

***Annual Drinking Water Quality Report for 2021***  
***Village of Red Hook***  
***7467 South Broadway, Red Hook, NY 12571***  
***(Public Water Supply ID#1302775)***

## **INTRODUCTION**

To comply with State regulations, The Village of Red Hook issues the Annual Drinking Water Quality Report that describes 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. 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 Village Hall at 758-1081. 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. The meetings are held on the second Monday of the month at the Village Hall at 7:00 pm.

## **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 over 2,730 people through 853 service connections. Our water source is from eight (8) active drilled wells that draw from an underground aquifer. The water is then disinfected with sodium hypochlorite within the pump house facility to inactivate microbiological contaminants prior to distribution.

## **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, nitrite, 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 the data, though representative, is 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 Department of Behavioral Community and Health at 486-3404.

**Table of Detected Contaminants**

| <b>Contaminant</b> | <b>Violation Yes/No</b> | <b>Date of Sample</b> | <b>Level Detected (Avg/Max) (Range)</b> | <b>Unit of Measurement</b> | <b>MCLG</b> | <b>Regulatory Limit (MCL, TT or AL)</b> | <b>Likely Source of Contamination</b>   |
|--------------------|-------------------------|-----------------------|---|----------------------------|-------------|---|---|
| Nitrate            | No                      | 12/21/2021            | 1.2                                     | mg/L                       | 10          | 10                                      | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.                              |
| Sodium (1)         | No                      | 12/21/2021            | 24                                      | mg/L                       | n/a         | See Health Effects (1)                  | Naturally occurring; Road salt; Water softeners; Animal waste.  |
| Barium             | No                      | 11/14/2019            | 0.040                                   | mg/L                       | 2           | 2                                       | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.                               |
| Chloride           | No                      | 12/21/2021            | 39                                      | mg/L                       | n/a         | 250                                     | Naturally occurring or indicative of road salt contamination.   |
| Fluoride           | No                      | 11/14/2019            | 0.0402                                  | mg/L                       | n/a         | 2.2                                     | Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories. |
| Lead (3)           | No                      | September 2020        | 3.21<br>(Range = ND – 6.29)             | ug/L                       | 0           | AL = 15                                 | Corrosion of household plumbing systems; Erosion of natural deposits.   |
| Copper (2)         | No                      | September 2020        | 0.132<br>(Range = ND – 0.332)           | mg/L                       | 1.3         | AL = 1.3                                | Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives.                   |

| Contaminant                                    | Violation Yes/No | Date of Sample | Level Detected (Avg/Max) (Range) | Unit of Measurement | MCLG | Regulatory Limit (MCL, TT or AL) | Likely Source of Contamination   |
|--|------------------|----------------|----------------------------------|---------------------|------|----------------------------------|--|
| Haloacetic Acids                               | No               | 8/30/2021      | 11.2                             | ug/L                | n/a  | 60                               | By-product of drinking water disinfection needed to kill harmful organisms.  |
| Total Trihalomethanes                          | No               | 8/30/2021      | 11                               | 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. |
| Perfluorooctanoic Acid (PFOA)<br>Well 1        | No               | Quarterly 2021 | ND<br>ND<br>2.25<br>0.672        | ng/L                | n/a  | 10                               | Released into the environment from widespread use in commercial and industrial applications.   |
| Perfluorooctane Sulfonic Acid (PFOS)<br>Well 1 | No               | Quarterly 2021 | ND<br>ND<br>0.976<br>0.933       | ng/L                | n/a  | 10                               | Released into the environment from widespread use in commercial and industrial applications.   |
| Perfluorooctanoic Acid (PFOA)<br>Well 3        | No               | Quarterly 2021 | 3<br>2.58<br>2.22<br>1.44        | ng/L                | n/a  | 10                               | Released into the environment from widespread use in commercial and industrial applications.   |
| Perfluorooctane Sulfonic Acid (PFOS)<br>Well 3 | No               | Quarterly 2021 | ND<br>0.837<br>0.963<br>0.739    | ng/L                | n/a  | 10                               | Released into the environment from widespread use in commercial and industrial applications.   |
| Perfluorooctanoic Acid (PFOA)<br>Well 4        | No               | Quarterly 2021 | 3<br>1.03<br>2.29<br>2.22        | ng/L                | n/a  | 10                               | Released into the environment from widespread use in commercial and industrial applications.   |
| Perfluorooctane Sulfonic Acid (PFOS)<br>Well 4 | No               | Quarterly 2021 | 3<br>0.674<br>1.07<br>1.48       | ng/L                | n/a  | 10                               | Released into the environment from widespread use in commercial and industrial applications.   |

| Contaminant                                     | Violation Yes/No | Date of Sample | Level Detected (Avg/Max) (Range) | Unit of Measurement | MCLG | Regulatory Limit (MCL, TT or AL) | Likely Source of Contamination   |
|---|------------------|----------------|----------------------------------|---------------------|------|----------------------------------|--|
| Perfluorooctanoic Acid (PFOA)<br>Well 9         | No               | Quarterly 2021 | 3<br>2.90<br>3.12<br>0.992       | ng/L                | n/a  | 10                               | Released into the environment from widespread use in commercial and industrial applications. |
| Perfluorooctane Sulfonic Acid (PFOS)<br>Well 9  | No               | Quarterly 2021 | ND<br>0.942<br>0.954<br>0.772    | ng/L                | n/a  | 10                               | Released into the environment from widespread use in commercial and industrial applications. |
| Perfluorooctanoic Acid (PFOA)<br>Well 12        | No               | Quarterly 2021 | ND<br>2.53<br>2.06<br>0.701      | ng/L                | n/a  | 10                               | Released into the environment from widespread use in commercial and industrial applications. |
| Perfluorooctane Sulfonic Acid (PFOS)<br>Well 12 | No               | Quarterly 2021 | ND<br>0.809<br>1.08<br>0.960     | ng/L                | n/a  | 10                               | Released into the environment from widespread use in commercial and industrial applications. |
| Perfluorooctanoic Acid (PFOA)<br>Well 13        | No               | Quarterly 2021 | 3<br>1.35<br>1.45<br>ND          | ng/L                | n/a  | 10                               | Released into the environment from widespread use in commercial and industrial applications. |
| Perfluorooctane Sulfonic Acid (PFOS)<br>Well 13 | No               | Quarterly 2021 | ND<br>0.709<br>1.19<br>0.710     | ng/L                | n/a  | 10                               | Released into the environment from widespread use in commercial and industrial applications. |
| Perfluorooctanoic Acid (PFOA)<br>Well 14        | No               | Quarterly 2021 | 2<br>2.24<br>1.42<br>0.630       | ng/L                | n/a  | 10                               | Released into the environment from widespread use in commercial and industrial applications. |
| Perfluorooctane Sulfonic Acid (PFOS)<br>Well 14 | No               | Quarterly 2021 | ND<br>0.818<br>1.24<br>0.852     | ng/L                | n/a  | 10                               | Released into the environment from widespread use in commercial and industrial applications. |

| Contaminant                                     | Violation Yes/No | Date of Sample | Level Detected (Avg/Max) (Range) | Unit of Measurement | MCLG | Regulatory Limit (MCL, TT or AL) | Likely Source of Contamination   |
|---|------------------|----------------|----------------------------------|---------------------|------|----------------------------------|--|
| Perfluorooctanoic Acid (PFOA)<br>Well 15        | No               | Quarterly 2021 | ND<br>ND<br>2.38<br>ND           | ng/L                | n/a  | 10                               | Released into the environment from widespread use in commercial and industrial applications. |
| Perfluorooctane Sulfonic Acid (PFOS)<br>Well 15 | No               | Quarterly 2021 | ND<br>1.05<br>0.891<br>1.08      | ng/L                | n/a  | 10                               | Released into the environment from widespread use in commercial and industrial applications. |

**Table of Unregulated Detected Contaminants**

| Contaminant  | Date of Sample         | Level Detected (Avg/Max) (Range)                      | Unit of Measurement | Likely Source of Contamination   |
|--|------------------------|---|---------------------|--|
| Perfluorobutanesulfonic Acid (PFBS)<br>Well 3<br>Well 9<br>Well 13<br>Well 14<br>Well 15               | 6/28/2021<br>6/30/2021 | 0.697<br>0.761<br>0.602<br>0.711<br>1.05              | ng/L                | Released into the environment from widespread use in commercial and industrial applications. |
| Pefluorohexanoic Acid (PFHxA)<br>Well 2<br>Well 3<br>Well 4<br>Well 9<br>Well 12<br>Well 13<br>Well 14 | 6/28/2021<br>6/30/2021 | 0.606<br>7.36<br>2.56<br>7.94<br>5.98<br>3.68<br>6.29 | ng/L                | Released into the environment from widespread use in commercial and industrial applications. |

| Contaminant                     | Date of Sample         | Level Detected (Avg/Max) (Range) | Unit of Measurement | Likely Source of Contamination   |
|---------------------------------|------------------------|----------------------------------|---------------------|--|
| Perfluoroheptanoic Acid (PFHpA) | 6/28/2021<br>6/30/2021 |                                  | ng/L                | Released into the environment from widespread use in commercial and industrial applications. |
| Well 3                          |                        | 4.01                             |                     |  |
| Well 4                          |                        | 1.46                             |                     |  |
| Well 9                          |                        | 4.53                             |                     |  |
| Well 12                         |                        | 3.45                             |                     |  |
| Well 13                         |                        | 2.09                             |                     |  |
| Well 14                         |                        | 3.59                             |                     |  |

**Footnotes:**

(1) - 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.

(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 copper values detected at your water system. In this case, ten samples were collected at your water system and the 90th percentile value was 0.132 mg/l. The action level for copper was not exceeded at any of the sites tested.

(3) - The level presented represents the 90th percentile of the 10 samples collected. The action level for lead was not exceeded at any of the sites tested.

**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.

**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.

**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.

**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.

**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;

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. The Village of Red Hook 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 was in compliance with applicable State drinking water operating, monitoring and reporting requirements.

## **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?**

It is important to conserve water since it is one of our most valuable resources

- 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 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.

The Village maintains yearly water production numbers for the past several years.

## **SYSTEM IMPROVEMENTS**

The Village has conducted a water system evaluation, which identified multiple improvements that are needed to improve the Village's water system. The Village is currently in the planning stage for the replacement of aging mains in the Village east of Broadway. In 2015, the Village used funding from USDA Rural Development to make improvements including replacing water mains and providing an additional storage tank.

## **CLOSING**

Thank you for allowing us to continue to provide your family with quality drinking water this year. We ask that all our customers help us conserve water and protect our water sources (aquifer).