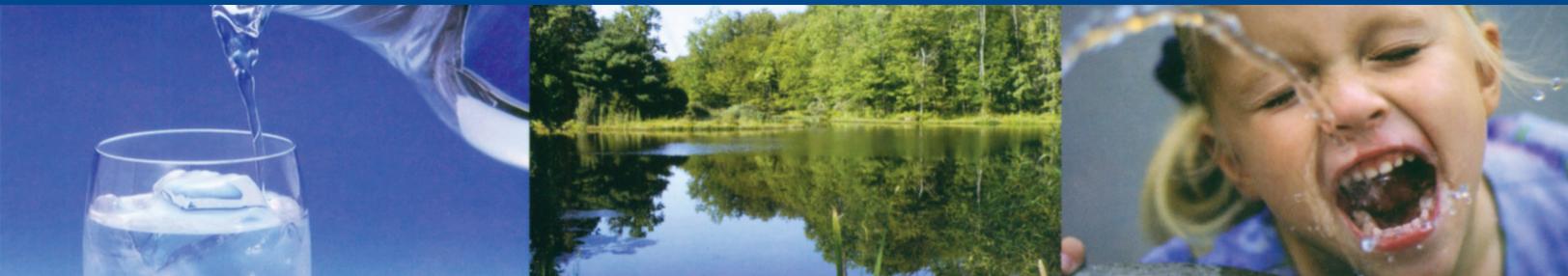


# MARLBORO TOWNSHIP WATER UTILITY DIVISION

# 2018 WATER QUALITY REPORT



This report contains important information about your drinking water in order to provide you, the consumer, with an understanding of water quality standards and terminology as it relates to your water system.

The Marlboro Township Water Utility is pleased to present this summary of water quality delivered during 2018. Each year, every public community water system is required to provide its customers with a report on the quality of water delivered during the prior year.

Please be assured that the Water Utility is dedicated to the proposition that all customers of the Water Utility are entitled to consume and enjoy their water with the utmost confidence and, in pursuit of that endeavor, all personnel and professionals associated with the Water Utility are committed to providing you with drinking water of the highest possible quality.

### **A note about water conservation**

The Water Utility completed surveying its water system for leaking Water Mains, Hydrants and Service lines. The current leak detection survey was performed during 2017 and 2018, all system leaks found were investigated and/or repaired as part of this program. We also have a water meter replacement program in effect that replaces domestic water meters every 10 years, or on an as needed basis. The Marlboro Township Water Utility Division's policies concerning the watering of lawns and filling of swimming pools can be found at <http://ecode360.com/12880974> of the municipal code which is located in Chapter 356: Water Use, Article I: Water Conservation Section 356-1, A (2) (a).

### **Special Considerations Regarding Children, Pregnant Women, Nursing Mothers and Others**

Children may receive a slightly higher amount of a contaminant present in the water than do adults, on a body weight basis, because they may drink a greater amount of water per pound of body weight than do adults. For this reason, reproductive or developmental effects are used for calculating the drinking water standard if these effects occur at lower levels than other health effects of concern. If there is insufficient toxicity information for a chemical (for example, lack of data on reproductive or developmental effects), an extra uncertainty factor may be incorporated into the calculation of the drinking water standard, thus making the standard more stringent, to account for additional uncertainties regarding these effects. In the cases of lead and nitrate, effects on infants and children are the health endpoints upon which the standards are based.

### **Every Drop Counts**

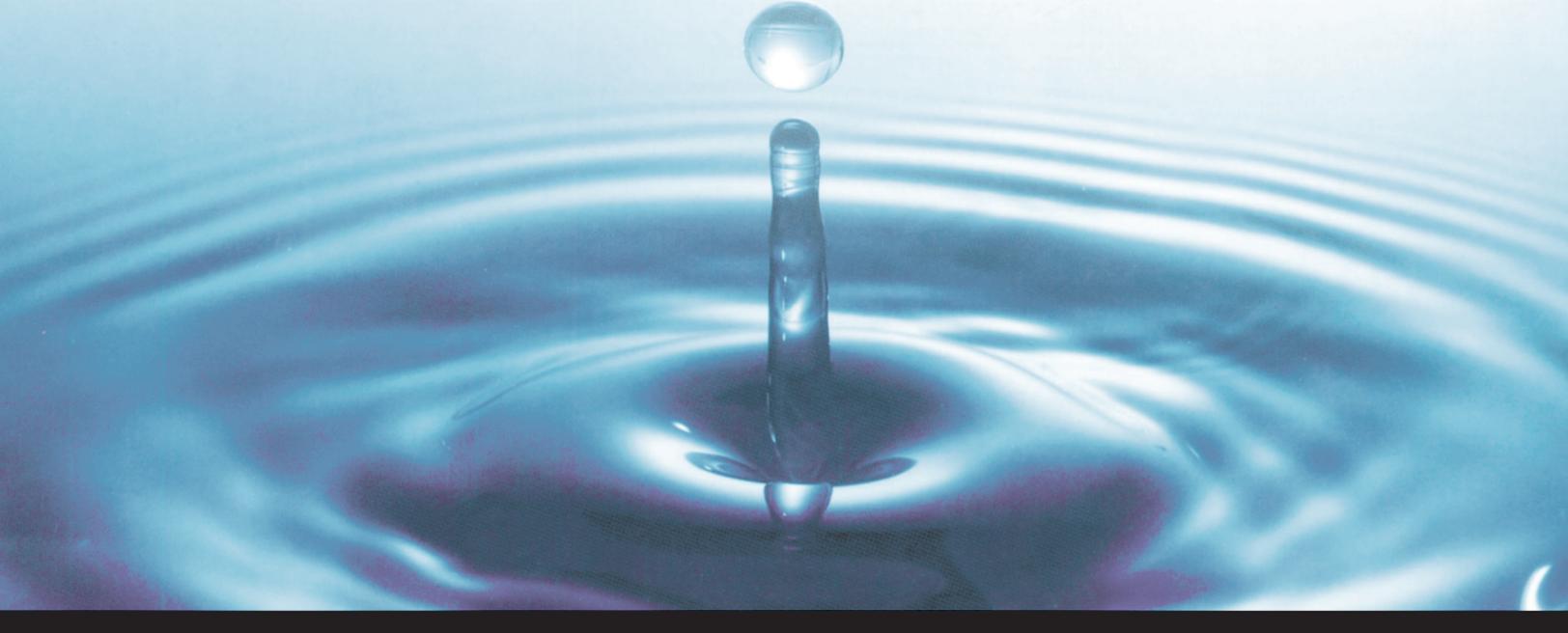
One drip every second adds up to five gallons per day! Check your faucets and showerheads for leaks. Toilet leaks can be silent! Be sure to test your toilet for leaks at least once a year. To check your toilets for leaks. Put a little food coloring in your toilet tank. If, without flushing, the color begins to appear in the bowl within 30 minutes, you have a leak that should be repaired immediately. Most replacement parts are inexpensive and easy to install. Use your water meter to check for hidden water leaks. Read the house water meter before and after a two-hour period when no water is being used. If the meter does not read exactly the same, there is a leak.

### **National Primary Drinking Water Regulation Compliance and Other Monitoring**

The Water Utility takes an active role in protecting the environment, community, and the health and safety of its customers is the highest priority. The Water Utility welcomes questions residents may have about water quality. For more information, call Kurt W. Eifert PE, Engineering Project Manager at (732) 591-1759. The Marlboro Township Council also holds regular meetings which are open to the public. Customers may attend and address any concerns that they may have during the public session. Please refer to [http://www.marlboro-nj.gov/TC\\_agendas\\_minutes.html](http://www.marlboro-nj.gov/TC_agendas_minutes.html) for the meeting schedule. This Water Quality Report can also be viewed on-line at [http://www.marlboro-nj.gov/Water\\_Utility.html](http://www.marlboro-nj.gov/Water_Utility.html).

### **Special Notice Regarding 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. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home plumbing. The Water Utility 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 your drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://epa.gov/safewater/lead>.



## The Source of Your Water Supply

The Marlboro Township Water Utility supplies its customers with a combination of water from two different sources. A portion of the Water Utility’s water (approximately 75%) is purchased from Middlesex Water Company (“MWC”), a water purveyor with more than 100 years of water collection, treatment and distribution experience. MWC supplies the Marlboro Water System with surface water that is obtained from the Delaware and Raritan Canal, as supplemented by the Spruce Run and Round Valley Reservoirs, which is operated by the New Jersey Water Supply Authority. Water is withdrawn from the Canal at an intake and pumping station in New Brunswick and transported to MWC’s plant in Edison for treatment. The treated water is then transmitted to the Water Utility through MWC’s South River Basin Pipeline System. Not that information concerning MWC’s water supply has been included in this report. The Water Utility’s second source of water comes from the Water System’s own groundwater supplies. Groundwater is pumped from 700-foot deep wells, which are located in the Potomac-Raritan-Magothy Aquifer, to the Water Utility’s two (2) treatment plants on Harbor Road and Tennent Road. Water at Harbor Road and Tennent Rd is treated by a dual filter media Direct Filtration process. The water is then distributed to customers through a vast network of underground water mains and service connections.

The New Jersey Department of Environmental Protection (NJDEP) has completed and issued the Source Water Assessment Report and Summary for public water systems, which is available at <http://www.nj.gov/dep/watersupply/swap/index.html> or by contacting the NJDEP, Bureau of Safe Drinking Water at (609) 292-5550.

A public water system’s susceptibility rating [Low (L); Medium (M); or High (H)] is a combination of the following two factors:

- 1) How “sensitive” the water supply is to contamination. For example, a shallow well or surface water source, like a reservoir, would be more exposed to surface and above ground contamination than a very deep well.
- 2) How frequently a contaminant exists or certain activities such as industry or agriculture take place near the water source. This is known as “intensity of use.”

The ratings are based on the potential for a contaminant to be: (i) at or above 50% of the Drinking Water Standard or MCL (High); (ii) between 10% and 50% of the MCL (Medium); or (iii) or less than 10% of the MCL (Low).

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, NJDEP may customize (change existing) monitoring schedules based on the susceptibility rating.

*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 transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infection. These individuals 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 are available from the Safe Drinking Water Hotline at (800) 426-4791.*

## Susceptibility Ratings for the Marlboro Township Water System

The Marlboro Township Water System is a public community water system which includes two (2) water treatment plants and consists of 5 wells. None of the wells are under the direct influence of surface water (GUDI). The Water System has no surface water intakes. The Water System has one (1) groundwater source and one (1) source of purchased surface water. The Water System’s groundwater comes from the Potomac-Raritan-Magothy aquifer and treated surface water is purchased from Middlesex Water Company.

The assessment of the Water System involved the following:

- Identifying the area (known as the source water assessment area) that supplies water to your public drinking water system;
- Inventorying any significant potential sources of contamination in the area; and
- Analyzing how susceptible the drinking water source is to the potential sources of contamination

The table below illustrates the susceptibility ratings for the contaminant categories for each source in the Water 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, please refer to the specific water system’s source water assessment report.

SOURCE	CONTAMINANT CATEGORY																										
	pathogens			nutrients			pesticides			volatile organic chemicals			inorganics			radionuclides			radon			disinfection by-product precursors					
Five (5) Wells	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L
			5			5			5			5			5			5			5			5			5

### An Explanation of the Water Quality Data Table

The chart on the following page provides representative analytical results of water samples routinely collected through 2018 from your water system. Please note the following definitions:

**Maximum Contaminant Level (MCL):** The highest level of 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.

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

**Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements, which a water system must follow. An Action Level (AL) is not a Maximum Contaminant Level (MCL).

**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 use of disinfectants to control microbial contamination.

**ND:** None Detected

**N/A:** Not Applicable

**NTU:** Nephelometric Turbidity Units

**pCi/l:** Picocuries per liter

**ppm:** Parts per million

**ppb:** Parts per billion

**EPA:** Environmental Protection Agency

**FDA:** Food and Drug Administration

**CDC:** Center for Disease Control

**GUDI:** Groundwater Under Direct Influence

## 2018 WATER QUALITY TEST RESULTS - PWSID # 1328002

**About the Data:** The table lists all of the drinking water contaminants for which testing was performed during the 2018 calendar year by the Marlboro Water Utility or Middlesex Water Company with respect to water supplied to the Marlboro System. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in the table is associated with testing that was performed between January 1, 2018 and December 31, 2018. The State of New Jersey requires the monitoring of certain contaminants at a frequency of less than once per year because the concentration of those contaminants is not expected to vary significantly from year to year.

**Monitoring Waivers:** The Safe Drinking Water Act regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for some compounds because previous testing results have been consistently below the MCL. The Water System received waivers for: Nitrites in August 1997; Asbestos in August 1994; and Synthetic Organic Contaminants (SOCs). Testing for asbestos was performed in 2002 and 2011. The results from both of the tests were "ND" or Non-Detectable. Testing for Lead and Copper is on a reduced three-year monitoring schedule because years of testing have demonstrated that the results are consistently below the EPA action levels [Tri-annual testing was performed during 2016].

Contaminant	Violation Y/N	Marlboro Twp. Water Utility	Middlesex Water Co.	Unit Measurement	MCLG	MCL	Major Sources in Drinking Water
<b>MICROBIOLOGICAL CONTAMINANTS</b>							
Total Coliform	N	384 Samples No Coliform	No Coliform	Absent (negative) or Present (positive)	0	No more than 5% of monthly samples should be positive	Naturally present in the environment.
Turbidity (1)	N	Low - 0.023 High - 0.426 Average - 0.059	Low - 0.2	NTU	0	No sample > 1.0 NTU 95% samples < 0.3 NTU TT	Soil runoff.
<b>INORGANIC CONTAMINANTS</b>							
Barium	N	<0.100 - 0.205	<0.03	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Fluoride	N	Less than 0.25	Less than 0.1	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Copper (2)	N	0.412	0.23	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits.
Lead (2)	N	2.6	1.4	ppb	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits.
Nitrate (as Nitrogen)	N	< 0.500	0.9	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Nickel (3)	N	< 0.550	1.7	ppb	No MCLG	No MCL	Nickel occurs naturally in soil, groundwater, and surface water and is often used in electroplating, stainless steel and alloy products.
<b>DISINFECTANTS AND DISINFECTION BY-PRODUCTS</b>							
THM (Total Trihalomethanes) (4) Range all Samples	N	39 -46 (LRAA) 5.5 -76	53 4 - 117	ppb	N/A	80	By-product of drinking water disinfection.
HAA5 (Haloacetic Acids) (4) Range all Samples	N	25 -28 (LRAA) 1.5 - 41.8	44 ND - 80	ppb	N/A	60	By-product of drinking water disinfection.
Chlorine Range Highest Annual Average	N	0.26 - 1.8 0.71	ND - 2.0 0.9	ppm	4 ppm MRDLG	4 ppm MRDL	Water additive to control microbes.
<b>RADIOLOGICAL CONTAMINANTS</b>							
Alpha Emitters (5)	N	< 3.0	N/A	pCi/L	0	15	Erosion of natural deposits.

- Turbidity is a measure of the cloudiness of water and is a good indicator of the effectiveness of the filtration system.
- Lead and Copper were tested in 2016, in accordance with permit requirements. The results indicate 90th percentile value.
- There is no MCL or MCLG for Nickel.
- Compliance is based on Locational Running Annual Average (LRAA).
- Based on quarterly samples taken at Tennent Rd.
- 6 " <" (Less Than Symbol) means the contaminant cannot be accurately detected below the limit specified, the results can be considered zero.

**What is being done to maintain water quality?**

In an effort to minimize the formation of HAA5's while ensuring proper disinfection, the Water Utility has completed construction and started the operation of the Water Treatment Plant at Tennent Road. This will enable the blending of purchased treated surface water from Middlesex Water Company which supplies approximately 75% of the water with well water from the new treatment plant. This blending should aid in minimizing the formation of HAA5's and keep any monitored levels below the NJDEP's Maximum Contaminate Levels (MCL)

The Utility maintains an aggressive multi-year capital improvement program which is updated on an annual basis. The program ensures that the necessary resources are allocated for maintenance and replacement of critical infrastructure.

The Utility is pleased to report that the drinking water supplied has met or exceeded all Federal and State requirements. While certain constituents have been detected, the EPA has determined that the supplied water IS SAFE at these levels.

<b>UNREGULATED CONTAMINANT MONITORING (UCMR3)</b>					
Contaminant Level	Units	NJDEP Guidance Level	Range Detected	Highest Level Detected	Use or Environmental Source
Chlorate	ppb	NA	ND to 110	110	Agricultural defoliant or desiccant; disinfection
Chromium 6	ppb	NA	ND to 0.16	0.16	Major sources of Hexavalent Chromium (Chromium-6) in drinking water are discharges from steel, pulp mills, and erosion of natural deposits of chromium-Hexavalent
Strontium	ppb	NA	6.7 to 120	120	Naturally occurring element; commercial use of strontium has been in the faceplate glass of cathode-ray tube televisions to block x-ray emissions.
Chromium	ppb	NA	ND to 0.35	0.35	Naturally occurring element. Chromium is not currently regulated as an individual substance.
Vanadium	ppb	NA	0.20	0.20	Naturally occurring elemental metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst.

### Unregulated Contaminant Monitoring Rule 3 (UCMR3)

During 2014 and 2015, the Water Utility participated in the Unregulated Contaminant Monitoring Rule. 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 and NJDEP in determining the occurrence of unregulated contaminants in drinking water and whether regulation is warranted.

### Required Additional Health Information

In order to ensure that tap water is safe to drink, the EPA and NJDEP prescribe regulations that require water suppliers to monitor and treat for potentially harmful contaminants. These agencies set water quality standards, 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. 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 Environmental Protection Agency's Safe Drinking Water Hotline at (800) 426-4791.

The sources of drinking water (both tap 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 radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may have been 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 resulting from urban storm 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, storm water runoff, and residential uses.

Organic chemical contaminants, including synthetic and volatile organics, which 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, which can be naturally occurring or be the result of oil and gas production and mining activities. Radon, which is a 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 By-Product Precursors, which are formed when disinfectants (usually chlorine) used to kill pathogens react with dissolved organic material (for example, leaves) present in surface water.

*\*People who drink water containing halo acetic acids in excess of the MCL over many years may have an increased risk of getting cancer.\**

### Important Information About Your Drinking Water Monitoring Requirements Not Met for Manganese and Nitrate

Our water system violated a drinking water requirement over the past year. Even though this was not an emergency, as our customer, you have a right to know what happened and what we did to correct the situation.

\*We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets required health standards. During 2018 we did not complete all testing for Manganese and Nitrates and therefore cannot be sure of the quality of your drinking water during that time.

Manganese testing was performed at the Harbor Road Water Treatment Plant, the Tennent Road Water Treatment Plant and the Tennent Road Pump Station, all testing sample results for manganese were (less than) < 0.04 Mg/l (milligrams per liter) at these locations, the MCL (Maximum Contaminant Level) is .05 Mg/l. Testing was not performed in the Distribution system as required by the safe drinking water rules and regulations.

Major sources of Manganese in drinking water typically derive from erosion of natural rock and soil deposits.

Nitrate testing was performed at the Harbor Road Water Treatment Plant; however a sample was not collected at the Tennent Road Water Treatment as required by the rules and regulations. Testing results for Harbor Road was less than < 0.05 mg/l. the MCL for Nitrates is 10 Mg/l.

Major sources for Nitrates in drinking water typically derive from domestic/wild animal waste, fertilizer use (residential and agricultural), septic system leaching, leaky sewer pipes and erosion of natural mineral deposits.

Years of testing of our water have revealed that Manganese and Nitrate levels are well below detectable limits for both NJDEP / EPA Safe Drinking Water Standards.

#### What should I do?

There is nothing you need to do at this time. You may continue to drink the water. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

#### What is being done?

We collected our yearly samples for Manganese and Nitrate on January 23rd, 2019; results for both samples were well below the MCL (Maximum Contaminant Level). Consequently, the water system has been returned to compliance. The sample result for Manganese was (less than) < 0.04 Mg/l (milligrams per liter), the MLC (Maximum Containment Level) is .05 Mg/l. The sample result for Nitrate was less than < 0.05 mg/l; the MCL for Nitrates is 10 Mg/l.

For more information, please contact Kurt W. Eifert, PE – Engineering Project Manager at (732) 591-1759 or 1979 Township Dr. Marlboro, NJ 07746.

*\*Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.\**

This notice is being sent to you by Marlboro Township Water Utility Division. State Water System ID#: 1328002. This notice has been incorporated into the current CCR as required and has been posted on the township website.