PWS ID# NJ1404001

Annual Drinking Water Quality Report

Borough of Chatham Water Utility
For the Year 2016, Results from the Year 2015

We are pleased to present to you this year's Annual Drinking Water Quality Report. The purposes of this report are to enhance consumer understanding of our community's drinking water supply and improve awareness of the need to protect our precious water resources. Our constant goal is to provide you with a safe and dependable supply of drinking water.

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 persons, 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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

The Borough of Chatham Water Department routinely samples and tests for over 80 possible contaminants in our water supply according to Federal and State laws. This table shows the results of our monitoring from January 1st to December 31st, 2015 and lists only detected contaminants.

Table of Detections

Contaminant:	Viola-tion?	Level Detected	Units of Measure-ment	MCLG	MCL	Likely Sources
Inorganic:						
Arsenic Test results Yr. 2015	No	1	Ppb	n/a	5	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium Test results Yr. 2015	No	0.01	Ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium Test results Yr. 2015	No	2	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Copper Tested Yr. 2015 Results at the 90th Percentile	No	0.1 No samples exceeded the action level.	Ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Fluoride Test results Yr. 2015	No	0.07	Ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead Tested Yr. 2015 Result at the 90th Percentile	No	3 No samples exceeded the action level.	Ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as Nitrogen) Test results Yr. 2015	No	1.9	Ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Disinfection Byproducts:						
TTHM Total Trihalomethanes Test results Yr. 2015	No	Range = 2 – 5 Highest detect = 5	Ppb	N/A	80	By-product of drinking water disinfection
HAA5 Haloacetic Acids Test results Yr. 2015	No	ND	ppb	N/A	60	By-product of drinking water disinfection

Regulated Disinfectants	Level Detected	MRDL	MRDLG
Chlorine Test results Yr. 2015	Average = 0.9	4.0 Ppm	4.0 Ppm

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. The Borough of Chatham Water Utility is responsible for providing high quality drinking water, but can not 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 second to 2 minutes before using water for drinking and 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.

Our water source: Our three wells are over 150 feet deep and draw groundwater from the Buried Valley Aquifer system of the Central Passaic River Basin. Our wells are located at the Public Works Complex, near the Middle School. Source water assessments are performed to determine the susceptibility of water sources to contamination. The New Jersey Department of Environmental Protection (NJDEP) has completed and issued the Source Water assessment Report and Summary for this public water system. Further information on the Source Water Assessment Program can be obtained by logging onto NJDEP's source water assessment web site at WWW.state.nj.us/dep/swap or by contacting NJDEP's Bureau of Safe Drinking Water at (609) 292-5550. Chatham Borough's source water susceptibility ratings and a list of potential contaminant sources is included. The Passaic Valley Ground Water Protection Committee has developed a source water/wellhead protection planning document and an educational groundwater protection video, which are available at the Library of the Chatham's. They provide more information such as potential sources of contamination and means to protect our water resources.

Definitions:
In the following table you will find many terms and abbreviations with which you might not be familiar. To help you better understand these terms we've provided the following definitions:

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present in detectable amounts.

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in $10,000.

Parts per billion (ppb) or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.

Pico curies per liter (pCi/L) - Pico curies per liter is a measure of the radioactivity in water.

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

Maximum Contaminant Level - The "Maximum Allowed" (MCL) is 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 -The "Goal"(MCLG) is 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.

Secondary Contaminant- Substances that do not have an impact on health. Secondary Contaminants affect aesthetic qualities such as odor, taste or appearance. Secondary standards are recommendations, not mandates.

Recommended Upper Limit (RUL) – Recommended maximum concentration of secondary contaminants. These reflect aesthetic qualities such as odor, taste or appearance. RULs are recommendations, not mandates.

Maximum Residual Disinfectant Level (MRDL) - The highest level of a disinfectant 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, below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination

Potential sources of contamination: 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 municipal 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, municipal storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can, also come from gas stations, municipal 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.

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

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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

Waivers: The Safe Drinking Water Act regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for asbestos, volatile organic chemicals and synthetic organic chemicals. Our system received monitoring waivers for asbestos and synthetic organic chemicals.

We at the Borough of Chatham Water Utility work hard to provide high quality water to every tap. We know its importance to the community. In 1999, the Chatham Borough and Township Environmental Commissions distributed surveys to determine the environmental issues of most concern to residents. Eighty percent of the surveys returned by Borough residents indicated drinking water quality to be very important, making it the highest-ranking environmental issue in the survey. We at the Borough of Chatham Water Utility work hard to provide top quality water to every tap. We ask all residents to help us protect our water resources, which are critical for our community and our children's future.

In light of the events of September 11, 2001, Chatham Borough has reviewed our water system operations to increase security and decrease any vulnerabilities.

The following suggestions can help residents protect their drinking water quality:

- **Dispose of household hazardous waste properly. Call the Morris County Municipal Utilities Authority at 973-829-8006 for more information.**
- **Adopt environmentally friendly lawn-care practices, such as keeping grass cut high and choosing disease- resistant grasses to reduce the need for lawn chemicals.**
- **Keep streets free of litter and pet waste that can contaminate storm water runoff.**
- **Conserve water as much as possible and teach children the importance of protecting the water supply.**

For additional information: If you have any questions about this report or concerning your water utility, please contact Peter Atkinson at 973-635-5242. We want our valued customers to be informed about their water supply and distribution system.

If you want to learn more about water, health or environmental issues, you can contact the Borough Administrator, or attend any regularly scheduled Borough Council, Board of Health or Environmental Commission meeting at Borough Hall, 54 Fairmount Avenue. Council meetings are held on the second and fourth Mondays of each month at 8:00 p.m., and minutes of the meetings are published on the Chatham Borough Website.

We constantly monitor for various contaminants in the water supply to meet all regulatory requirements. We inadvertently monitored late for Total Trihalomethanes (TTHMS) and Haloacetic Acids (HAA5s) in the year 2015. We were required to collect two (2) samples for TTHMs and two (2) samples for HAA5s in July but we took the samples in August. The results of the samples taken in August are reflected in the "Test Results" table. They are in compliance.

Trihalomethanes & Haloacetic Acids are byproducts of drinking water disinfection / chlorination. Some people who drink water containing trihalomethanes and haloacetic acids in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Chatham Borough Water Department- PWSID # NJ1404001

Chatham Borough Water Department is a public community water system consisting of 3 wells.

This system's source water comes from the following aquifer: Glacial Sand and Gravel Aquifer System

This system can purchase water from the following water systems: NJ American Water – Little Falls, Madison Water Department

Susceptibility Ratings for Chatham Borough Water Department Sources

The table below illustrates the susceptibility ratings for the seven contaminant categories (and radon) for each source in the system. The table provides the number of wells and intakes that rated high (H), medium (M), or low (L) for each contaminant category. For susceptibility ratings of purchased water, refer to the specific water system's source water assessment report.

The seven contaminant categories are defined at the bottom of this page. DEP considered all surface water highly susceptible to pathogens, therefore all intakes received a high rating for the pathogen category. For the purpose of Source Water Assessment Program, radionuclides are more of a concern for ground water than surface water. As a result, surface water intakes' susceptibility to radionuclides was not determined and they all received a low rating.

If a system is rated highly susceptible for a contaminant category, it does not mean a customer is or will be consuming contaminated drinking water. The rating reflects the potential for contamination of source water, not the existence of contamination. Public water systems are required to monitor for regulated contaminants and to install treatment if any contaminants are detected at frequencies and concentrations above allowable levels. As a result of the assessments, DEP may customize (change existing) monitoring schedules based on the susceptibility ratings.

	Pathogens			Nutrients			Pesticides			Volatile Organic Compounds			Inorganics			Radionuclides			Radon			Disinfection Byproduct Precursors		
Sources	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L
Wells - 3		**3**		**3**					**3**	**3**			**3**			**3**			**3**				**3**	

Pathogens: Disease-causing organisms such as bacteria and viruses. Common sources are animal and human fecal wastes.

Nutrients: Compounds, minerals and elements that aid growth, that are both naturally occurring and man-made. Examples include nitrogen and phosphorus.

Volatile Organic Compounds: Man-made chemicals used as solvents, degreasers, and gasoline components. Examples include benzene, methyl tertiary butyl ether (MTBE), and vinyl chloride.

Pesticides: Man-made chemicals used to control pests, weeds and fungus. Common sources include land application and manufacturing centers of pesticides. Examples include herbicides such as atrazine, and insecticides such as chlordane.

Inorganics: Mineral-based compounds that are both naturally occurring and man-made. Examples include arsenic, asbestos, copper, lead, and nitrate.

Radionuclides: Radioactive substances that are both naturally occurring and man-made. Examples include radium and uranium.

Radon: Colorless, odorless, cancer-causing gas that occurs naturally in the environment. For more information go to http://www.nj.gov/dep/rpp/radon/index.htm or call (800) 648-0394.

Disinfection Byproduct Precursors: A common source is naturally occurring organic matter in surface water. Disinfection byproducts are formed when the disinfectants (usually chlorine) used to kill pathogens react with dissolved organic material (for example leaves) present in surface water.