

# ANNUAL DRINKING WATER QUALITY REPORT

## Consumer Confidence Report

For the year 2016

Prepared by:

The Freetown Water Commission

PWS ID# 4102035

The Freetown Water Commission is pleased to present to you this year's Annual Drinking Water Quality Report. This report is designed to inform you about the quality of water and services we deliver to you every day. The statistics in this report are based on testing done throughout 2016. 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.

### The Source of Your Water

The Freetown Water Commission (FWC) purchases water from the City of Fall River for the residents who live near the Assonet/Fall River town line and from the City of New Bedford for the residents who live around the East Freetown/New Bedford town line.

### Is My Water Treated?

The City of Fall River water is treated surface water from North Watuppa Pond and the Copicut Reservoir. The City uses a conventional treatment system. The water is treated with NaOH (sodium hydroxide) to increase the pH. Pre-chlorinated (seasonally), poly aluminum chloride (coagulant) and CO<sub>2</sub> is added to assist with corrosion control. Fluoride is added to the water and then pumped to the distribution system and our consecutive user systems. The City of New Bedford comes from a surface supply comprised of five ponds and is comprised from Little Quittacas, Great Quittacas, Pocksha, Assawompset and Long Pond which is treated at the Quittacas Water Treatment Plant. Treatment consisted of conventional filtration, disinfection, corrosion control, and fluoridation. However, the continual developments of privately owned lands in the watershed area pose a concern for the water quality entering the ponds.

The Freetown Water Commission routinely monitors for constituents in your drinking water according to Federal and State laws. The following tables show the results of monitoring for the period of January 1, 2016 to December 31, 2016. As water travels over the land, or underground, it can pick up substances or contaminants such as microbes, inorganic and organic chemicals, and radioactive substances. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk.

### Freetown Water Commission

Freetown Water Commission's (FWC) water supply system  
Is operated and maintained by WhiteWater, Inc. (WWI)

If you have any questions about this report, please contact  
Steven Chandler @ the Water Department Office, 508.644.4000.

#### Board of Commissioners

Bob Parker, Chairman

Brad Paiva

Paul Sadeck

The (FWC) encourages public participation. Meetings are scheduled every other Friday at 10am at the Freetown Town Hall, 3 North Main Street, Assonet, MA.

Additional copies of this report are available upon request.

## DISTRIBUTION SYSTEM WATER QUALITY

The report summarizes only those items detected during sampling – not all contaminants that are monitored

Date	Contaminant	90 <sup>th</sup> Percentile	Action Level	MCLG	# of Sites Tested	# of Sites Above Action Level	Exceeds Action Level?	Possible Source of Contamination
2016	Lead (ppb)	0	15	0	0	0	No	Corrosion of household plumbing
2016	Copper (ppm)	0.03	1.3	0	0	0	No	Corrosion of household plumbing

### Educational Statement on Lead

If present, elevated levels of lead can cause serious health problems, especially in pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Freetown Water Commission is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has not been run 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>.

Microbial Results 2016	Contaminant	Highest # Positive in a Month	MCL	MCLG	Violation	Possible Source of Contamination
Freetown	Total Coliform Bacteria	1	1	0	No	Naturally present in the environment
Freetown	Fecal Coliform – E. Coli	0	0	0	No	Naturally present in the environment

Coliform are bacteria that are naturally present in the environment and are used to indicate that other, potentially harmful bacteria may be present. The total coliform rule requires water systems to meet a stricter limit for coliform bacteria. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease causing bacteria.

### Key to Tables

- ppm – parts per million corresponds to one penny in \$10,000
- pCi/L – picocuries per liter
- n/a – not applicable
- \* MRDLG – maximum residual disinfection level goal
- \* NTU – nephelometric turbidity units
- \* ppb – parts per billion corresponds to one penny in \$10,000,000
- \* ND – non-detect
- \* MRDL – maximum residual disinfection level. The highest level of A disinfection allowed in drinking water
- \* MREM/Year – millirems per year
- \* TT – treatment technique

### 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.

**90th Percentile:** Out of every 10 homes, 9 were at or below this level.

All drinking water, including bottled water and tap 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 (800.426.4791). (Website: [www.epa.gov](http://www.epa.gov)).

In order to ensure tap water is safe to drink, the DEP and the 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. For more information you can visit the EPA or MDPH websites respectively.

## SUMMARY OF FINISHED WATER CHARACTERISTICS

### Disinfection By Products

Date	Regulated Contaminant	Highest Running Annual Average for System	Source Range Detected	MCL	MCLG	Violation	Possible Source of Contamination
2016	Total Trihalomethanes (TTHMs) (ppb)	50.7	11.0 – 77.1	80	n/a	No	By-product of drinking water chlorination
2016	Haloacetic Acids (HAA5s) (ppb)	24.56	4.5 – 40.8	60	n/a	No	By-product of drinking water chlorination
2016	Chlorine Residual	0.54	0.26 – 0.75	4	4	No	Disinfectant, kills bacteria

### Inorganic Contaminants

Source and Date	Regulated Contaminant	Highest Level Detected	Range Detected	MCL	MCLG	Violation	Possible Source of Contamination
Fall River Daily 2016	Fluoride (ppm)	1.1	0.3-1.1	4	4	No	Water additive, promotes healthy teeth
Fall River 3/7/2016	Barium (ppm)	0.008	n/a	2	2	No	Erosion of natural deposits
Fall River 3/3/2015	Nitrate (ppm)	0.07	n/a	10	10	No	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
Fall River 7/26/2016	Perchlorate (ppb)	<0.05	n/a	2	2	No	Rocket propellants, fireworks, munitions, flares, blasting agents
New Bedford 2/4/2016	Barium (ppm)	0.0074	n/a	2	2	No	Discharge of drilling waste, erosion of natural deposits
New Bedford Daily 2016	Fluoride (ppm)	0.8	0.6-0.8	4	4	No	Water additive, promotes strong teeth
New Bedford 2014	Chromium (ppb)	0.42	ND-0.42	100	100	No	Discharge from steel and pulp mills; erosion of natural deposits
New Bedford 1/28/2014	Nitrate (ppm)	0.054	n/a	10	10	No	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits

### Radioactive Contaminants

Source and Date	Regulated Contaminant	Highest Level Detected	Range Detected	MCL	MCLG	Violation	Possible Source of Contamination
Fall River 12/31/2012	Gross Alpha Activity (pCi/L)	0.99	n/a	15	0	No	Erosion of natural deposits
Fall River 12/31/2012	Radium 226 & 228 Combined (pCi/L)	0.06	n/a	5	0	No	Erosion of natural deposits
New Bedford 8/12/2015	Radium 226 & 228 Combined (pCi/L)	1.2	n/a	5	0	No	Erosion of natural deposits

### Turbidity

Turbidity is a measure of the cloudiness of the water and is measured because it is an indicator of the effectiveness of a filtration system. Monthly turbidity compliance related to a specific treatment technique (TT). The water is filtered so that at least 95% of all the samples taken during a month are below limits specified in the regulations. NTU = Nephelometric Turbidity Units.

Turbidity 2016	Treatment Technique (TT)	Highest Level Found	Lowest Monthly % of Samples Less Than 0.3 NTU	Violation	Possible Source of Contamination
New Bedford - Daily Compliance (NTU)	1	0.24	-	No	Soil runoff
New Bedford - Monthly Compliance	At least 95%	-	100	No	Soil runoff
Fall River - Daily Compliance	5.0	0.46	-	No	Soil runoff
Fall River - Monthly Compliance	At least 95%	-	100	No	Soil runoff

## Unregulated Contaminants

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

Source and Date	Contaminant	Range of Levels Detected	Average Level Detected	SMCL	ORSG	Possible Source
Fall River 3/7/2016	Sodium (ppm)	18.3	n/a	-	20	Natural sources; runoff from use as salt on roadways; by-product of treatment process
Fall River 7/19/2016	Manganese (ppb)	7	n/a	50	300*	Erosion of natural deposits
New Bedford 2/4/2016	Sodium (ppm)	27	n/a	-	20	Natural sources; runoff from use as salt on roadways; by-product of treatment process
New Bedford 2016	Manganese (ppb)	13-28	20	50	300*	Erosion of natural deposits

\*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.

### 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.

### Additional Health Information

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) prescribes 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 on 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 at 800/426-4791. (Website: [www.epa.gov](http://www.epa.gov)) 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 at 800/426-4791.

### Source Water Protection (SWAP)

The MassDEP has prepared a Source Water Assessment Program (SWAP) Report for the water supply source serving the Freetown Water Commission. The report assesses the susceptibility of public water supplies to contamination and makes recommendations.

The SWAP reports for New Bedford and Fall River are available from the MassDEP website:

Fall River - <http://www.mass.gov/eca/docs/dep/water/drinking/swap/sero/4095000.pdf>

New Bedford - <http://www.mass.gov/eca/docs/dep/water/drinking/swap/sero/4201000.pdf>

If you have any questions about this Water Quality Report, the SWAP report, or about your water utility in general, please contact the Freetown Water Commission at (508) 644-4000. We want our valued customers to be informed about their water utility.

# Cross Connection Control & Prevention

The outside watering tap and garden hose tend to be the most common sources of cross connections



## *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 non-potable liquid applicators to your water line

- Install hose bibb vacuum breakers (HBVB) on all outside faucets. The HBVB isolates garden hose applications, 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 personnel and find out if all cross connections within your workplace are protected.
- Find out when/if all backflow preventers have been tested.
- Ask you facility to provide you with information on its cross connection program.

In general:

- Find out all you can about cross connection control from DEP, your local water department, or a plumbing 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](mailto:rtierney@rhwhite.com)

## *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 death— have 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.



**Backsiphonage may occur due to a water main break or other low-pressure incident such as a fire.**