

Annual Drinking Water Quality Report for 2016
Shenandoah Water System
Lime Kiln Rd Hopewell Junction, NY 12533
(Public Water Supply ID#1330674)

INTRODUCTION

To comply with State regulations, Shenandoah Water will be annually issuing a report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. Last year, your tap water met all State drinking water health standards. We are proud to report that our system did not violate a maximum contaminant level or any other water quality standard. This report provides an overview of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State standards.

If you have any questions about this report or concerning your drinking water, please contact JCO Inc at 845-888-5755. We want you to be informed about your drinking water.

WHERE DOES OUR WATER COME FROM?

In general, 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 activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the quantity of certain contaminants in water provided by public water systems. The State Health Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our water system serves 400 people through 138 service connections. Our water source is the Town of Fishkill owned Merritt Park Water District. The Town of Fishkill Merritt Park Water District obtains its water from a well field located off of Snook Road and from the Village of Fishkill well field located off of Clover Road. The treated water from the Town of Fishkill enters this water system through a transmission main located along Route 52. A booster pump station located off of Lime Kiln Road Extension pumps the water from the transmission main to the 100,000 gallon storage tank. Most of our customers are residential except for a few commercial customers who draw water from the transmission main located along Route 52. In 2016, we pumped 7,668,000 gallons of water at an average use of 21,000 gallons per day. Copies of the Village of Fishkill Water District and Merritt Park Water District Annual Water Quality Reports are included in this mailing.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, lead, copper, total trihalomethanes, haloacetic acids and free chlorine residual. The table presented below depicts which compounds were detected in your drinking water. The State allows us to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

It should be noted that all drinking water, including bottled drinking water, may be reasonably 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 or the Dutchess County Department of Community and Behavioral Health at (845) 486- 3404.

Table of Detected Contaminants

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (Range)	Unit of Measurement	MCLG	Regulatory Limit (MCL, AL or TT)	Likely Source of Contamination
Free Chlorine Residual (Entry Point)	No	Yearly Average 12/27/16	1.63 (0.32-2.8)	mg/L	N/A	4.0	Additive to control microbes.
Copper ¹	No	7/27/2016, 7/26/2016, 7/29/2016	106 (Range = 20 – 130)	ug/L	1300	AL=1300	Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives.
Lead ²	No	7/27/2016, 7/26/2016, 7/29/2016	5.45 (Range = ND–5.9)	ug/L	0	AL=15	Corrosion of household plumbing systems; Erosion of natural deposits.
Total Trihalomethanes	No	9/28/2016	41.0	ug/L	n/a	80	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter.
Haloacetic Acids	No	9/28/16	12.1	ug/L	n/a	60	By-product of drinking water disinfection needed to kill harmful organisms.
Manganese	No	2/2/2012	4	ug/L	n/a	300	Naturally occurring; Indicative of landfill contamination.
Sodium	No	2/2/2012	42.5	mg/L	n/a	See Health Effects ³	Naturally occurring; Road salt; Water softeners; Animal waste.
Chloride	No	2/2/2012	70	mg/L	n/a	250	Naturally occurring or indicative of road salt contamination.

¹ The level presented represents the 90th percentile of the 5 sites tested. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the copper values detected at your water system. In this case, 5 samples were collected at your water system and the 90th percentile value is the reported value. The action level for copper was not exceeded at any of the sites tested.

² The level presented represents the 90th percentile of the 5 sites tested. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the lead values detected at your water system. In this case, 5 samples were collected at your water system and the 90th percentile value is the reported value. The action level for lead was not exceeded at any of the sites tested.

³ Water containing more than 20 mg/l of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 mg/l should not be used for drinking by people on moderately restricted sodium diets.

Definitions:

Non - Detects (ND) - Laboratory analysis indicates that the constituent is not present.

Milligrams per liter (mg/l) – Corresponds to one part of liquid in one million parts of liquid (parts per million – ppm).

Micrograms per liter (ug/l) – Corresponds to one part of liquid in one billion parts of liquid (parts per billion – ppb).

Action Level (AL) - The concentrations of a contaminant, which, if exceeded, triggers treatment, or other requirements, which a water system must follow.

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.

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.

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

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table, our system had no Maximum Contaminant violations. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by the State. We are required to present the following information on lead in drinking water.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women, infants and young children. 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's plumbing. Shenandoah Water 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 the 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 (800) 426-4791 or at <http://www.epa.gov/safewater/lead>.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

During 2016, our system was in compliance with applicable State drinking water operating, monitoring and reporting requirements.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Although our drinking water met or exceeded state and federal regulations, some people may be more vulnerable to disease causing microorganisms or pathogens 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 from their health care provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbial pathogens are available from the Safe Drinking Water Hotline (800) 426-4791

WHY SAVE WATER AND HOW TO AVOID WASTING IT?

Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons why it is important to conserve water:

- ◆ Saving water saves energy and some of the costs associated with both of these necessities of life;
- ◆ Saving water reduces the cost of energy required to pump water and the need to construct costly new wells, pumping systems and water towers; and
- ◆ Saving water lessens the strain on the water system during a dry spell or drought, helping to avoid severe water use restrictions so that essential firefighting needs are met.

You can play a role in conserving water by becoming conscious of the amount of water your household is using, and by looking for ways to use less whenever you can. It is not hard to conserve water. Conservation tips include:

- ◆ Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- ◆ Turn off the tap when brushing your teeth.
- ◆ Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it up and you can save almost 6,000 gallons per year.
- ◆ Check your toilets for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you save more than 30,000 gallons a year.

CLOSING

Thank you for allowing us to continue to provide your family with quality drinking water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements. We ask that all our customers help us protect our water sources, which are the heart of our community. Please call our office if you have any questions.

*Annual Drinking Water Quality Report for 2016
Merritt Park Water District
Fishkill, New York
Public Water Supply ID# 1330656*

INTRODUCTION

To comply with State regulations, the Merritt Park Water District is issuing this annual report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. Last year, your tap water met all State drinking water health standards. We are proud to report that our system did not violate a maximum contaminant level or any other water quality standard. This report provides an overview of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State standards.

If you have any questions about this report or concerning your drinking water, please contact **CAMO Pollution Control, Inc. at (845) 463-7310**. We want you to be informed about your drinking water. The time and place of regularly scheduled town board meetings may be obtained from Darlene Bellis, Town Clerk, at (845) 831-7800.

WHERE DOES OUR WATER COME FROM?

In general, 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 activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

FACTS AND FIGURES

Our water system serves 1,700 people through 543 service connections. Our water source is groundwater drawn from two 60-foot deep drilled wells which are located on Snook Road. The water is disinfected with sodium hypochlorite prior to distribution.

During 2016 our detailed testing program showed chloride levels below maximum contaminant levels set forth by the State. We no longer are required to use Village of Fishkill water for blending, and in 2016 no water came from the Village of Fishkill.

As in the past, the water for the Merritt Park Water District meets all requirements set forth by the New York State Department of Health. Despite the chloride level reduction in the wells and the continued compliance with all testing parameters set forth by the State, the district is still required to provide long-term capital improvements in order to ensure that if the chloride levels return, a plan is in place to reduce them. The Town has authorized the Town Engineer to proceed with a plan which will be developed and submitted to the Health Department. The water in the Merritt Park Water System does contain levels of hardness. The estimated hardness of your water is between 10 and 12 grains per gallon.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, lead and copper, total trihalomethanes, and haloacetic acids. The table presented below depicts which compounds were detected in your drinking water. The State allows us to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

It should be noted that all drinking water, including bottled drinking water, may be reasonably 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) or the Dutchess County Health Department at (845) 486-3404.

Table of Detected Contaminants							
Contaminant	Violation Yes/No	Date of Sample	Level Detected (Range)	Unit of Measure	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
Inorganics							
Arsenic	No	12/2013	0.001	mg/l	N/A	0.010	Erosion of natural deposits; runoff from orchards; Runoff from glass and electronics production waste
Barium	No	11/2014	0.015	mg/l	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chloride	No	2016	206.4 (181-242) See Note 3	mg/l	N/A	250	Naturally occurring or indicative of road salt contamination.
Copper	No	09/2014	0.7 (0.01-0.09) See Note 1	mg/l	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride	No	12/2013	0.12	mg/l	N/A	2.2	Erosion of natural deposits; Water additive that promotes strong teeth; discharge from fertilizer & aluminum factories
Lead	No	09/2014	0.002 (ND-0.016) See Note 2	mg/l	0	0.015	Corrosion of household plumbing systems; Erosion of natural deposits
Nickel	No	11/2014	0.001	mg/l	N/A	N/A	Naturally occurring
Nitrate	No	11/2016	1.06	mg/l	10	10	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
Iron	No	11/2014	6.0	ug/l	N/A	300	Naturally occurring

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Range)	Unit of Measure	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
Sodium	No	2016	114.3 (77.2-162)	mg/l	N/A	See Health Effects See Note 3	Naturally occurring; Road salt; Water softeners; Animal waste.
Sulfate	No	11/2014	30.5	mg/l	N/A	250	Naturally occurring
Zinc	No	12/2013	0.007	mg/l	N/A	5.0	Naturally occurring; Mining waste
Disinfection Byproducts							
Haloacetic Acids	No	3/2016 6/2016 9/2016 12/2016	1.6-6.1 See Note 4	ug/l	N/A	60	By-product of drinking water disinfection needed to kill harmful organisms
Total Trihalomethanes	No	3/2016 6/2016 9/2016 12/2016	6.34-18.2 See Note 4	ug/l	N/A	80	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter
Radioactive Contaminants							
Gross Alpha	No	02/2013	1.27	pCi/L	0	15	Erosion of natural deposits
Radium 226 & 228	No	02/2013	0.05	pCi/L	0	5	Erosion of natural deposits

Notes:

1 – The level presented represents the 90th percentile of the 10 sites tested. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the copper values detected at your water system. The action level for copper was not exceeded at any of the sites tested.

2 – The level presented represents the 90th percentile of the 10 samples collected. The action level for lead was exceeded in one sample.

3 - This is the average of the 25 required yearly samples. The test results show acceptable levels of chlorides and sodium in the water. However, as operators we are concerned with maintaining these levels. Sodium does not have a maximum contaminant level. Sodium

levels in the well water are at a level of 104.1 milligrams per liter. This level will be increased by a water softener, if you have one. Water containing more than 20 milligrams of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 milligrams per liter of sodium should not be used by people on moderately restricted sodium diets. It is the recommendation of the Town that you consult your physician regarding these levels if you are on a sodium restricted diet. The chloride level in the water samples collected was 112.9 milligrams per liter. The presence of chloride ions in the drinking water above the maximum contaminant level of 250 milligrams per liter can result in two undesirable aesthetic effects. First, you may detect an objectionable taste of the water. Second, the higher level of chloride may cause corrosion of the pipes within the water system. Softener backwash into septic systems is contributing to the elevated levels of sodium and chlorides in the well water. All homeowners with softeners should check and adjust their softeners in order to limit the amount of brine solution discharged into septic systems and groundwater.

4 – The level presented represents the range of four quarterly samples taken in 2016. None of the samples taken exceeded the maximum contaminant level.

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.

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.

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.

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Non-Detects (ND): Laboratory analysis indicates that the constituent is not present.

Milligrams per liter (mg/l): Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).

Micrograms per liter (ug/l): Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb).

Picocuries per liter (pCi/L): A measure of the radioactivity in water.

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

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table, our system had no violations. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by the State.

We are required to present the following information on lead in drinking water:

If present, elevated levels of lead can cause serious health problems, especially for pregnant women, infants, and young children. 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's plumbing. **CAMO Pollution Control, Inc.** 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 (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

During 2016, our system was in compliance with applicable State drinking water operating, monitoring and reporting requirements. In 2016 the Town of Fishkill enacted local law for cross-connection control. This will enable the Town to implement a program to prevent possible contamination through distribution connections. Due to the dry hot summer we did request a water conservation effort to limit outdoor water use.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Although our drinking water met or exceeded state and federal regulations, some people may be more vulnerable to disease causing microorganisms or pathogens 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 from their health care provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium*, *Giardia* and other microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

WHY SAVE WATER AND HOW TO AVOID WASTING IT?

Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons why it is important to conserve water:

- ◆ Saving water saves energy and some of the costs associated with both of these necessities of life;
- ◆ Saving water reduces the cost of energy required to pump water and the need to construct costly new wells, pumping systems and water towers; and
- ◆ Saving water lessens the strain on the water system during a dry spell or drought, helping to avoid severe water use restrictions so that essential fire fighting needs are met.

You can play a role in conserving water by becoming conscious of the amount of water your household is using, and by looking for ways to use less whenever you can. It is not hard to conserve water. Conservation tips include:

- ◆ Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- ◆ Turn off the tap when brushing your teeth.
- ◆ Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- ◆ Check your toilets for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you save more than 30,000 gallons a year.

HELPFUL INFORMATION REGARDING THE WATER SUPPLY

The average pressure on the water mains is in excess of 100 lbs. In order to protect appliances and internal plumbing, the Town building code states that each home is responsible for providing and maintaining a pressure reducing valve. The service life for pressure reducing valves in this district is three to five years. When they fail, the customer usually loses pressure.

CLOSING

Thank you for allowing us to continue to provide your family with quality drinking water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements. We ask that all our customers help us protect our water sources, which are the heart of our community. We ask that all of our residents be vigilant in regard to suspicious activity in the area of our water treatment plants.

Please call **CAMO Pollution Control, Inc. at (845) 463-7310** if you have questions.