

Annual Drinking Water Quality Report for 2023
Dutchess Estates Water System
Morris Drive, Hyde Park, NY 12538
(Public Water Supply ID# 1302767)

INTRODUCTION

To comply with State regulations, Dutchess Estates 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 C3ND Environmental Consulting, LLC at (845) 244-0129. 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 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 source is two shallow gravel wells near the water plant on the west side of Route 9G across from Halstead Drive. The water is filtered through 5 micron and 1 micron filters and disinfected with chlorine prior to being pumped to the buried storage tank. The water is then drawn from the storage tank and pumped to the pneumatic tank via two booster pumps. This provides adequate pressure for the entire distribution system. Our water system services 400 people through 119 service connections. As part of the approval process for a third ground water source (Well 3), it was required to perform testing to determine if the source water is under the direct influence of surface water (GWUDI), as the wells location runs near the Crum Elbow Creek. On June 21, 2019, Well 3 was brought on line to provide potable water to the Dutchess Estates community, utilizing appropriate techniques for treatment, while performing daily test for pH, Conductivity and temperature. Initial MPA (Microscopic Particulate Analysis) samples were collected shortly after the well was put on line and another sample scheduled for a later date. This would satisfy sampling requirements to determine if the well would in fact be deemed a ground water source under the direct influence of surface water. After Well 3 was put into service for some time, various customers within the community experienced discoloration of water. Though at times the discoloration would clear up, others experienced discoloration of water for extended periods of time. It was determined that the difference in water chemistry between Wells 1 & 2, were different than that of Well 3. Precautionary measures were taken at this time and Well 3 taken out of service to continue daily testing, with no introduction to the community water supply. All testing has now been completed for GWUDI analysis and it is determined the well is not GWUDI. It was determined that Well 3 was not experiencing any issues related to public health, but issues related to water chemistry, creating aesthetically displeasing conditions within the community water supply. A full analysis of water characteristics has been completed for Well 3 and is currently under review. A design for treatment options has been approved and awaiting construction of new water treatment plant to bring Well #3 online.

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, lead and copper, volatile organic compounds, total trihalomethanes, haloacetic acids, synthetic organic compounds, and radiologicals. 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.

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
Nitrate	No	12/15/2022	1.5	mg/L	10	10	Runoff from fertilizer use; Leaching from septic tanks; Sewage; Erosion of natural deposits.
Copper *	No	September 2021	0.09 (Range = ND – 0.1)	mg/L	1.3	1.3	Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives.
Lead **	No	September 2021	0.0006 (Range = ND – 0.0012)	mg/L	0	0.015	Corrosion of household plumbing systems; Erosion of natural deposits.
Barium	No	12/27/2023	0.013	mg/L	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Sodium	No	12/27/2023	140	mg/L	n/a	See Health Effects ***	Naturally occurring; Road salt; Water softeners; Animal waste.
Sulfate	No	12/27/2023	25.5	mg/L	n/a	250	Naturally occurring.
Chloride	No	12/27/2023	390	mg/L	n/a	250	Naturally occurring or indicative of road salt contamination.
Manganese	No	12/27/2023	29	ug/L	n/a	300	Naturally occurring; Indicative of landfill contamination.

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
Color	No	12/27/2023	10	Pt-Co	n/a	15	Large quantities of organic chemicals, inadequate treatment, high disinfectant demand and the potential for production of excess amounts of disinfectant byproducts 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.
Turbidity ****	No	2023	0.21 (Range = 0.17 – 0.26)	NTU	n/a	5	Soil Runoff
Gross Alpha	No	3/18/2020	1.21	pCi/L	0	15	Erosion of natural deposits.
Radium 226, 228	No	3/18/2020	0.26	pCi/L	0	5	Erosion of natural deposits.
Uranium	No	3/18/2020	0.182	ug/L	0	30	Erosion of natural deposits.
Gross Beta	No	3/18/2020	3.07	pCi/L	0	50 *****	Decay of natural deposits and man-made emissions.
Total Trihalomethanes	No	9/28/2023	2.5	ug/L	n/a	80	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains organic matter.
Haloacetic Acids	No	9/28/2023	2.3	ug/L	n/a	60	By-product of drinking water disinfection needed to kill harmful organisms.
Perfluorooctanoic Acid (PFOA) Well 1	No	3/30/2023 12/27/2023	3.5 4.8	ng/L	n/a	10	Released into the environment from widespread use in commercial and industrial applications.

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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
Perfluorooctane Sulfonic Acid (PFOS) Well 1	No	3/30/2023 12/27/2023	6.7 8.3	ng/L	n/a	10	Released into the environment from widespread use in commercial and industrial applications.
1,4 Dioxane Well 1	No	3/30/2023 12/27/2023	0.039 0.020	ug/L	n/a	1	Released into the environment from commercial and industrial sources and is associated with inactive and hazardous waste sites.
Perfluorooctanoic Acid (PFOA) Well 2	No	3/30/2023 12/27/2023	2.7 4.7	ng/L	n/a	10	Released into the environment from widespread use in commercial and industrial applications.
Perfluorooctane Sulfonic Acid (PFOS) Well 2	No	3/30/2023 12/27/2023	3.5 5.1	ng/L	n/a	10	Released into the environment from widespread use in commercial and industrial applications.
1,4 Dioxane Well 2	No	3/30/2023 12/27/2023	0.080 0.075	ug/L	n/a	1	Released into the environment from commercial and industrial sources and is associated with inactive and hazardous waste sites.
1,4 Dioxane Well 3	No	3/30/2023 12/27/2023	0.058 0.065	ug/L	n/a	1	Released into the environment from commercial and industrial sources and is associated with inactive and hazardous waste sites.
Manganese Raw Well 1	No	Monthly 2023	2.67 (Range = ND – 32)	ug/L	n/a	300	Naturally occurring; Indicative of landfill contamination.
Iron Raw Well 1	No	Monthly 2023	165.42 (Range = ND – 1,000)	ug/L	n/a	300	Naturally occurring.

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
Manganese Raw Well 2	No	Monthly 2023	67.75 (Range = ND – 97)	ug/L	n/a	300	Naturally occurring; Indicative of landfill contamination.
Iron Raw Well 2	No	Monthly 2023	29.5 (Range = ND – 180)	ug/L	n/a	300	Naturally occurring.
Manganese Distribution	No	Monthly 2023	27.33 (Range = ND – 39)	ug/L	n/a	300	Naturally occurring; Indicative of landfill contamination.
Iron Distribution	No	Monthly 2023	37.58 (Range = ND – 150)	ug/L	n/a	300	Naturally occurring.
Manganese Raw Well 3	No	4/9/2019	56.7	ug/L	n/a	300	Naturally occurring; Indicative of landfill contamination.
Iron Raw Well 3	No	4/9/2019	129	ug/L	n/a	300	Naturally occurring.
Sodium Raw Well 3	No	4/9/2019	90.8	mg/L	n/a	See Health Effects ***	Naturally occurring; Road salt; Water softeners; Animal waste.
Zinc Raw Well 3	No	4/9/2019	0.0265	mg/L	n/a	5	Naturally occurring; Mining waste.
Nickel Raw Well 3	No	4/9/2019	0.000639	mg/L	n/a	n/a	
Barium Raw Well 3	No	4/9/2019	0.496	mg/L	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Calcium Hardness Raw Well 3	No	4/9/2019	106	mg/L	n/a	n/a	
Hardness Raw Well 3	No	4/9/2019	162	mg/L	n/a	n/a	
Sulfate Raw Well 3	No	4/9/2019	8.67	mg/L	n/a	250	Naturally occurring.
Chloride Raw Well 3	No	4/9/2019	163	mg/L	n/a	250	Naturally occurring or indicative of road salt contamination.
Turbidity **** Raw Well 3	No	4/9/2019	2.12	NTU	n/a	1	Soil Runoff.
Heterotrophic Plate Count Raw Well 3	No	4/9/2019	33.0	CFU	n/a	n/a	

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
Odor Raw Well 3	No	4/9/2019	1.00	T.O.N.	n/a	3	Organic or inorganic pollutants originating from municipal and industrial waste discharges; natural sources.
Manganese 1336 Route 9G	No	11/18/2019	54	ug/L	n/a	300	Naturally occurring; Indicative of landfill contamination.
Gross Beta Raw Well 3	No	4/9/2019	2.96	pCi/L	0	50 *****	Decay of natural deposits and man-made emissions.
Combined Radium 226, 228 Raw Well 3	No	4/9/2019	2.74	pCi/L	0	5	Erosion of natural deposits.
Gross Alpha Raw Well 3	No	4/9/2019	6.31	pCi/L	0	15	Erosion of natural deposits.
Uranium Raw Well 3	No	4/9/2019	0.144	ug/L	0	30	Erosion of natural deposits.
Color Raw Well 3	No	4/9/2019	10	Pt-Co	n/a	15	Large quantities of organic chemicals, inadequate treatment, high disinfectant demand and the potential for production of excess amounts of disinfectant byproducts 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.
Hardness 1336 Route 9G	No	11/18/2019	200	mg/L	n/a	n/a	
Alkalinity 1336 Route 9G	No	11/18/2019	210	mg/L	n/a	n/a	
Odor 1336 Route 9G	No	11/18/2019	1.00	T.O.N.	n/a	3	Organic or inorganic pollutants originating from municipal and industrial waste discharges. Natural sources.
Turbidity *** 1336 Route 9G	No	11/18/2019	0.70	NTU	n/a	1	Soil Runoff

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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
Chloride 1336 Route 9G	No	11/18/2019	180	mg/L	n/a	250	Naturally occurring or indicative of road salt contamination.

Table of Unregulated Detected Contaminants

Contaminant	Date of Sample	Level Detected (Max) (Range)	Unit Measurement	Likely Source of Contamination
Perfluorobutanesulfonic Acid (PFBS)			ng/L	Released into the environment from widespread use in commercial and industrial applications.
	Well 1	3/30/2023 12/27/2023	2.0 5.4	
	Well 2	12/27/2023	3.9	
Perfluorobutanoic Acid (PFBA)			ng/L	Released into the environment from widespread use in commercial and industrial applications.
	Well 1	12/27/2023	3.4	
	Well 2	12/27/2023	5.6	
Well 3	12/27/2023	2.4		
Perfluoropentanoic Acid (PFPeA)			ng/L	Released into the environment from widespread use in commercial and industrial applications.
	Well 1	12/27/2023	1.9	
Perfluorohexanoic Acid (PFHxA)			ng/L	Released into the environment from widespread use in commercial and industrial applications.
	Well 1	12/27/2023	1.9	
Perfluorohexanesulfonic Acid (PFPS)			ng/L	Released into the environment from widespread use in commercial and industrial applications.
	Well 2	12/27/2023	2.3	

Footnotes:

* 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.

** The level presented represents the 90th percentile of the 5 samples collected. The action level for lead was not exceeded at any of the sites tested.

*** 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.

**** Turbidity is a measure of the cloudiness of the water. We test it because it is a good indicator of the effectiveness of the filtration system. Our highest single turbidity measurement for the year occurred in December 2023 (0.29).

***** The State considers 50 pCi/L to be the level of concern for beta particles.

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.

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.

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

Nephelometric Turbidity Unit (NTU) - A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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

Nanograms per liter (ng/L) – Corresponds to one part of liquid to one trillion parts of liquid (parts per trillion – ppt).

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.

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. [Dutchess Estates](#) is responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact [Dutchess Estates 845-244-0129](#). Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <http://www.epa.gov/safewater/lead>.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

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 your drinking water meets health standards. During 2023, we did not test for Nitrate, and therefore cannot be sure of the quality of your drinking water during that time.

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 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.