Town of Athol Water Division
2017 Water Quality Report
Public Water Supply Identification Number 1015000

The Town of Athol Water Division once again is pleased to tell you our water system had another successful year of supplying you with the highest quality of water. This was all made possible with the team of professional staff here within the Town of Athol Department of Public Works. The following staff is committed to working hard as a team to assure you're provided with water of the highest quality and can be contacted at 978-249-4542.

Public Works Superintendent
Douglas A. Walsh

Assistant Superintendent
Duane Truehart

Administrative Clerk
Diana Cooley

Water Department Staff

Water & Sewer Foreman
Andrew Tessier

Utility Foreman
David Carr

Treatment Operator
Robert Hughes

Distribution Operators
David Craven
Robert L. Hughes

SOURCES OF SUPPLY

The Town of Athol has four (4) groundwater sources all located in the downtown area. Water is pumped from three (3) of these sources to the Public Works facility for treatment, before being distributed through the 58 miles of distribution lines to your homes. The fourth groundwater source has a treatment facility of its own located off of Jones Street.
All of these sources pump from downtown to the uptown area where two booster stations are provided to assist in the filling of the storage tanks and supply the distribution system with an adequate supply of water.

Projects Completed in 2017

- Continued replacement of fire hydrants.
- Continued replacement of water meters with radio reads.
- Completed upgrade of So. St. chlorination and hydroxide systems.
- Completed Tully Well field #3 well cleaning.
- Completed phase #3 water main replacement Grove St and Main St area.

Projects Scheduled for 2018

- Water main replacement and low pressure sewer installation Winter St and Wilder St area
- Continue replacement and /or installation of water meter radio reads
- Cleaning of Tully wellfield well#2 and design for replacement of well #2.
- Continued replacement of fire hydrants

Water Cost in 2017, $4.28 /100 cubic feet = 750 Gallons

WATER CONSERVATION

There are several ways you can help to conserve water, lower your cost and replenish our valuable resource.

- Don't let water run while washing cars
- Don't let water run while brushing your teeth
- Check for leaking toilets by placing food coloring in the tank and see if it ends up in the bowl.
- Contact the Department of Public Works for assistance at 978-249-4542

You can replenish our resources by removing roof drains and sump pumps from sanitary sewers and divert water to your back yards allowing water to naturally flow back into the ground. **And did you know it is actually illegal to have your sump pumps and roof drains connected to the town's sanitary sewer.**

Garfield Tank

Source Water Assessment Plan

In 2003, a source water assessment plan was updated and prepared for the town to protect our water supplies. The program is to prevent any further contamination of our sources. Restrictions are in place to prevent hazardous materials and facilities from being allowed within the established protection zones. Our local agencies work very closely with the Public Works Department to prevent any type of contamination.

To receive a copy of the source water assessment plan please contact the Department of Public Works at 584 Main Street-Room 24, Athol, MA 01331.

"The sources of drinking water (both tap water and bottled water) include rivers lakes, streams, ponds, reservoirs, springs & 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".

All drinking water, including bottled water may reasonably be expected to contain at least small amounts of some contaminants. The presence of some contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the environmental agency's Safe Drinking Water Hotline at 1-800-426-4791.

Contaminants That May Be Present In Source Water…..

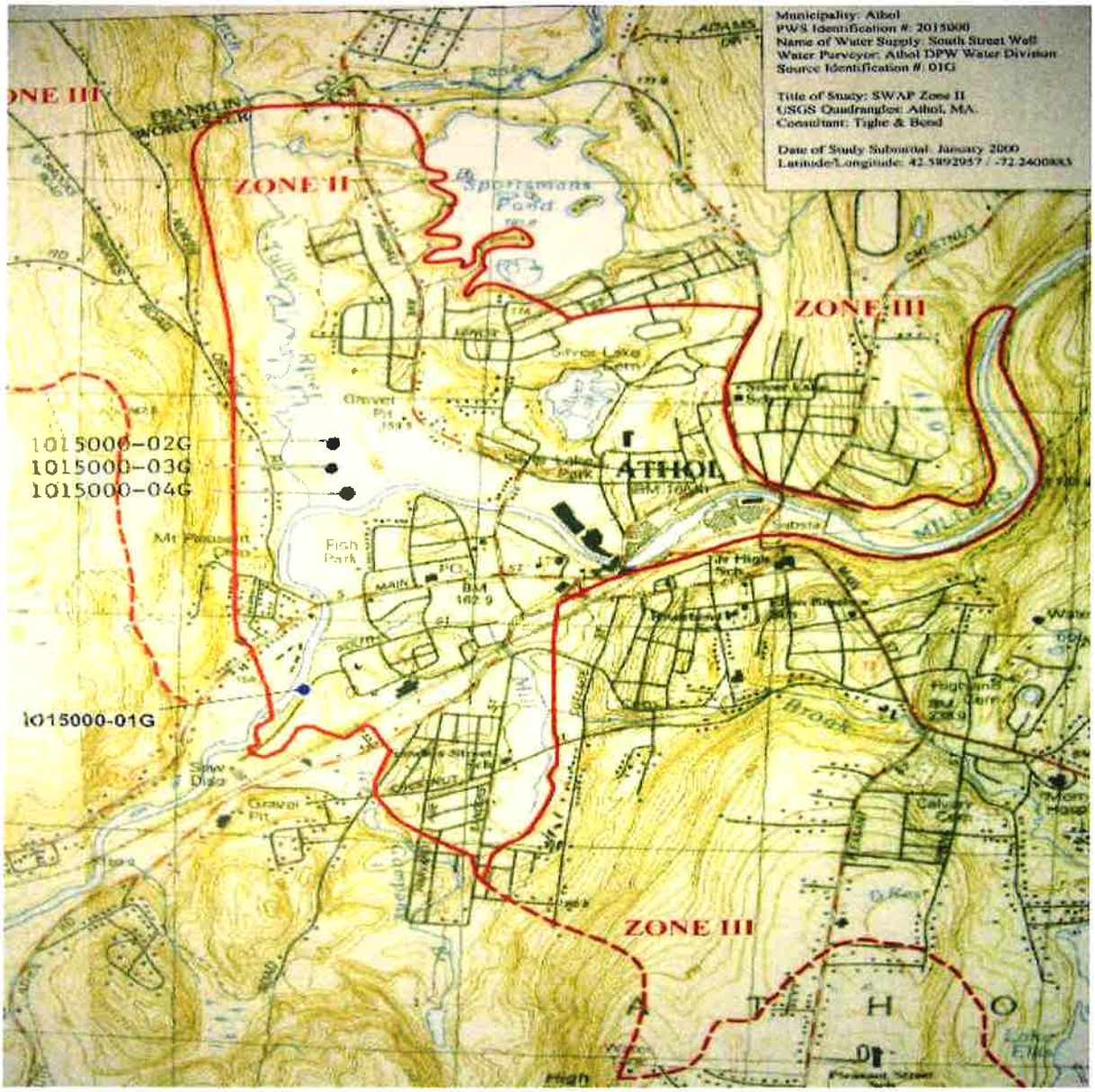
- Microbial Contaminants, such as viruses and bacteria that may come from sewerage treatment plants, septic systems, agricultural livestock operations and wildlife.
- Pesticides and Herbicides that may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- Inorganic Chemical Contaminants, such as salts and metals, that can be naturally-occurring or result from urban storm water runoff, industrial, or domestic wastewater discharges, oil and gas production, mining or farming.
- 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, that can be naturally occurring or be the result of oil and gas production and mining activities.

Notice of non-compliance

In 2017 the Athol water department received a notice of non-compliance, for failure to submit the 2016 fourth quarter Halo acetic Acids and Trihalomethanes Report to DEP by January 10, 2017. The report was submitted to DEP on January 17, 2017.

Protection of the Water System

The Public Works Department and Local Agencies can only provide a certain amount of protection without the help of you the resident and consumer. We ask that you assist us in protecting our valuable water resources by reporting any illegal dumping of gasoline, oil or other hazardous materials on to the ground by calling the Public Works Office at 978-249-4542.Reports of suspicious activity around the Water Department Buildings or Water Storage Tanks please contact the local Police Department at 978-249-3232



Zone II is the Department of Environmental Protection approved primary recharge area for our aquifer. It is very important to protect the land within zone II to avoid contamination to our water supply from improper disposal of hazardous materials from residential, commercial and industrial facilities.

Cross Connection Program

A cross connection is an actual or potential interconnection between a drinking water line and any source of pollution or contamination such as a piping arrangement that allows drinking water to come in contact with non drinking water, chemicals gases or other potentially harmful substances. Plumbing cross connections exist whenever a pipe carrying drinking water has a direct physical connection to a source of potentially harmful materials.

Examples of Cross Connections:

- A water feed to a boiler
- A water line feed to a chemical tank
- A garden hose connected to an outside spigot and one end submerged below the surface of a swimming pool
- A garden hose with a fertilizer/pesticide spray attachment
- A hose connected to sink faucet and under low pressure situations could possibly back-siphon

These are just a few examples that could occur if there was a pressure drop in the distribution system due to a water break, causing the back siphonage of these hazardous materials into the water system.

How can you help to prevent some cross connections?

You can assist the water system and every potential user by installing Hose Bibb Vacuum Breakers on all threaded faucets in and outside of your home. These devices will prevent hazardous water from being siphoned back into your home.

Our staff, survey all **Commercial, Industrial, Municipal and Institutional** buildings for hazardous cross connections. Once surveyed owners of these facilities either eliminate the cross connection or install the appropriate device(s) for protection against the back syphonage of the hazard within their facility. On a regular basis our staff will visit each facility and test the backflow devices to insure they are functioning appropriately. If your
Facility has already undergone a survey and you alter your plumbing in any way, you need to notify the Athol Department of Public Works to determine if a new survey is necessary.

Understanding this Report

In order to ensure that tap water is safe to drink, USEPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

The Athol Water Department routinely monitors for constituents in your drinking water according to federal and state laws. This report covers the period of January 1, 2017 to December 31, 2017. The water division wants you to understand all drinking water, including bottled water, may be reasonably expected to contain at least small amounts of some contaminants. It is important to remember that the presence of these contaminants does not necessarily pose 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. Immune 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 lesson the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791)

Definitions of Unit Measurements and Terms

In the tables to follow a variety of unit measurements will be used to describe the amount of a certain contaminant detected in the samples collected and tested. Below is a list of Measurements and terms with definitions to assist you in understanding the chart.

Distribution System – The network of pipes and valves that carry water from the treatment plant to the homes and businesses where water is used.

Massachusetts Department of Environmental Protection (DEP) – The state agency responsible for setting and enforcing drinking water regulations in Massachusetts.

Maximum Contaminant Level (MCL) – The highest level of a contaminant in drinking water. MCL's are set as close to the MCLG's 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.

Maximum Residual Disinfectant Contaminant Level Goal (MRDLG) – The level of a drinking water disinfectant 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.

Massachusetts Office of Research and Standards Goal (ORSG)

Parts per Million (ppm) or Milligrams per Liter (mg/l) – One part per million corresponds to 1 minute in 2 years or a single penny in $10,000.00.

Picocuries per Liter (pCi/l) – A measurement of radioactivity in water.

Micrograms per Liter (Ug/l) - parts per billion

Secondary Maximum Contaminant Level (SMCL)-

Water Quality Testing:

Below are substances that were detected in the town's drinking water during the past 5 years. None of these substances were detected above the allowable limit.

Range of Dates	Contaminant	Highest Detect Value	Range Detected	MCL	MCLG	Violation (Y/N)	Possible Source
01/01/17-12/31/17	Fluoride	0.81 ppm	0.55 - 0.81 ppm	4.0 ppm	4.0 ppm	N	Erosion of natural deposits: Added to water for dental hygiene
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 children. At this level, it is safe, odorless, colorless, and tasteless. Our water system has been providing this treatment since 1960. There are over 3.9 million people in 140 Massachusetts water systems and 184 million people in the United States who receive health and economic benefits of fluoridation.							
05/16/17-06/20/17	Nitrate	1.46 ppm	0.838-1.46 ppm	10.0 ppm	10.0 ppm	N	Runoff from fertilizer use. Leaching from septic tanks.
08/16/16	Radium	0.12 pCi/L	0.12 pCi/L	5	Zero	N	Natural Deposits

Nitrates: Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and Blue Baby Syndrome.

Bacteria Testing

January 1, 2017 to December 31, 2017

Revised Total Coliform Rule (RTCR)

	Highest # Positive in a month	MCL	MCLG	Violation (Y/N)	Possible Source of Contamination
Total Coliform	Three months had one positive test each	*	0	N	Naturally present in the environment
E.Coli	None	*	0	N	Human and animal fecal waste

*Compliance with RTCR is based on the E.coli MCL and upon additional repeat testing.

Unregulated Inorganic

Range of Dates	Contaminant	Highest Detect Value	Range Detected	SMCL	SMCLG	Violation (Y/N)	Possible Source
05/16/17-06/20/17	Sodium	78.9 ppm	47.8 – 78.9 ppm	20 ppm ORSG	Zero	N	Winter deicing operations
05/16/17-06/20/17	Iron	256 ppb	4.4-256 ppb	300 ppb	Zero	N	Natural and industrial sources as well as aging water system.
05/16/17-06/20/17	Manganese	97.9 ppb	60.5–97.9 ppb	50 ppb	Zero	N	Natural Deposits and industrial uses.

IRON – Use of water containing iron at concentrations above the secondary MCL may result in aesthetic issues including the staining of laundry and plumbing fixtures and water with an unpleasant metallic taste and rusty odor.

MANGANESE - Drinking water may naturally have manganese and , when concentrations are greater than 50 ppb, the water may be discolored and taste bad. Over a lifetime, the EPA recommends that people drink water with manganese levels less than 30 ppb and over the short term, EPA recommends that people limit their consumption of water with levels over 1000 ppb.

Volatile Organic Compounds

Range of Dates	Contaminant	Highest Detect Value	Range Detected	MCL	MCLG	Violation (Y/N)	Possible Source
02/18/13-10/15/2013	Trichloroethylene	0.69 ug/l	0.52 ug/l-0.69 ug/l	5.0 ug/l	Zero	N	Discharge from metal degreasing sites and other factories
02/03/15	Methyl Tertiary Butyl Ether (MBTE)	**0.97 ug/l**	0.97 ug/l	**70 ug/l**	70 ug/l ORSGL*	**NA**	Fuel Additive; leaks and spills from gasoline storage tanks

* Massachusetts Office of Research and Standards as adopted a guideline of 70 ug/l as a health protective concentration for MBTE and Drinking Water

Disinfectants and Disinfection By-Products

Range Of Dates	Substance	Highest Value Detected	Range Detected	Highest Quarterly Average	MRDL	MRDLG	Annual Quarterly Running Average	Sources
Monthly 2017	Residual Chlorine	0.99 ppm	.02-0.99 ppm	0.42 ppm	4.0 ppm	4.0 ppm	0.41 ppm	Additive to Control Bacteria

Range of Dates		Highest Value Detected	Range Detected	MCL	MCLG	Violation (Y/N)	Possible Source
02/21/17 - 11/21/17	Halo acetic Acids	5.9 ug/l	1.3 – 5.9 ug/l	60 ug/l	zero	N	By-Product of drinking water disinfection
02/21/17- 11/21/17	Trihalomethanes	24.0 ug/l	8.82-24.0 ug/l	80 ug/l	zero	N	By-Product of drinking water Chlorination

The Town of Athol Water Division was granted a sampling waiver for Inorganic Compound on July 11, 2017 and for Synthetic Organic Compound on July 11, 2017.

LEAD AND COPPER

Understand the source water and water within the distribution system is lead free. However, some of the older homes when they were built had plumbing installed that may have lead soldered joints or lead and copper pipes as part of their plumbing. When water is allowed to remain in these pipes for a period of time the lead and copper can dissolve into the water. The Town of Athol treats their water to prevent this process from occurring.

"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 Town of Athol 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 minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead."

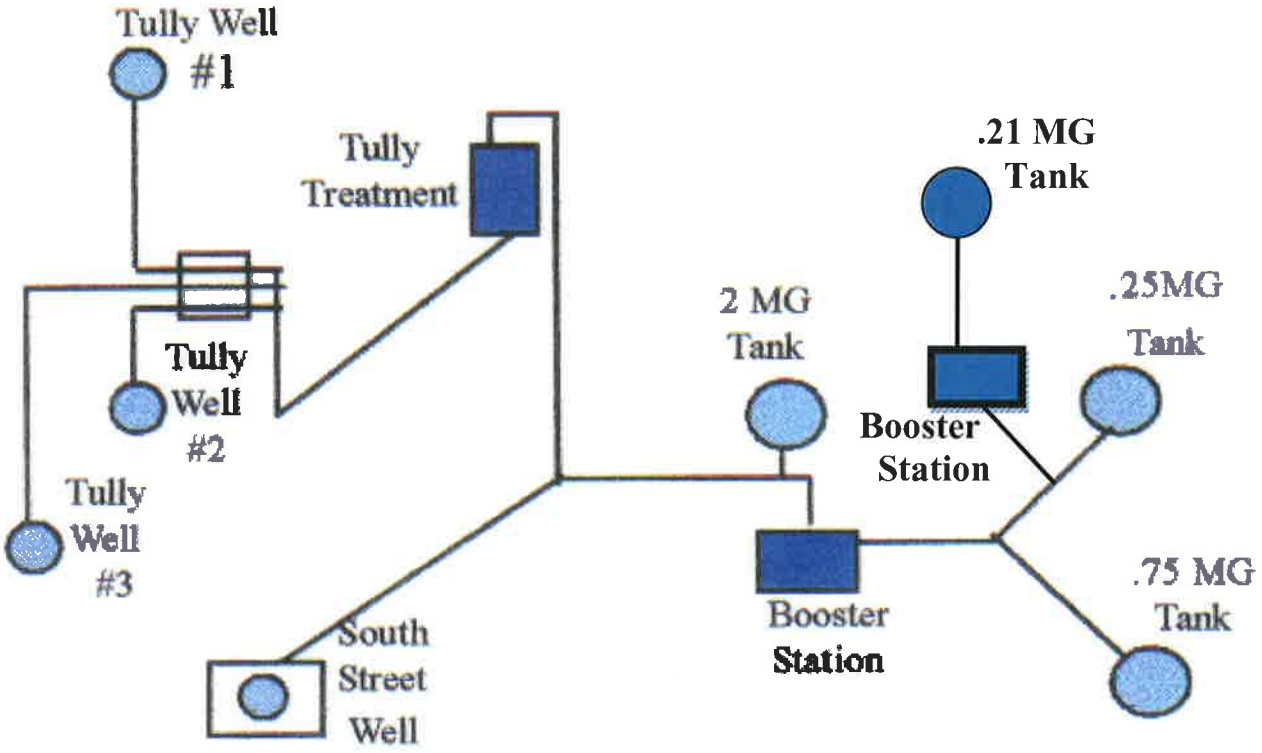
The following results are from June 13, 2017 testing:

Parameter	Action Level (AL)	90th Percentile	90th %> AL Yes/No	# of Sites Sampled	# of Sites Above AL	% of Sites Above AL
Lead (ppm)	0.015	0.0023	No	20	1	5
Copper (ppm)	1.3	0.184	No	20	None	Zero

Likely source for corrosion of lead & copper is household plumbing:
The 90th percentile means, of every 10-sample sites, 9 are at or below that number.

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

OVERVIEW OF THE SYSTEM



If you have any questions about this report or would like to know more about your water utility, please contact the Department of Public Works office at 584 Main St. Room 24 Athol. MA 01331 or by calling 978-249-4542.

Monday, Wednesday, Thursday	8:00am – 5:00pm
Tuesday	8:00am – 8:00pm
Friday	Office is Closed

A member of our professional staff will be more than happy to answer any questions you might have.

Copies of this report will be available at the Town Clerk's Office, the Town of Athol Web site at http://www.athol-ma.gov and Department of Public Works at 584 Main Street, Athol MA.