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Annual Drinking Water Quality Report for 2023
Village of South Dayton Water System
17 Park Street, South Dayton, NY 14138-0269
Public Water Supply ID#NY0400351

INTRODUCTION

To comply with State regulations, the Village of South Dayton Water System will be issuing a report annually 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 resources. 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 Mr. Steve Smuda at 716-374-0065. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled Village Board meetings.

WHAT IS THE SOURCE OF OUR WATER?

In general, the sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, 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 661 people through 250 service connections. Our water supply is presently drawn from three (3) drilled wells. Groundwater is pumped from the wells into the treatment plant where it is filtered to remove iron (Fe) and manganese (Mn) and then is disinfected with sodium hypochlorite before it enters the distribution system.

Well No. 5R is the newest well and is our primary source. The well was drilled and put into use in 2022. This replaces well No. 5 which had a diminished well yield and became unusable in the recent years.

Well No. 2 is located in the Southeast quadrant of the village and was drilled about 1951, but was not activated until 1955. It was originally a 100 GPM well but the most recent yield tests show a safe yield of 65 GPM. When Well No. 5 had to be shut down, Well No. 2 was reactivated and is currently the village's primary source again.

Well No. 4 is immediately next to Well No. 2, and has been reactivated to serve as an auxiliary source. This well was drilled in 1972 and is fitted with a 100 GPM pump. Present safe yield is also estimated at 65 GPM.

In February 2022 we were officially notified that we were approved for a \$1.8 M grant and \$1.2 M 0% interest loan from the NYS Drinking Water State Revolving Fund to complete the \$3.1 M project. We have already installed a new production well (5R), and are in the process of upgrading the other two wells, replacement of several old water mains and some water service lines; replacement of some old hydrants and valves; water system controls upgrade and installation of emergency power equipment; and all new water meters and meter reading system and software programs. The projects are anticipated to be completed in 2024.

In 2003, the NYS DOH completed a source water assessment for our water system, based **on available** information. Possible and actual threats to the drinking water were evaluated. The source water assessment includes 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 contamination of the source water. It does not mean that the drinking water is, or will become contaminated. See section "ARE THERE CONTAMINANTS IN OUR DRINKING WATER?" for a list of contaminants that have been detected. The source water assessments provide resource managers with additional information for protecting source water into the future.

As was mentioned before, our water can be derived from several wells. The source water assessment has rated the combined susceptibility to contamination for these wells as medium-high from cations/anions (salts, sulfate), halogenated solvents, herbicides/pesticides, metals, nitrates, other industrial organics and petroleum products; and medium from enteric viruses. These ratings for the wells are due to their proximity to pasture land, industrial activities and permitted discharge facilities (industrial/commercial facilities that discharge wastewater into the environment and are regulated by the State and/or Federal government). A copy of this assessment, including maps of the assessment areas, can be obtained by contacting us, as noted above.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: coliform bacteria, inorganic compounds, nitrate, lead and copper, volatile organic compounds, total trihalomethanes, haloacetic acids, radiological and synthetic organic contaminants. 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 water, might 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 Cattaraugus County Health Department at (716) 701-3386. Information is also available from the EPA website:
<https://www.epa.gov/dwreginfo/drinking-water-regulations>.

Table of Detected Contaminants							
Contaminant	Violation Yes/No	Date of Sample	Level Detected (Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
Disinfectant							
Chlorine Residual	No	2023	Avg. = .17 (.05 - .48)	mg/l	N/A	MRDL = 4	Water additive used to control microbes.
Inorganic Contaminants							
Barium	No	4/6/21	101	ug/l	2,000	MCL = 2,000	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Copper ¹	No	9/29/21	106 (12 - 116)	ug/l	1,300	AL = 1,300	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Iron	YES	12/15/22	4,400	ug/l	N/A	MCL = 300	Naturally occurring.
Lead ²	No	9/29/21	2.31 (ND - 3.73)	ug/l	0	AL = 15	Corrosion of household plumbing; erosion of natural deposits.
Manganese	YES	12/15/22	538	ug/l		MCL = 300	Naturally occurring; indicative of landfill contamination.
Disinfection By-products							
Total Haloacetic Acids	No	8/10/23	High = 6.55 (6.41 - 6.55)	ug/l	N/A	MCL = 60	By-product of drinking water disinfection needed to kill harmful organisms.
Total Trihalomethanes	No	8/10/23	High = 42.8 (31.4 - 42.8)	ug/l	N/A	MCL = 80	By-product of drinking water chlorination needed to kill harmful organisms.
Synthetic Organic Contaminants Including Pesticides and Herbicides							
Perfluorobutanoic acid (PFBA)	No	11/13/23	2.7	ng/L	N/A	MCL = 50,000	Released into the environment from widespread use in commercial and industrial applications.

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. In this case, ten samples were collected at your water system and the 90th percentile value was the second highest value, 106 ug/l. The action level for copper was not exceeded at any of the sites tested.

2 - The 90th percentile level for lead was 2.31 ug/l. None of the ten sites exceeded the action level of 15 ug/l.

Definitions:

Action Level (AL): The concentration 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. 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.

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

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

Nanograms per liter (ng/l): Corresponds to one part of liquid to one trillion parts of liquid (parts per trillion - ppt).

Not Detected (ND): Laboratory analysis indicates that the constituent was not present.

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table, our system had MCL violations. This is due to the filtration system being off as it is being repaired as part of the system improvements.

The water samples collected on 12/15/2022 showed elevated levels of iron and manganese (4,400 ug/l iron and 538 ug/l manganese). The maximum contaminants levels (MCL) of iron and manganese are put in place to protect consumers from nuisance aesthetic issues such as stains, odors, and bad taste (MCL = 300 ug/l for iron; 300 for manganese). This will continue to be an ongoing issue until the water improvements are completed.

This is not an immediate risk. If it had been, you would have been notified not to drink the water. Iron is a common metal and a dietary mineral that is essential for maintaining human health. It is used in construction materials, in drinking water pipes, in paint pigments and plastics, and as a treatment for iron deficiency in humans. Iron can be elevated in drinking water in areas where there are high concentrations of iron in soil and rocks, and where iron salts are used in the water treatment process. Iron can also get into drinking water from corrosion of cast iron, steel, and galvanized iron pipes used for water distribution. Elevated levels of iron in water can result in a rusty color and sediment, a metallic taste, and reddish or orange staining. Although iron is essential for good health, too much iron can cause adverse health effects. For example, oral exposure to very large amounts of iron can cause effects on the stomach and intestines (nausea, vomiting, diarrhea, constipation and stomach pain). These effects occur at iron exposure levels higher than those typically found in drinking water, and usually diminish once the elevated iron exposure is stopped. A small percentage 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 the effects of iron on the taste, odor and appearance of the water.

Manganese is a common element in rocks, soil, water, plants, and animals. Manganese occurs naturally in water after dissolving from rocks and soil. Contamination of drinking water may occur if manganese gets into surface or groundwater after dissolving from rocks and soil. It may also occur if manganese gets into surface or groundwater after improper waste disposal in landfills or by facilities using manganese in the production of steel or other products.

Manganese is an essential nutrient that is necessary to maintain good health. However, exposure to too much manganese can cause adverse health effects. There is some evidence from human studies that long-term exposure to high concentrations of manganese in drinking water is associated with nervous system effects in adults (e.g., weakness, stiff muscles, and trembling of the hands) and children (learning and behavior). The results of these studies only suggest an effect because the possible influences of other factors were not adequately assessed. There is supporting evidence that manganese may cause nervous system effects in humans from occupation studies of workers exposed to high levels of manganese in air, but the relevance of these studies to long term drinking water exposure is less clear because the exposures were quite elevated and by inhalation, not by ingestion.

We are working with the Cattaraugus County Health Department (CCHD) and our Engineers to correct the issue as fast as possible. You will be kept updated every few months regarding the progress of the repairs on the iron and manganese treatment equipment, and once water samples show there is no more violation.

Also, we are required to provide 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. The Village of South Dayton 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 take 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 the Village at 716-988-3833. 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?

Also, 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 monitor for 1,4-Dioxane in the correct quarter, 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), or at <http://www.cdc.gov/parasites/water.html>.

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 and helps 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. Repair 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. Repair 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 past 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 questions.

This institution is an equal opportunity provider and employer.

If you wish to file a Civil Rights program complaint of discrimination, complete the USDA Program Discrimination Complaint Form, found online at http://www.ascr.usda.gov/complaint_filing_cust.html, or at any USDA office, or call (866) 632-9992 to request the form. You may also write a letter containing all of the information requested in the form. Send your completed complaint form or letter to us by mail at U.S. Department of Agriculture, Director, Office of Adjudication, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, by fax (202) 690-7442 or email at program.intake@usda.gov.