Annual Drinking Water Quality Report for 2021
Schreiber Water Service Area
25 Hillside Avenue
Wingdale, New York 12594
Public Water Supply ID# 1315971

INTRODUCTION

To comply with State regulations, DCWWA 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. 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.

Sulfate exceeded the maximum contaminant level in drinking water last year. DCWWA is currently using methods such as well blending to reduce the levels and continues to monitor for sulfate for determining an adequate means of correction.

If you have any questions about this report or concerning your drinking water, please contact the **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 and 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 70 residents through 23 service connections. The water source for the Schreiber Water System is two drilled wells on the Schreiber Water System property located off Hillside Avenue. All wells are properly sealed and protected from surface contamination. Water from all sources is metered as it is pumped into a ground storage tank that feeds the distribution system by gravity. Treatment of the water drawn from these wells consists of disinfection with chlorine to destroy microorganisms. Copies of specific test results are available by contacting the Dutchess County Water and Wastewater Authority at (845) 486-3601.
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 has rated our water source as having an elevated susceptibility to microbial and nitrate contamination. These ratings are due primarily to the close proximity of the wells to permitted discharge facilities (industrial/commercial facilities that discharge wastewater into the environment and are regulated by the state and/or federal government) and the residential and agricultural land use and related activities in the assessment area. In addition, the wells draw from fractured bedrock and overlying soils may not provide adequate protection from potential contamination.

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 DCWWA office at 845-486-3601 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, inorganic compounds, nitrate, lead and copper, volatile organic compounds, total trihalomethanes, haloacetic acids, radiological and synthetic organic compounds. 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.

Quarterly Sulfate sample results taken exceeded the maximum contaminant level (MCL) in 2021. Sulfate is a substance that occurs naturally in drinking water. The New York Sanitary Code Subpart 5-1 allows 250 miligrams per liter (mg/l) as the concentration level in the finished drinking water. Concentration above this level are non-compliant and need corrective measures. After having Well #3 rehabitabliated our sulfate levels have been below the MCL.

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 Department of Behavioral and Community Health at (845)486-3404.

Table of Detected Contaminants

Inorganic Contaminants

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Average) (Range)	Unit Measure-ment	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
Barium	No	4/20	0.028	mg/l	2	2	Discharge of drilling wastes; Discharge of metal refineries Erosion of natural deposits
Copper (3)	No	Sept 2020	0.08 (0.050-0.086)	mg/l	1.3	AL 1.3	Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives
Lead (6)	No	Sept. 2020	0.0015 (ND-0.0017)	mg/l	0	AL 0.015	Corrosion of household plumbing systems; Erosion of natural deposits
Manganese	No	Quarterly 2021	0.0065 (0.01-0.015)	mg/l	N/A	0.3	Naturally occurring: Indicative of landfill contamination
Nitrate	No	4/21	0.34	mg/l	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Nickel	No	4/20	0.0051	mg/l	N/A	N/A	Naturally occurring, by product of some manufacturing waste
Selenium	No	8/17	0.0004	mg/l	N/A	0.05	Naturally occurring
Sulfate (4)	Yes	1,2,3,5, 6,8&11/ 2021	264 Avg. for 2021 (24-550)	mg/l	N/A	250	Naturally occurring
Sulfate (4) Well #2	No	12/20	38	mg/l	N/A	250	Naturally occurring
Sulfate (4) Well #3	No	10/21	240	mg/l	N/A	250	Naturally occurring

Table of Detected Contaminants (continued)

Inorganic Contaminants

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Average) (Range)	Unit Measure-ment	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
Total Coliform Bacteria Distribution System	No	7/21	Present	N/A	0	TT = 2 or more positive samples after April 1, 2016. MCL= 2 or more positive samples before April 1, 2016	Naturally present in the environment
Total Coliform Bacteria Well #3	No	10/21	Present	N/A	0	TT = 2 or more positive samples after April 1, 2016. MCL= 2 or more positive samples before April 1, 2016	Naturally present in the environment
Iron Well #3	No	10/21	2.5	mg/l	N/A	0.3	Naturally occurring
Manganese Well #3	No	10/21	0.29	mg/l	N/A	0.3	Naturally occurring
Sodium Well #3	No	10/21	5.9	mg/l	N/A	(see Health Effects) (5)	Naturally occurring; Road salt; Water softeners; Animal waste
Zinc Well#3	No	10/21	0.058	mg/l	N/A	5	Naturally occurring; Mining waste.
Arsenic Well #3	No	10/21	0.0018	mg/l	N/A	0.005	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production waste
Nickel Well #3	No	10/21	0.0049	mg/l	N/A	N/A	Naturally occurring, by product of some manufacturing waste
Antimony Well #3	No	10/2/	0.069	mg/l	0.006	0.006	Discharge from petroleum refineries; fire retardants; ceramics;electronics; solder

Table of Detected Contaminants (continued)

Inorganic Contaminants							
Contaminant	**Violation Yes/No**	**Date of Sample**	**Level Detected (Average) (Range)**	**Unit Measure-ment**	**MCLG**	**Regulatory Limit (MCL, TT or AL)**	**Likely Source of Contamination**
Color Well #3	No	10/21	25	Units	15	N/A	Large quantities of organic chemicals, inadequate treatment, high disinfectant demand and the potential for production of excess amounts of disinfectant by products such as trihalomethanes, the presence of metals such as copper, iron and manganese; Natural color may be caused by decaying leaves, plants, and soil organic matter.
pH Well #3	No	10/21	7.5	SU	N/A	N/A	N/A
Turbidity Well #3	No	10/21	9.8	NTU	N/A	N/A	Soil Runoff
Chloride Well #3	No	10/21	4.2	mg/l	N/A	250	Naturally occurring or indicative of road salt contamination.
Nitrate Well #3	No	10/21	0.019	mg/l	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Odor Well #3	No	10/21	1.0	Units	N/A	3	Organic or inorganic pollutants originating from municipal and industrial waste discharges; natural sources
Barium Well #3	No	10/21	0.056	mg/l	2	2	Discharge of drilling wastes; Discharge of metal refineries Erosion of natural deposits

Radioactive Contaminants							
Contaminant	**Violation Yes/No**	**Date of Sample**	**Level Detected Max (Range)**	**Unit Measure-ment**	**MCLG**	**Regulatory Limit (MCL, TT or AL)**	**Likely Source of Contamination**
Gross Beta (2)	No	4/21	4.85	pCi/l	0	50	Erosion of natural deposits
Gross Alpha (Excluding Uranium) (7)	No	4/21	1.72	pCi/l	0	15	Erosion of natural deposits
Uranium	No	4/21	7.91	ug/L	0	30	Erosion of natural deposits
Combined radium – 226 and 228	No	4/21	3.49	Pci/L	0	5	Erosion of natural deposits

Disinfection							
Contaminant	**Violation Yes/No**	**Date of Sample**	**Level Detected Avg (Range)**	**Unit Measure-ment**	**MCLG**	**Regulatory Limit (MCL, TT or AL)**	**Likely Source of Contamination**
Total Trihalomethanes (THM)	No	8/20	16	ug/l	0	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 (HAA5)	No	8/20	4.4	Ug/l	N/A	60	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter
Chlorine Residual	No	Daily in 2021	1.04 (0.3-2.2)	mg/l	N/A	4	Water additive used to control microbes

Synthetic Organic Contaminents							
Contaminant	**Violation Yes/No**	**Date of Sample**	**Level Detected Avg (Range)**	**Unit Measure-ment**	**MCLG**	**Regulatory Limit (MCL, TT or AL)**	**Likely Source of Contamination**
Perfluorooctane sulfonic acid (PFOS) Well # 2	No	2/10/21 5/26/21	0.513 (ND-0.513)	ng/l	10	N/A	Released into the environment from widespread use in commercial and industrial applications.
Perfluorooctane sulfonic acid (PFOS) Well #3	No	2/10/21 5/26/21	0.579 (ND-0.579)	ng/l	10	N/A	Released into the environment from widespread use in commercial and industrial applications.

Footnotes:

(1) Iron has no health effects. At 1,000 ug/l a substantial number of people will note the bitter astringent taste of iron. Also, at this concentration, it imparts a brownish color to laundered clothing and stains plumbing fixtures with a characteristic rust color. Staining can result at levels of 50 ug/l, lower than those detectable to taste buds. Therefore, the MCL of 300 ug/l represents a reasonable compromise as adverse aesthetic effects are minimized at this level. Many multivitamins may contain 3000 or 4000 micrograms of iron per capsule.

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

(3) 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. In this case, (include number of samples, e.g. ten samples) samples were collected at your water system and the 90th percentile value was the (include what sample had the highest value, e.g. second highest) value (include level detected, e.g. 1.1 mg/l). The action level for copper was not exceeded at any of the sites tested.

(4) Sulfate is a substance that occurs naturally in drinking water. Health concerns regarding sulfate in drinking water have been raised because of reports that diarrhea may be associated with the ingestion of water containing high levels of sulfate. Of particular concern are groups within the general population that may be at greater risk from the laxative effects of sulfate when they experience an abrupt change from drinking water with low sulfate concentrations to drinking water with high sulfate concentrations. Sulfur reducing bacteria live in oxygen-deficient environments such as deep wells.

(5) 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 of sodium should not be used for drinking by people on moderately restricted sodium diets.

(6) 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. In this case, (include number of samples, e.g. ten samples) samples were collected at your water system and the 90th percentile value was the (include what sample had the highest value, e.g. second highest) value (include level detected, e.g. 1.1 mg/l). The action level for lead was not exceeded at any of the sites tested.

(7) Calculated by converting Uranium level in ug/l to pCi/l and multiplying by 0.67. This calculation is done because Uranium is a Gross Alpha Radioactive Contaminants and to correctly report Gross Alpha it needs to be excluded from the Labratories reported 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.

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.

LEAD IN YOUR 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 that at other homes in the community because of materials used in your homes plumbing. The Dutchess County Water & Wastewater Authority is responsible for providing a 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 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.

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table, our system has had a violation. The table show that our system continued to have higher than the maximum contaminent levels (MCL) for Sulfate this year. As of these results show our system continues to be in violation of the New York Sanitary Code Subpart 5-1 , Section 52 , Table 1 Inorganic Chemicals and Physical Characteristics Maximum Contaminant Level Determination

Drinking water containing high concentrations of sulfate can cause short-term intestinal effects in humans. The effects can range from a laxative effect (loose stools) to diarrhea (unusually frequent and liquid bowel movements). Diarrhea is of particular concern in infants, because it can lead to more serious effects such as dehydration. Travelers or new residents, who may change from drinking water with low sulfate concentrations to drinking water with high sulfate concentrations, may experience short term intestinal effects due to sulfate. The New York State standard for sulfate is 250 milligrams per liter, and is based on sulfate's effects on the taste and odor of the water.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

Our system was compliant in 2021 with all applicable State drinking water operating, monitoring, and reporting requirements except for Sulfate.

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 a number of 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 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.

CLOSING

Thank you for allowing us to continue to provide your family with quality drinking water this year. To maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all our customers. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary to address these improvements. We began a more aggressive system flushing program in 2009 to improve water quality that will continue throughout 2021. We flush the system every month during non-freezing weather. We hope this will reduce the amount of taste and odor problems the system encounters. 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.