment** - A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an *E. coli* MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

# WATER QUALITY TESTING RESULTS

## What Does This Data Represent?

The water quality information presented in the table is from the most recent round of testing done in accordance with the regulations. All data shown was collected during the last calendar year unless otherwise noted in the table.

### Definitions:

- ppm = parts per million, or 1 drop in a million gallons
- ppb = parts per billion, or 1 drop in a billion gallons
- ppt = parts per trillion, or 1 drop in a trillion gallons
- pCi/l = picocuries per liter (a measure of radioactivity)
- ND = Not Detected
- N/A = Not Applicable
- ug/L = Micrograms per Liter = ppb (parts per billion)
- ng/L = Nanogram per Liter = ppt (parts per trillion)

## Lead and Copper Results from the 2019 System Survey

	Date(s) Collected	90 <sup>TH</sup> percentile	Action Level	MCLG	# of sites sampled	# of sites above Action Level	Possible Source of Contamination
Lead (ppb)	8/9->12/16	0.002ppb	15	0	20	0	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	8/9->12/16	0.210ppm	1.3	1.3ppm	20	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

MassDEP has reduced the monitoring requirements for *Asbestos Reduced sampling next samples 2022, Gross Alpha Particle Activity reduced sampling next samples due 2021, Inorganic contaminants, Lead & Copper we are on a 3 year sample plan, Radium 226 & Radium 228 reduced sampling next samples due 2021, Synthetic organic contaminants 2021, perchlorate 2021* because the source is not at risk of contamination.

## Bacteria Testing Results

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessments to identify any problems that were found during these assessments.

Bacteria	MCL / TT	MCL	Value	Date	Violation (Y/N)	Possible Sources
E. coli	0	0	Positive ( <i>E.coli</i> )		N	Human and animal fecal waste
Total Coliform Bacteria	4	0	Positive	8/16/21 9/7/21	N	Human and animal fecal waste

In August we had three (3) sites fail Coliform Bacteria Testing, which are required to be reported. This triggered a Level 1 assessment; we raised the chlorine levels and all sites passed retesting. During the past year, we were required to conduct one (1) Level 2 Assessment. One (1) Level 2 Assessment was completed. In addition, we were required to take three (3) corrective actions which we have completed.

Contaminant (Unit of measure)	Test Date(s)	Highest result	Range of Results	MCL	Violation (Y/N)	Possible Sources
<b>Radionuclides</b>						
Gross Alpha (pCi/L)	5/2021, 12/2021	1.41	-1.7 – 1.41	15	N	Erosion of natural deposits
Radium 226 (pCi/L)	5/2021, 12/2021	0.55	0.28 – 0.55	5	N	Erosion of natural deposits
Radium 228 (pCi/L)	5/2021, 12/2021	0.85	0.06 – 0.85	5	N	Erosion of natural deposits
<b>Disinfectant contaminants</b>						
Total Haloacetic Acids (ppm)	8/03/2021	3.9	ND – 3.9	60	N	Byproduct of drinking water chlorination
Trichloroacetic Acid (ppm)		3.9	----	--	--	Byproduct of drinking water chlorination
Total Trihalomethanes (ppm)	8/03/2021	13.9	9.9 – 13.9	80	N	Byproduct of drinking water chlorination
Chloroform (ppm)		7.7	6.6 -7.7	--	--	Byproduct of drinking water chlorination
Bromodichlormethane (ppm)		4.3	2.2 - 4.3	--	--	Byproduct of drinking water chlorination
Dibromochloromethane (ppm)		1.9	1.1 - 1.9	--	--	Byproduct of drinking water chlorination
<b>Inorganic Contaminants</b>						
Sodium (ppm)	5/05/2021	30.5	---	20*	N/A	Discharge from use and improper storage of sodium-containing de-icing compounds or in water-softening agent
<b>Nitrate Report</b>						
Nitrate (ppm)	5/05/2021	2.68	0.62 – 2.68	10	N	Runoff from fertilizer use, leaching from septic tanks, sewage, erosion of natural deposits
<b>Perchlorate Report</b>						
Perchlorate (ppb)	8/19/2021	0.47	0.46 – 0.47	2	N	Rocket propellants, fireworks, munitions, flare, blasting agents
<b>Sodium Report</b>						
Sodium (ppm)	5/04/2021	47.4	30.5 – 47.4	20*	N/A	Discharge from use and improper storage of sodium-containing de-icing compounds or in water-softening agent
<b>Synthetic Organic Compounds Contaminant Report</b>						
Multiple Contaminants (ppb)	5/04/2021, 12/15/2021	ND	ND	Varied	N	
Tetrachloroethylene (ppb)	2/22/2021	.05	ND - .05	5	N	Discharge from use in

Contaminant (Unit of measure)	Test Date(s)	Highest result	Range of Results	MCL	Violation (Y/N)	Possible Sources
						chemical manufacturing
<b>Regulated Volatile Organic Contaminants</b>						
Multiple Contaminants (ppb)	2/04/2021, 5/04/2021, 8/16/2021, 12/07/2021	ND	ND	Varied	N	
Xylenes [Total] (ppb)	5/04/2021	2.61	--	10000	N	Discharge of industrial effluents
<b>Unregulated Volatile Organic Contaminants</b>						
<b>Multiple Contaminants</b>	<b>2/04/2021, 5/04/2021, 8/16/2021, 12/07/2021</b>	<b>ND</b>	<b>ND</b>	<b>Varied</b>	<b>N</b>	
Chloroform (ppb)	2/21, 5/21, 8/21, 12/21	3.1	ND – 3.1	70	N	Byproduct of drinking water chlorination
Bromodichloromethane (ppb)	2/21, 5/21, 8/21	3.1	0.6 – 3.1	N/A	N/A	Byproduct of drinking water chlorination
Chlorodibromomethane (ppb)	2/21, 5/21	2.3	0.6 – 2.3	N/A	N/A	Byproduct of drinking water chlorination
Acetone (ppb)	2/21	15.9	15.9	N/A	N/A	Leaching from municipal and industrial landfills, industrial waste
<b>Secondary Unregulated Contaminants</b>						
Manganese (ppb)	2/21, 5/21, 8/21, 12/21	2,210	0.212 -2.21	50*	N/A	Natural sources as well as discharges from industrial uses
<b>Perfluorocarbons</b>						
PFAS6 (ppt)	monthly	22.4	3.3-22.4	20	Y	Discharges and emissions from industrial and manufacturing sources associated with the production or use of PFAS. Additional sources include the use and disposal of products containing PFAS

\*No current MCL, however DEP Office of Research and Standards has established a guideline (ORSG) for this contaminant.

For information on PFAS follow these links: <https://www.epa.gov/pfas/basic-information-pfas>  
<https://www.mass.gov/service-details/per-and-polyfluoroalkyl-substances-pfas-in-drinking-water>  
<https://www.mass.gov/doc/massdep-fact-sheet-pfas-in-drinking-water-questions-and-answers-for-consumers/download>



**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.

**Manganese** is a naturally occurring mineral found in rocks, soil, 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 (microgram per liter), or 50 parts per billion. In addition, MassDEP's Office of Research and Standards (ORS) has set a drinking water guideline for manganese (ORSG), which closely follows the EPA public health advisory for manganese.

Drinking water may naturally have manganese and, when concentrations are greater than 50 ug/L, the water maybe discolored and taste bad. Over a lifetime, the EPA recommends that people limit their consumption of water with levels over 1000 ug/L, primarily due to concerns about the possible neurological effects. Children up to one 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.

The ORSG differs from the EPA's health advisory because it expands the age group to which a lower manganese concentration applies from children less than six months of age to children up to one year of age to address concerns about children's susceptibility to manganese toxicity.

See EPA Drinking Water Health Advisory for manganese at: [https://www.epa.gov/sites/production/files/2014-09/documents/support\\_cc1\\_magnese\\_dwreport\\_0.pdf](https://www.epa.gov/sites/production/files/2014-09/documents/support_cc1_magnese_dwreport_0.pdf) and MassDEP Office of Research and Standards (ORS) for manganese <http://www.mass.gov/eea/agencies/massdep/water/drinking/lead-and-other-contaminants-in-drinking-water.html#11>

### **Sodium**

Sodium is the sixth most abundant element on Earth and is widely distributed in soils, plants, water and foods. Most of the world has significant deposits of sodium-containing minerals, most notably sodium chloride (salt). Sodium and chloride occur naturally in water as a result of erosion or salt water intrusion (when salt water from the ocean seeps into underground water supplies). Sodium may reach both ground and surface water supplies as a result of residential, commercial and industrial activity, such as road salting.

### **PFAS6**

What health effects are associated with exposure to PFAS6? The MassDEP drinking water standard is based on studies of the six PFAS substances in laboratory animals and studies of exposed people. Overall, these studies indicate that exposure to sufficiently elevated levels of the six PFAS compounds may cause developmental effects in fetuses during pregnancy and in breastfed infants. Effects on the thyroid, the liver, kidneys, hormone levels and the immune system have also been reported. Some studies suggest a cancer risk may exist following long-term exposures to elevated levels of some of these compounds. MassDEP - Drinking Water Program - One Winter Street - Boston, MA 02108 12-17-20 <https://www.mass.gov/drinking-water-program> 2 It is important to note that consuming water with PFAS6 above the drinking water standard does not mean that adverse effects will occur. The degree of risk depends on the level of the chemicals and the duration of exposure. The drinking water standard assumes that individuals drink only contaminated water, which typically overestimates exposure, and that they are also exposed to PFAS6 from sources beyond drinking water, such as food. To enhance safety, several uncertainty factors are additionally applied to account for differences between test animals and humans, and to account for differences between people. Scientists are still working to study and better understand the health risks posed by exposures to PFAS. If your water has been found to have PFAS6 and you have specific health concerns, you may wish to consult with your doctor.

# COMPLIANCE WITH DRINKING WATER REGULATIONS

## Does My Drinking Water Meet Current Health Standards?

We are committed to providing you with the best water quality available. However, some contaminants that were tested last year did not meet all applicable health standards regulated by the state and federal government. Due to contaminant violations of *Total Coliform Bacteria* during the period(s) of *August and September* our system took the following corrective actions.

- *We collected additional samples.*
- *We disinfected and flushed the distribution system to eliminate coliform bacteria.*

## Health Effects Statements

### 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. If we had to do a level One or Two assessment, it is because we found Coliforms in more samples than allowed and this was a warning of potential problems. The test is based on presence or absence, which means you are allowed zero.

# EDUCATIONAL INFORMATION

## Cross-Connection Control and Backflow Prevention

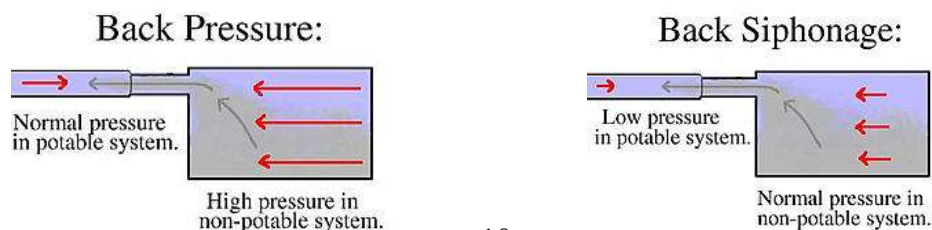
The West Bridgewater Water Department makes every effort to ensure that the water delivered to your home and business is clean, safe and free of contamination. Our staff works very hard to protect the quality of the water delivered to our customers from the time the water is extracted via deep wells from underground aquifers or withdrawal point from a surface water source, throughout the entire treatment and distribution system. But what happens when the water reaches your home or business? Is there still a need to protect the water quality from contamination caused by a cross-connection? If so, how?

### What is a cross-connection?

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 equipment that allows the drinking water to come in contact with non-potable liquids, solids, or gases (hazardous to humans) in event of a backflow.

### What is a 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 (back pressure), 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 (back siphonage). Backflow is a problem that many water consumers are unaware of, a problem that each and every water customer has a responsibility to help prevent.



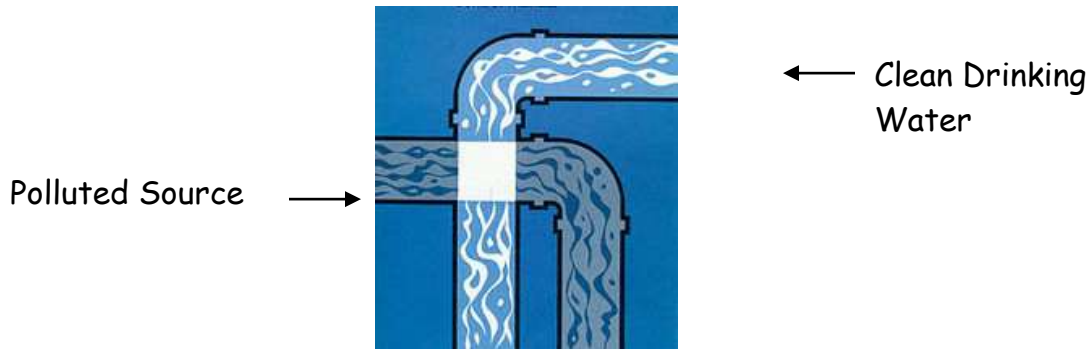
### What can I do to help prevent a cross-connection?

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, they are:

- 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** in any 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 backflow preventers.
- Buy and install backflow prevention devices or assemblies for all high and moderate hazard connections.

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 by your water purveyor. If your property has NOT been surveyed for cross-connection, contact your water department to schedule a cross-connection survey.

### What is a Cross Connection and what can I do about it?



A cross connection is a connection between a drinking water pipe and a polluted source. The pollution can come from your own home. For instance, you're going to spray fertilizer on your lawn. You hook up your hose to the sprayer that contains the fertilizer. If the water pressure drops at the same time you turn on the hose, the fertilizer may be sucked back into the drinking water pipes through the hose. This problem can be prevented by using an attachment on your hose called a backflow-prevention device.

The West Bridgewater Water Department recommends the installation of backflow prevention devices, such as a low cost hose bibb vacuum breaker, for all inside and outside hose connections. You can purchase this at a hardware store or plumbing supply store. This is a great way for you to help protect the water in your home as well as the drinking water system in your town! For additional information on cross connections and on the status of your water systems cross connection program, please contact the Water Department.

## ADDITIONAL INFORMATION

*We are under a MassDEP imposed water ban from May 1 to September 30, restricting water use to Hand Held Water with no grass watering between the hours of 9 AM to 5 PM.*

