

Annual Drinking Water Quality Report for 2021
Shore Haven Water System
Holmes, New York 12531
Public Water Supply ID#1302807

INTRODUCTION

To comply with State regulations, the Shore Haven Water System will be annually issuing a report describing the Shore Haven drinking water quality. 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, we conducted tests for over 60 contaminants. We detected 2 of those contaminants at a level higher than the State allows. As we told you at the time, our water temporarily exceeded a drinking water standard. In order to resolve this new violation, we are hereby required to retain the services of a NYS licensed design professional to ascertain why the treatment system is not functioning as designed and develop a plan to bring the system into compliance. 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.

In February of 2009 ownership of your system was transferred to the Dutchess County Water & Wastewater Authority. This report is in part based on information that was transferred to the Authority at that time. If you have any questions about this report or concerning your drinking water, please contact **Dutchess County Water & Wastewater Authority at (845) 486-3601**. We want you to be informed about your drinking water. If you want to learn more about the Dutchess County Water & Wastewater Authority, please visit our website at WWW.DCWWA.Org .

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.

Our water system serves approximately 290 people through 100 service connections. Our water sources are 3 drilled wells which are located at the end of Rocky Mt. Way off Rt. 292. Prior to February 2013 the water was disinfected with sodium hypochlorite prior to storage and distribution. After February of 2013 the method of disinfection was changed to chloramines from sodium hypochlorite to reduce the levels of Disinfection Byproducts.

The NYS DOH has completed a source water assessment for this system, based on available information. Possible and actual threats to this water source were evaluated. The State source water assessments include a susceptibility rating based on the risk posed by each potential source of contamination and how easily contaminants can move through the subsurface to the wells. **The susceptibility rating is an estimate of the potential for contamination of the source water, it does not mean that the water delivered to consumers is or will be contaminated.** See section "Are there contaminants in our drinking water?" for a list of the contaminants that have been detected, if any. The source water assessments provide resource managers with additional information for protecting source waters in the future.

The source water assessment did not identify any significant sources of contamination. However, the wells draw from fractured bedrock and overlying soils may not provide adequate protection from potential contamination and is therefore susceptible to potential sources of contamination. Continued vigilance in compliance with water quality protection and pollution prevention programs as well as continued monitoring and enforcement will help to continue to protect groundwater quality. The county and state health departments will use this information to direct future source water protection activities. The source water assessment summary for your system is available by calling the DCDB&CH at 845-486-3404 and requesting a copy.

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, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, haloacetic acids, and radiological. 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 Behavioral and Community Health at 845-486-3404.

**A Summary of the Regulated Contaminants
Detected in Our Treated Water**

Table of Detected Contaminants							
Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (Range)	Unit Measurement	MCL G	Regulatory Limit (MCL, AL, or TT)	Likely Source of Contamination
Barium	No	04/03/2020	0.022	mg/l	2	2	Discharge of drilling wastes; Discharge of metal refineries Erosion of natural deposits
Arsenic	No	04/03/2020	0.0016	mg/l	N/A	0.005	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production waste
Nickel	No	04/03/2020	0.0023	mg/l	N/A	N/A	Naturally occurring, by product of some manufacturing waste
Total Organic Carbon Well #1	No	01/13/2017	1.9	mg/l	N/A	N/A	Naturally found
Total Organic Carbon Well #2	No	01/13/2017	4.82	mg/l	N/A	N/A	Naturally found
Total Organic Carbon Well #3	No	01/13/2017	4.82	mg/l	N/A	N/A	Naturally found
Copper ^{1 9}	No	8/19-8/26/2021 12/4-12/6/21	1.01 (0.1-1.1) ² 1.8 (0.26-1.8)	mg/l	N/A	1.3	Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives

Table of Detected Contaminants

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, AL, or TT)	Likely Source of Contamination
Lead ²	No	8/19-8/26/2021 12/4-12/6/21	0.0179 ¹⁰ (ND-0.029) 0.0055 (ND-0.0076)	mg/l	0	0.015-AL	Corrosion of household plumbing systems; Erosion of natural deposits
Calcium Entry Point	No	11/30/2021	21	mg/l	N/A	N/A	Naturally occurring
Conductivity Entry Point	No	11/30/2021	290	umhos/cm	N/A	N/A	N/A
Alkalinity to pH 4.5 as mg/l CaCO ₃ Entry Point	No	11/30/2021	110	mg/l	N/A	N/A	Naturally occurring
pH Entry Point	No	11/30/2021	7.27	pH units	N/A	N/A	N/A
Temp @ time of pH Entry Point	No	11/30/2021	13.2	pH units	N/A	N/A	N/A
Manganese	No	2/23/2021 5/18/2021 8/18/2021 9/7/2021 12/29/2021	0.066 (0.031–0.088)	mg/l	N/A	0.3	Naturally occurring; Indicative of landfill contamination
Iron	Yes	2/23/2021 5/18/2021 8/18/2021 9/7/2021 12/29/2021	0.42 (0.072-0.73)	mg/l	N/A	0.3	Naturally occurring
Nitrates Well #3	No	4/23/2020	0.153	mg/l	10	10	Runoff from fertilizer use; Leach from septic tanks, sewage; Erosion of natural deposits
Nitrate Entry Point	No	4/13/2021	0.059	mg/l	10	10	Runoff from fertilizer use; Leach from septic tanks, sewage; Erosion of natural deposits
Sodium	No	04/13/2021	65	mg/l	N/A	See footnote 7	Naturally occurring; Road salt; Water softeners; Animal waste

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Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, AL, or TT)	Likely Source of Contamination
Total Coliform Bacteria Distribution System	No	7/26/2021	Present	N/A	0	TT = 2 or more positive samples after April 1, 2016. MCL= 2 or more positive samples before April 1, 2016 ⁸	Naturally present in the environment
Haloacetic Acids (HAA5)	No	2/23/21 5/18/21 8/18/21 12/1/21	37 ⁴ (14-71) ⁵	ug/l	N/A	60	By-product of drinking water chlorination needed to kill harmful organisms
Total Trihalomethanes (TTHMs)	No	2/23/21 5/18/21 8/18/21 12/1/21	38 ⁴ (11-62) ⁵	ug/l	N/A	80	By-product of drinking water chlorination needed to kill harmful organisms. TTHM's are formed when source water contains large amounts of organic matter

Radioactive Contaminants							
Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, AL, or TT)	Likely Source of Contamination
Combined Radium 226 and 228	No	2/23/2021 5/18/2021 8/18/2021 11	0.93 ⁴ (0.2-1.5) ⁵	pCi/l	0	5	Erosion of natural deposits
Gross Alpha Activity (Including Radium 226 but excluding Radon & Uranium)	No	2/23/2021 5/18/2021 8/18/2021 11/29/2021	8.7 ⁴ (4.61-9.83) ⁵	pCi/l	0	15	Erosion of natural deposits
Gross Beta	No	2/23/2021 5/18/2021 8/18/2021 11/29/2021	3.74 ⁴ (2.4-5.01) ⁵	pCi/l	0	50 ³	Erosion of natural deposits
Combined Uranium	No	2/23/2021 5/18/2021 8/18/2021 11/29/2021	0.978 ⁴ (0.704-1.47) ⁵	ug/l	0	30	Erosion of natural deposits

Foot 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 exceeded at 3 of the sites tested in 2021.

2- 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 lead values detected at your water system. The action level of .015 mg/l, for lead was not exceeded at any of the sites tested in 2021.

3- The State considers anything greater than 50 pCi/l to be the level of concern for beta particles.

4- This level represents the highest Locational Running Annual Averages (LRAA) calculated from data collected.

5- This represents the range of detected values in 2021.

6- The levels presented in the table above represents the range of locational running annual average (LRAA) of the detected levels in 2021. Compliance with regards to the Maximum Contaminant Level (MCL) is based on the LRAA meeting the MCL limits set by New York State.

7- 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.

8- Before April 1, 2016, a violation occurs at systems collecting 40 or more samples per month when more than 5% of the total coliform samples are positive. A violation occurs at systems collecting less than 40 samples per month when two or more samples are total coliform positive. After April 1, 2016, a Level 1 assessment is triggered if 2 or more routine/repeat samples are total coliform positive in the same month.

9- Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor

10- There was a Lead Action Level Exceedance in the first half of the year. Based on follow - up sampling at the same locations, the initial action level exceedance is being considered an anomaly. Sampling results in the second half of the year were below the Action Level of 0.015 mg/L.

11- Due to an error at the Laboratory the 4th quarter samples were not processed in 2021. The samples were taken on January 18th, 2022, to rectify the Laboratory error.

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.

Treatment Technique (TT):

A required process intended to reduce the level of a contaminant in drinking water.

Non-Detects (ND):

Laboratory analysis indicates that the constituent is not present.

Nephelometric Turbidity Unit (NTU):

A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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).

Nanograms per liter (ng/l):

Corresponds to one part of liquid to one trillion parts of liquid (parts per trillion - ppt).

Picograms per liter (pg/l):

Corresponds to one part per of liquid to one quadrillion parts of liquid (parts per quadrillion – ppq).

Picocuries per liter (pCi/L):

A measure of the radioactivity in water.

Millirems per year (mrem/yr):

A measure of radiation absorbed by the body.

Million Fibers per Liter (MFL):

A measure of the presence of asbestos fibers that are longer than 10 micrometers.

Locational Running Annual Average (LRAA):

The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table, our system has had violations. The table show that our system uncovered some problems this year. The system has been experiencing above Maximum Contaminant Levels (MCL) for Iron since 8/18/21, confirmed on 9/7/21 with a second sample and as well in our fourth quarter sampling. The duration of the violation is from 8/24/21 to present. We have currently hired Tighe & Bond Engineering Consultants to perform a complete evaluation of the treatment process.

We are required to present the following information on iron and lead in drinking water: Iron is essential for maintaining good health. However, too much iron can cause adverse health effects. Drinking water with very large amounts of iron can cause nausea, vomiting, diarrhea, constipation and stomach pain. These effects usually diminish once the elevated iron exposure is stopped. A small number of people have a condition called hemochromatosis, in which the body absorbs and stores too much iron. People with hemochromatosis may be at greater risk for health effects resulting from too much iron in the body (sometimes called “iron overload”) and should be aware of their overall iron intake. The New York State standard for iron in drinking water is 0.3 milligrams per liter, and is based on iron’s effects on the taste, odor and color of the 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 because of materials used in your home’s plumbing. The Shorehaven water system 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 2021, our system has been in compliance with applicable State drinking water operating, monitoring and reporting requirements except for Copper and Iron.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

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 several reasons why it is important to conserve water:

- ◆ Saving water saves energy and some of the costs associated with both 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 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 you and your family with quality drinking water this year. The DCWWA continues to work towards bringing the Shore Haven water supply into regulatory compliance, and to make distribution system improvements to allow us to properly deliver quality water. It was felt that the most pressing issue faced by the system, is to meet water quality standards set by the regulatory agencies. 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 questions.